

SCIENTIFIC REPORT  
2019-2020

idæa



EXCELENCIA  
SEVERO  
OCHOA

INSTITUT DE DIAGNOSI AMBIENTAL I ESTUDIS DE L'AIGUA



CSIC

CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

2021, Institute of Environmental Assessment and Water Research (Instituto de Diagnóstico Ambiental y Estudios del Agua, IDÆA)  
Spanish Research Council (Consejo Superior de Investigaciones Científicas, CSIC)

C. Jordi Girona 18-26, 08034 Barcelona.

Tel.: +34 93 400 61 00

Fax: +34 93 204 59 04

<https://www.idaea.csic.es/>

# Content

|     |                                     |     |                                    |
|-----|-------------------------------------|-----|------------------------------------|
| 4   | <b>From the Director</b>            | 174 | <b>Research training</b>           |
| 6   | <b>The Institute</b>                | 174 | Doctoral Thesis                    |
| 6   | Welcome                             | 177 | Master Thesis                      |
| 6   | Location                            | 180 | Final Degree Projects              |
| 7   | Organisation                        | 182 | <b>Teaching activities</b>         |
| 8   | <b>Who are we?</b>                  | 188 | <b>Communication</b>               |
| 10  | <b>Research Groups</b>              | 188 | Dissemination activities           |
| 10  | Environmental Chemistry Department  | 192 | Media appearances                  |
| 35  | Geosciences Department              | 193 | Social media channels              |
| 48  | <b>Research Supporting Services</b> | 194 | <b>Organisation of Conferences</b> |
| 62  | <b>Supporting Departments</b>       | 198 | <b>Awards</b>                      |
| 64  | <b>Research Highlights</b>          | 199 | <b>Support Services</b>            |
| 82  | <b>Severo Ochoa</b>                 |     |                                    |
| 90  | <b>IDÆA in numbers</b>              |     |                                    |
| 96  | <b>Scientific Results</b>           |     |                                    |
| 96  | SCI publications                    |     |                                    |
| 146 | Other publications                  |     |                                    |
| 148 | Edited Books                        |     |                                    |
| 151 | Book chapters                       |     |                                    |
| 155 | Oral presentations in conferences   |     |                                    |

**Teresa Moreno**

Director of IDÆA

direccion.idaea@csic.es



It is difficult to overemphasise the potential value of high-quality research based on hard science and the need to share the results of such research with the wider public who face the consequences of so many 21<sup>st</sup> century environmental problems. The last two years have been an unexpectedly huge challenge for all of us on the planet, and IDÆA has been no exception. During these two years the Institute has been awarded the prestigious Severo Ochoa distinction of Excellence in Research, an incredible opportunity to expand and bring our strategic research activities to new levels. Being Severo Ochoa is something to be proud of for each of us in the Institute, but it is also a major challenge to keep pushing forward and developing our key concept, which is that environmental issues are best approached from a holistic point of view, integrating leading research teams with differing expertise. Always focussed on air and water, our most active research lines currently include subjects such as air and water quality, plastic contamination, ecotoxicology, chemometrics, mine pollution, aquifer research and water treatment, fluid injection-related earthquake prediction, and the magnifying toxic effects of persistent organic pollutants which are bio-accumulating in ecosystems everywhere.

Over the two years covered by this report IDÆA has continued to consolidate and develop itself as a reference research institute, winning 70 national and internationally funded projects. We have increased our number of publications in SCI journals, attaining a new record of 598 papers (524 in Q1 journals), and continue to be one of the most productive institutes in CSIC. We have created five committees comprising members of all research groups to achieve better working conditions, including those for gender balance, seminars, sustainability, young talent attraction and synergy projects. The latter enterprise in particular is allowing young postdoctoral researchers the experience of being joint Principal Investigators, sowing the seeds for their future development as research leaders.

In addition, it is obvious that our development and this report were going to be influenced by the COVID-19 viral pandemic we are still living through. This pandemic has forced us to change, quickly and dramatically, and demonstrated how extraordinarily adaptable we are. We could not imagine that telework suddenly would be here to stay, that we could not see our colleagues in person for weeks, that our labs would be forced to run at minimum speed for what at the time looked like a never-ending succession of new coronavirus infection waves. But despite all this we have managed to survive and prosper, producing more international publications than ever before, keep our research programmes



---

## 2.1 Welcome to the Institute of Environmental Assessment and Water Research

IDÆA is an environmental science institute devoted to the study of the footprint of the chemical changes our species is imposing on the biosphere. Much of the research work at this institute is centred on two of the great environmental challenges of our time, namely the cleanliness and availability of the WATER we drink and the quality of the AIR we breathe, guided by the principle that our scientific understanding of current threats to global ecosystems is best approached from a holistic, systems-based viewpoint.

Founded in 2008, IDÆA was envisaged as a new multidisciplinary research institute bringing together a wide range of expertise in environmental science and organized under two broad Departments (Environmental Chemistry and Geosciences). The institute has demonstrated particular strengths in the analysis of organic pollutants and their impact on ecosystems, the study and management of water resources, the development of multivariate resolution algorithms in chemometrics, and in the study of inhalable particulate matter and toxic gases.

The international research profile of the various research groups working at IDÆA is firmly grounded upon a solid analytical base operating within the institute building which houses large environmental geochemistry laboratories focused on analysing atmospheric and aqueous pollutants. The Institute is also responsible for prestigious, state-of-the-art air monitoring “supersites” integrated into international networks and have enabled the institute to achieve research dominance in the field of source apportionment and transboundary migration of atmospheric pollutants.

Since December 2019 IDÆA is a “Centre of Excellence Severo Ochoa”, an award given within the subprogram of Institutional Strengthening of the State Plan for Scientific and Technical Research and Innovation, to fund and accredit public research centres that demonstrate scientific leadership and impact at global level, as well as active collaboration in their social and business environment.

---

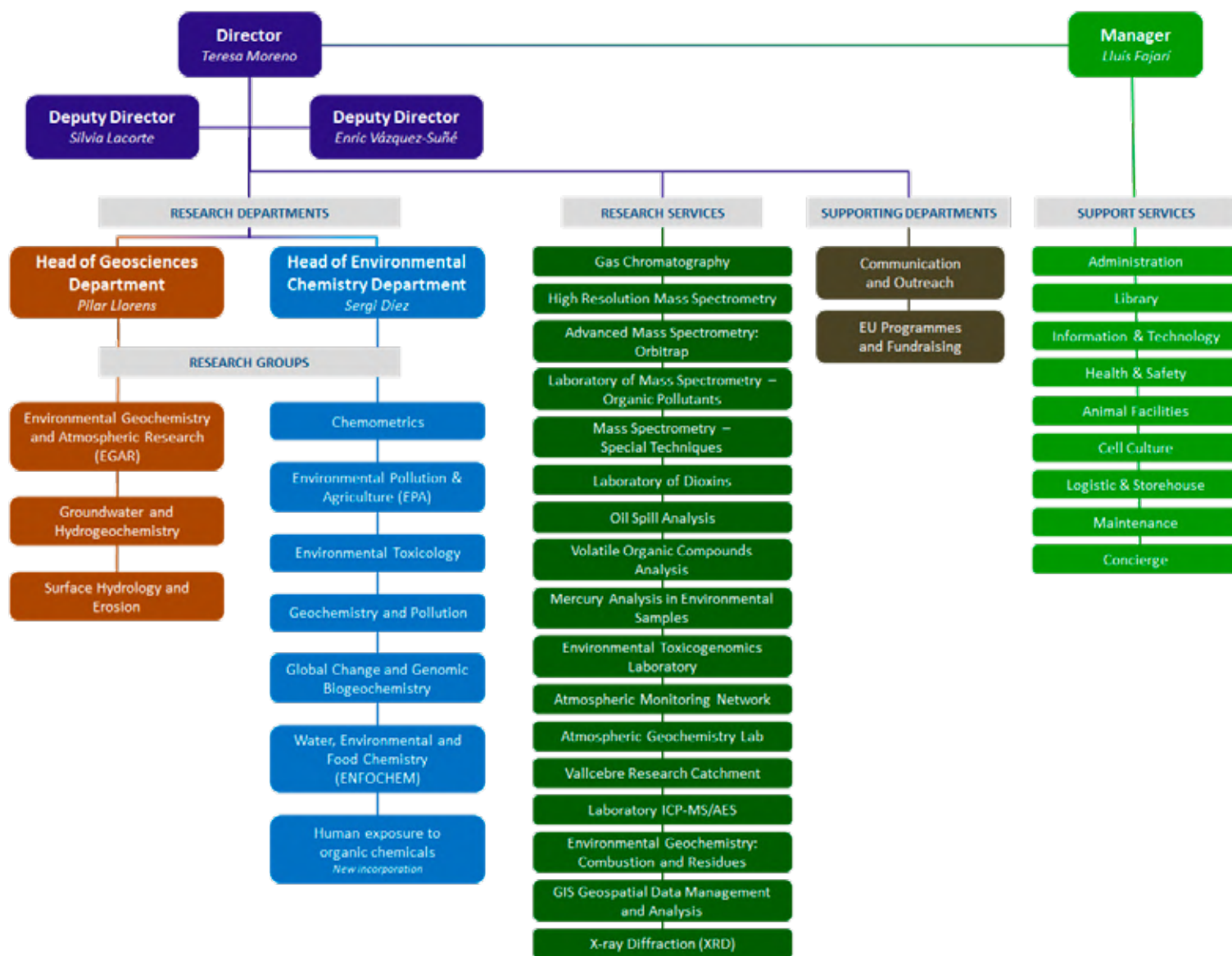
## 2.2 Location

IDÆA is located at the University  
Campus of Pedralbes  
c/ Jordi Girona, 18-26  
08034, Barcelona. Spain

Phone: +34 934 006 100

Fax: +34 932 045 904

## 2.3 Organisation



IDÆA is proud of being a multidisciplinary research institute bringing together a wide range of expertise in environmental science and organized under two broad Departments: Environmental Chemistry and Geosciences.

---

#### Environmental chemistry department

The **Environmental Chemistry Department** focusses on the assessment of origin, transport and evolution of natural and anthropogenic organic inputs to the environment, including the atmosphere, the water column, soils, sediments and organisms. The groups operating within the department have a world-class reputation for their research strength in the analysis, occurrence, fate and behaviour of organic pollutants, the development of chemometric methods of data analysis, the bioavailability and toxicity of emerging contaminants, and the interactions between organic pollutants and major biogeochemical cycles. Multiple methodologies have been developed for the analysis of polar and non-polar, volatile and non-volatile chemical compounds, based on different techniques such as gas and liquid chromatography, capillary electrophoresis and mass spectrometry. Other relevant topics involve the study of fossil molecular compounds as traces of climate change in the past and the toxicity of organic pollutants in organisms such as fish, shellfish and human beings.

---

#### Geosciences department

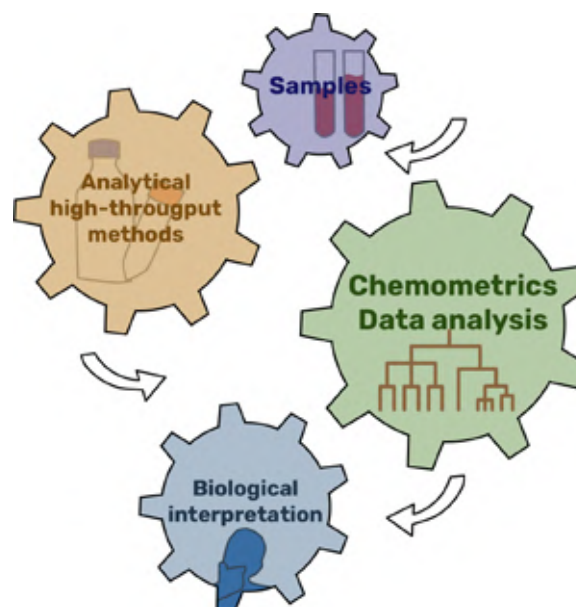
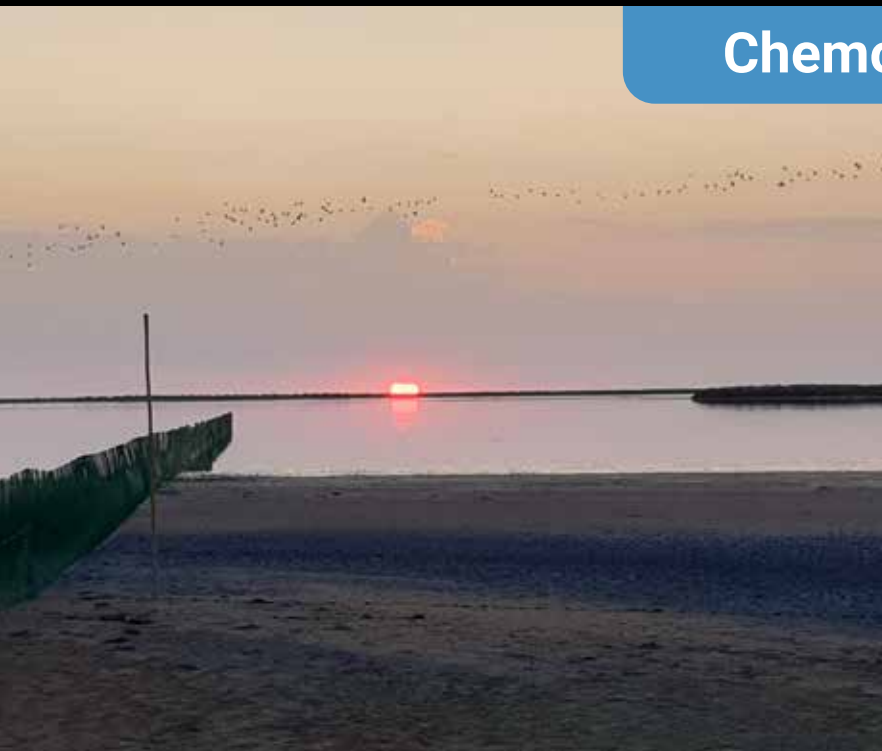
The **Geosciences Department** research interests focus on environmental issues related to air and water. Our atmospheric work includes study of the sources, transport and evolution of natural and anthropogenic inorganic compounds within the environment with a direct link to important global environmental issues such as urban air quality, the abatement of industrial emissions, the transboundary movement of regional aerosol plumes, and the interaction of aerosols and climate. Our hydrogeological expertise embraces the exploration of groundwater resources and pollutants, urban aquifer management, marine intrusion in coastal aquifers, and development of numerical models to assess suitable hydrogeological conditions for safe long-term waste storage and subsurface energy exploitation. Many aspects of our research involve applications in civil and mining engineering, and are again directly relevant to key environmental challenges facing modern society. Our surface hydrology approaches are multidisciplinary and include study of the role of vegetation on the hydrological cycle, rainfall-runoff dynamics, runoff generation processes and erosion and sediment transport processes.





## Environmental Chemistry Department

## Chemometrics



**Group**

**Permanent Research Staff**  
 Jaumot Soler, Joaquim  
 Lacorte Bruguera, Sílvia  
 Tauler Ferré, Romà (Group leader)

**Postdoctoral Research Staff**  
 d'Amico, Marcello  
 Bedia Girbés, Carmen  
 Dulsat Masvidal, Maria  
 Gorrochategui Matas, Eva  
 Platikanov, Stefan

**PhD Student**  
 Colomer Vidal, Pere  
 Marín García, Marc  
 Menéndez Pedriza, Albert  
 Oró Nolla, Bernat  
 Pérez Cova, Miriam Carolina  
 Velázquez Gómez, Miguel

**Technical Staff**  
 Ballesteros Cano, Rubén  
 Pueyo Portugués, Víctor  
 Zapata Corella, Pablo

---

## Chemometrics

The Chemometrics group focuses on the development and application of chemometric (data analysis) and analytical tools for the study of problems of environmental interest. Main research lines include the development of chemometric approaches to analyse datasets coming from diverse analytical platforms, the application of these chemometric data analysis methods to evaluate the metabolomic effects of chemical pollutants and global change stressors on environmentally relevant organisms, and the analysis of environmental data sets (i.e. monitoring studies on air, surface waters, sediments and soils) to retrieve information regarding the identification, resolution, and apportionment of pollution sources and their environmental impact.

---

## Projects

- Chemometrics: method development and application to analytical multidisciplinary problems; 2017SGR0753; Agència de Gestió d'Ajuts Universitaris i de Recerca, Generalitat de Catalunya; (SGR); R. Tauler; 01/2017 - 12/2019. 44.800€.
- Estrategias ómicas no dirigidas para la evaluación de sistemas ambientales multiestresados; CTQ2017-82598-P; Ministerio de Economía, Industria y Competitividad, Proyectos I+D Excelencia 2017; J. Jaumot; 01/2018 - 12/2020. 64.000€.
- Gestión Integral de la calidad y cantidad de las aguas en los procesos de suministro y distribución (IMAQUA); COMRDI16-1-0063. 13; Generalitat de Catalunya, Comunitat Ris3CAT (Feder); S. Lacorte; 2017 - 2020; 46.038€.
- Metodologías analíticas y quimio métricas aplicadas a química ambiental; PID2019-105732GB-C21; Ministerio de Ciencia, Innovación y Universidades, programa estatal de generación de conocimiento y fortalecimiento cient. y tec.del sistema I+D+I - PEICTI 2017-2020; R. Tauler; 01/06/2019 – 31/05/2023; 90.000€.
- Nuevos avances y propuestas para el análisis masivo de datos multi- y megavariantes; CTQ2015-66254-C02-01; Ministerio de Economía, Industria y Competitividad, Proyectos I+D Excelencia 2015; R. Tauler; 01/2016 - 12/2019; 128.000€.
- Ozone dose on wastewater disinfection: toxicity assessment and microcontaminant removal; ICOOPB20361; CSIC and FAESP in Brazil, programa CSIC de cooperación científica para el desarrollo I-COOP+; S. Lacorte; 01/01/2018 - 31/12/2019; 19.100€.



- Residuos de fármacos en los efluentes de aguas residuales de centros para personas mayores (Establecimientos y residencias de ancianos): riesgos, nuevas herramientas de control y sistemas efectivos de tratamiento; SOE1/P1/F0173; European comission, SUDOE2015; S. Lacorte, C. Barata; 01/07/2016 -30/06/2019; 153.007€.

## Contracts

- Análisis de contaminantes en aguas, sedimentos y suelos de zonas IBA; S. Lacorte; 20/03/2019 – 19/09/2020; 84.000€
- Análisis de microplásticos en botellas de PET; S. Lacorte; 01/05/2019 –30/04/2020; 35.760€
- Desarrollo y validación de modelos quimiométricos para el tratamiento de datos registrados en el análisis de aguas procedentes de 3 orígenes distintos: Llobregat- Planta Abrera, Ter - Planta Cardedeu y El Prat - Desaladora ITAM. (Proyecto DOMA); R. Tauler; 01/06/2020 – 31/01/2021; 8.500€.
- Desarrollo y validación de modelos quimiométricos para el tratamiento de datos registrados en la estación de tratamiento de agua potable (ETAP) de Sant Joan Despí; R. Tauler; 10/07/2018 - 31/10/2019; 7.000€.
- Detección de eventos y determinación del potencial de formación de trihalometanos en la ETAP SJD mediante espectrometría online-SpectroETAP; 2018-2019; 7.000€.
- Monitorización de microplásticos en aguas naturales y de consumo; S. Lacorte; 20/03/2019 – 19/09/2019; 16.000€
- Presencia, seguimiento e impacto de microplásticos en aguas naturales y de consumo; S. Lacorte; 15/02/2018 - 14/02/2019. 29.500€
- Support of the project “Ecology in practice: improving infrastructure habitats along roads”; S. Lacorte; 31/01/2019 – 30/04/2020; 39.000€



# Environmental Pollution and Agriculture (EPA)



---

## Group

### Permanent Research Staff

Bayona Termens, Josep Maria (Group leader)  
Díez Salvador, Sergi  
Matamoros Mercadal, Víctor

### Postdoctoral Research Staff

Domínguez Fernández, Carmen  
Escolà Casas, Mònica  
Tadić, Đorđe  
Turull López, Marta

### PhD Student

Cerqueira, Francisco Diogo de Almeida  
Margenat Mas, Anna  
You, Rui

### Technical Staff

Pastor López, Edward Jair  
Pulgar García, Sandra  
Rodríguez Espelta, Yolanda

## Environmental Pollution and Agriculture (EPA)

The Environmental Pollution and Agriculture group is focused on the natural processes affecting the fate of contaminants in the environment to find nature-based approaches to mitigate chemical pollution and the associated impact of human activity on the ecosystems. The research lines range from environmental chemistry to environmental forensics to identify the pollution sources and the key processes affecting their fate in the environment, including sustainable wastewater treatment systems, biogeochemistry of Mercury in ecosystems and fate of contaminants in agroecosystems. Non-target screening and metabolomic methods are developed to get further insight into the contaminant degradation pathways and their impacts into the downstream environment.

## Projects



- ANTibioticS and mobile resistance elements in WastEwater Reuse applications: risks and innovative solutions (ANSWER); H2020-MSCA-ITN-2015 - 675530; European commission, Marie Skłodowska-Curie Actions, Innovative Training Networks (ITN); JM. Bayona; 01/10/2015 - 30/09/2019; 462.280€.
- Decision support-based approach for sustainable water reuse application in agricultural production; OPE01824 – 1822; European Comission, PRIMA Foundation; JM. Bayona; 01/07/2019 – 31/05/2022; 200.000€
- Dinámica de la acumulación de antibióticos, metales y genes de resistencia bacteriana en cultivos agrícolas por fertilización orgánica. Implicaciones en la producción vegetal (DAMA) AGL2017-89518-R; MINECO, programa estatal de I+D+I orientada a los retos de la sociedad; JM. Bayona, V. Matamoros; 01/01/2018 - 31/12/2020; 163.350€.
- Explorando la química de la simbiosis en la atenuación de contaminantes emergentes. Avances en el tratamiento biológico de aguas residuales; CTM2017-91355-EXP; Ministerio de Ciencia, innovación y Universidades; V. Matamoros; 01/11/2018 - 31/10/2020; 60.500€
- Green solutions for treating groundwater pollution to meet drinking water directive standards (LIFE-SPOT); ENV/ES/000199; European Comission, LIFE 2018 ENV; V. Matamorros; 01/07/2019 – 30/06/2023; 214.898€
- Improvement and disclosure of efficient techniques for manure management towards a circular and sustainable agriculture (AGRICLOSE); ENV/ES/000439; European Comission, LIFE 2017 ENV; JM. Bayona; 01/07/2018 - 30/06/2022; 283.792€.
- Optimización y evaluación de una planta piloto de osmosis directa combinada con nanofiltración para riego agrícola. Aplicación de membranas biomiméticas; 202080E268; CSIC, Proyectos Intramurales; JM. Bayona; 01/12/2020 – 30/12/2023; 32.000€

- Reducción del uso de mercurio en comunidades dedicadas a la minería artesanal y en pequeña escala en Colombia; COOPB20362; CSIC, programa CSIC de cooperación científica para el desarrollo I-COOP + convocatoria 2018; S. Diez; 01/01/2019 – 31/12/2020; 28.938€
- Resolviendo la contaminación de los acuíferos mediante nuevas configuraciones de microalgas; 2018801046; CSIC; V. Matamoras; 22/11/2018 - 21/11/2019; 5.000€.

---

### Contracts

- Convenio en el marco de la convocatoria del prog. Pleamar 2019 de la fund. Biodiversidad para el mº tran. Ecológica, proy: estrategias para la valorización de la estrella de mar (ACUISTAR); Cluster de Acuicultura (CETGA); S. Diez; 08/10/2019 – 08/10/2021; 27.485€
- Identificación de vertidos de hidrocarburos en el mar y resolver cuestiones que surjan en las fases de evaluación y respuesta en emergencias de contaminación de hidrocarburos; Salvamento Marítimo (SASEMAR), Ministerio de Fomento; JM. Bayona; 25/10/2007 - 13/04/2022; 934.637,73€.



## Environmental Toxicology

### Group

#### Permanent Research Staff

Barata Martí, Carlos  
Piña Capó, Benjamí  
Porte Visa, Cinta (Group leader)  
Portugal Minguela, José  
Raldúa Pérez, Demetrio

#### Postdoctoral Research Staff

Faria, Melissa  
Hosseinzadeh Soureshjani, Mahboubeh  
Mansilla Barrado, Sylvia  
Navarro Martín, Laia

#### PhD Student

Bedrossiantz, Juliette  
Fuertes Rodríguez, Inmaculada  
Gilabert Begueria, Alejandra  
Marqueño Bassols, Anna  
Martínez López, Rubén Francisco  
Sanz Lanzas, Claudia  
Wang, Tiantian

#### Technical Staff

Casado Belloso, Marta  
Pérez Albaladejo, Elisabet  
Valls Brusco, Arnau



## Environmental Toxicology

The Environmental Toxicology group studies and assesses the bioavailability and toxicity of existing and emerging contaminants and their mixtures. To this end, the group applies an array of lab toxicity tests (i.e. transgenic yeast, cell lines, zebrafish embryos and *Daphnia magna* models), and field assays conducted with feral fish and invertebrates from both marine and freshwater environments. Effects are assessed across different biological levels using transcriptomic, lipidomics, metabolomics, morphogenetic and specific cell response, including effects on whole organism and population. Some of the key achievements of the group involve the use of biomarkers and sentinel species to biomonitor contamination in marine and freshwater systems, the first evidence of endocrine disruption in fish (estrogenic effects in fish) and aquatic invertebrates (imposex in gastropods), the application of -omic technologies to monitor effects and mode of action (MoA) on model species, the use of video-tracking technologies to assess neurobehavioral changes in model species, the determination of the 'obesogenic' effect of contaminants in fish, fish cell lines and invertebrates and the development of animal-free bioassays for endocrine disruption and related toxic effects.

## Projects



- Combined effect of microplastics and chemical and organic pollutants on skeletal deformities in a marine teleost fish, *Aphanius fasciatus*; COOPB20368; CSIC, programa CSIC de cooperación científica para el desarrollo I-COOP + convocatoria 2018; B. Piña; 01/01/2019 – 31/12/2020; 29.000€
- Development of medium- and high-throughput methodologies for chemical risk assessment in aquatic ecosystems: neurobehavioural effects and pathophysiological mechanisms in zebrafish and *Daphnia magna*; NeuroAquaTox; CTM2017-83242-R; MICIN; IDÆA, IRI-UPC/CSIC; D. Raldúa, C. Barata, E. Prats, M. Faria; 01/01/2018 - 31/12/2020; 180.000€.
- EPIgenetic Signatures as biomarkers of ecoTOXicological effects (EPISTOX); H2020-MSCA-IF-2017; European Commission, Europaid; B. Piña; 01/01/2015 - 31/12/2019; 170.121€
- Evaluación del riesgo biológico asociado a usos agrícolas de aguas residuales y biosólidos procedentes de depuradoras; RTI2018-096175-B-I00; Ministerio de Ciencia, Innovación y Universidades / FEDER, Programa Estatal de I+D+I orientada a los retos de la sociedad; B. Piña; 01/01/2019 – 31/12/2021; 200.000€
- Investigando la interacción contaminantes-lipidoma en modelos acuáticos; PGC2018-097513-B-I00; Ministerio de Ciencia, Innovación y Universidades, Programa Estatal de generación de conocimiento y fortalecimiento cient. y tec. del sistema I+D+I - PEICTI 2017-2020; C. Porte; 01/01/2019 – 31/12/2021; 120.000€

- Preparación de propuesta para el ERC Consolidator Grant 2021: Caracterización de las interacciones existentes entre tóxicos, epigenomas microbiomas y el sistema endocrino; EIN2019-102993; Ministerio de Ciencia, Innovación y Universidades, acciones de dinamización Europa investigación; L. Navarro; 01/06/2019 – 31/05/2021; 10.000€
- Toxicología Ambiental; 2017SGR902; Agència de Gestió d'Ajuts Universitaris i de Recerca, Generalitat de Catalunya; (SGR); B. Piña; 01/01/2018 - 31/12/2020; 20.000€.

---

### Contracts

- Cellular responses to contaminant exposure in marine mammals from the arctic; C. Porte; 26/10/2020 – 31/12/2021; 10.000€
- dCod 1.0: decoding systems toxicology of cod (*Gadus morthua*) environmental genomics for ecosystem quality monitoring and risk assessment; DLSI\_2016; Universidad de Bergen; C. Porte; 30/09/2016 - 30/03/2020; 50.000€.
- iCod 2.0: Integrative environmental genomics of Atlantic cod (*Gadus morhua*); a holistic approach to characterize the biological effects of emerging contaminants and mixed exposure regimes; 244564/E40; Universidad de Bergen; C. Porte; May 2015 - August 2019; 20.000€.



A scenic landscape photograph of a mountain lake. The foreground is dominated by a rocky shoreline with large, light-colored boulders and scattered driftwood. The lake is calm, reflecting the surrounding environment. The background features steep, rocky mountainsides with patches of green coniferous trees and some snow or light-colored rock. A blue rounded rectangle is overlaid on the top right of the image, containing the title "Geochemistry and Pollution" in white text.

# Geochemistry and Pollution

---

## Group

### Permanent Research Staff

Abad Holgado, Esteban  
Caixach Gamisans, Josep  
Fernández Ramón, Pilar  
Grimalt Obrador, Joan (Group leader)  
López Fernández, Jordi  
van Drooge, Barend L.

### Postdoctoral Research Staff

Bravo Villarraso, Natalia  
Cortina Guerra, Aleix  
Herrera Hernández, Eva María  
Martrat, Belen

### PhD Student

Capodiferro, Marco  
Díez Palet, Isabel  
Jaén Flo, Clara  
Junqué Martínez, Eva  
Martínez Prats, Raimon

### Technical Staff

Ábalos Navarro, Manuela  
Adrados León, Miguel Ángel  
Bartolomé Rodríguez, Arantxa  
Casado Núñez, Marta  
Cortina Masana, Montserrat  
Fernández Escobar, Inma  
Flores Rubio, Cintia  
González Quinteiro, Yolanda  
Marco Asensio, Esther  
Martrat Castellví, María Generosa  
Paraian, Alexandra  
Parera Costa, Jordi  
Planas Pastor, Carles  
Sauló Dalmau, Jordi

## Geochemistry and Pollution

The Geochemistry and Pollution group studies natural organic matter and contaminants as a source of knowledge of the evolution of ecosystems, including climate change and transport processes, distribution, transformation and effects of organic pollution in organisms, including humans. These approaches also include the study of molecules of viral activity, and, in the present times, contributing to understanding the environmental occurrence of SARS-CoV-2 pandemic.

The overall goal includes the development of analytical methods to study the concentrations of deleterious molecules, their transfer flows between environmental compartments and their incorporation into organisms. It also covers the investigation of how organic compounds can provide geochemical information on past and present ecosystems and molecules that are useful to describe the health status of organisms.

## Projects

- Ayuda de ciencia ciudadana del Ayuntamiento de Barcelona para CSIC para desarrollo de proyecto: exposición a contaminantes emergentes en el agua de consumo de Barcelona; Ayuntamiento de Barcelona, plan Barcelona Ciencia 2019; C. Flores; 27/12/2019 – 26/06/2021; 59.252€
- Exploring the Neurological Exposome (NEUROSOME); H2020-MSCAITN- 2017 SEP-210411486; European Commission, Marie Skłodowska-Curie Actions, Innovative Training Networks (ITN); J. Grimalt; 01/12/2017 - 30/11/2021; 247.873€.
- “GEF GMP2”GF4030-4F34; Global Environment Facility, GEF\_2016; E. Abad. 01/02/2016 - 30/04/2020; 827.436€.
- Health and Environment-wide Associations based on Large population Surveys (HEALS); FP7- ENV-2013-603946; European Commission, Cooperation project; J. Grimalt; 01/10/2013 - 31/06/2019; 450.437€.
- Iberian Climate Change paleoarchive - synthesis and stewardship of land-ocean data, taking the past 2000 years (2k) as a reference [IBCC-Io2k]; LINKA20102, programa CSIC conexión internacional I-link+ para la promoción de la colaboración científica internacional del CSIC con instituciones extranjeras; B. Martrat; 01/01/2019 – 31/12/0021; 28.525€
- Implementation of the MSED to the Deep Mediterranean Sea (IDEM); 11.0661/2017/750680/SUB/EN V.C2; European Commission, DG Environment; J. Grimalt; 01/04/2017 - 31/03/2019. 50.818€.
- Influencia de la inversión térmica en la contaminación orgánica atmosférica; PGC2018-102288-B-I00; Ministerio de Ciencia, Innovación y Universidades, Programa Estatal de generación de conocimiento y fortalecimiento cient. y tec. del sistema I+D+I - PEICTI 2017-2020; MP. Fernandez; 01/01/2019 – 31/12/2021; 175.000€



- Metabolic effects of Endocrine Disrupting Chemicals: novel testing METHODS and adverse outcome pathways (EDCMET); European Commission, RIA (RESEARCH&INNOV.ACT.); H2020-HEALTH/0490 – 825762; J. Grimalt; 01/01/2019 – 31/12/2023; 360.050€
- Microplásticos y microcontaminantes en la costa mediterránea. Toxicidad e impacto ambiental y en la salud humana; CTM2017-89701-C3-1-R; MINECO; M. Farré, E. Abad; 01/01/2018 - 31/12/2020; 177.870€.

### Contracts

- Análisis de compuestos organohalogenados, organofosforados, piretroides y glifosato en muestras de suero venoso de niños de la cohorte de Asturias; J. Grimalt; 02/12/2019 – 01/12/2020; 40.293€
- Análisis de compuestos tóxicos en unas muestras de suelos de la rambleta de Sant Adrià, incluyendo dioxinas; E. Abad; 07/12/2019 – 06/02/2020; 7.560€
- Análisis de contaminantes orgánicos en agua; J. Caixach; 25/06/2018 - 24/06/2020; 56.870€.
- Análisis de contaminantes orgánicos en muestras de agua; J. Caixach; 24/05/2019 – 19/10/2020; 9.740€
- Análisis de contaminantes orgánicos; J. Caixach; 10/04/2019 – 16/06/2020; 35.760€
- Análisis de dioxinas de las factorías de Arcelormittal en España; E. Abad; 01/01/2019 – 31/12/2019; 4.640€
- Análisis de dioxinas de las factorías de Arcelormittal en España; E. Abad; 01/01/2020 – 31/12/2020; 4.640€
- Análisis de dioxinas en muestras de suelo y biota; E. Abad; 28/05/2020 – 24/02/2021; 22.800€
- Análisis de dioxinas y compuestos relacionados en muestras de aceite; E. Abad; 01/10/2019 – 30/09/2020; 8.625€
- Análisis de PCBS (BCR), dioxinas y compuestos similares en muestras de biota de Catalunya (acciones complementarias del proyecto directiva Marc del ICRA); E. Abad; 05/06/2019 – 31/10/2019; 6.860€
- Analysis of 100 puf samples for dl-POPs; 15/02/2017 - 30/06/2019; 50.000€.

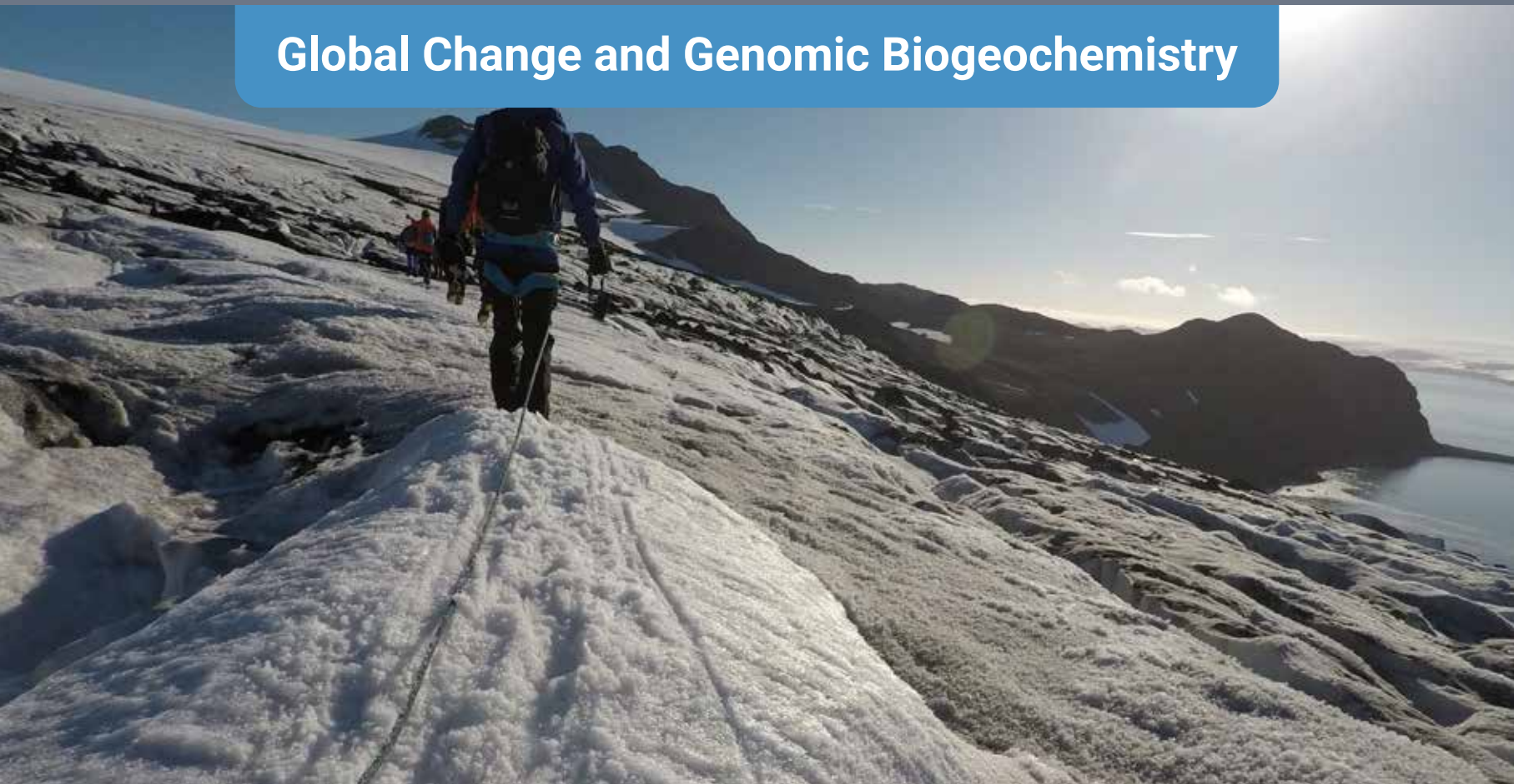




- Analysis of DMS/DMSE in water samples; J. Caixach; 15/05/2019 – 14/08/2019; 3.564€
- Analysis of organophosphate pesticides; J. Grimalt; 21/06/2019 – 21/12/2019; 25.000€
- Apoyo para la capacitación en el contexto de muestreo y análisis de COPS en dos países (Mongolia y Mauricio) incluido apoyo técnico, preparación de material, organización de la capacitación y preparación del informe; E. Abad; 25/07/2019 – 24/01/2020; 5.386€
- Apoyo tecnológico sobre las emisiones de dioxinas y furanos procedentes de fuentes estacionarias durante el proceso de producción de clinker, mediante sistemas de captación de gases en semicontinuo; 29/10/2014 - 28/12/2019; 14.520€.
- Control de contaminantes orgánicos emergentes en aguas subterráneas; 01/03/2014 - 29/02/2020; 12.705€.
- Determinación de contaminantes emergentes en agua; J. Caixach; 01/10/2019 – 01/10/2020; 12.100€
- Determinación de contaminantes orgánicos en la planta potabilizadora de Blanes. Evolución durante los procesos de tratamiento; J. Caixach; 01/10/2018 - 30/09/2019; 8.167€.
- Determinación de contaminantes orgánicos en muestras de agua; J. Caixach; 01/02/2019 – 31/01/2021; 15.300€
- Determinación de dioxinas y furanos en materias primas para la alimentación animal y en alimentos para animales; AE CSIC, M.P. (IDÆA), Ministerio Agri. y Pesca, Alimentación y Medio Ambiente; E. Abad; 03/12/2018 - 30/10/2019; 43.200€.
- Determinación de dioxinas y furanos en materias primas para la alimentación animal y en alimentos para animales; Ministerio de Agricultura y Pesca, Alimentación y Medio Ambiente (MAPA); E. Abad; 09/10/2020 – 09/01/2024; 129.600€
- Determinación de dioxinas y furanos en muestras de medios de muestreo y partes del tren de muestreo de emisiones atmosféricas de fuentes estacionarias de captaciones en continuo; 18/04/2017 - 30/06/2020; 14.520€.
- Determinación de dioxinas y furanos en muestras de suelo, vegetación y puntos de agua; 24/04/2017 - 31/12/2019; 77.440€.

- Determinación de dioxinas-furanos y PCBS similares a dioxinas en muestra biológica en el estudio epidemiológico en relación con la planta de valorización energética que forma parte del complejo medioambiental de Guipuzcoa; 01/12/2017 - 31/03/2019; 117.128€.
- Estudi en sòls de dioxines i furans al voltant de la planta de integral de valorització de residus de Sant Adrià de Besòs; 900556/2018; Area Metropolitana de Barcelona; J. Grimalt; 15/03/2018 - 14/03/2019; 19.946€.
- Estudio de contaminantes orgánicos en matrices ambientales; 01/07/2017 - 31/01/2019; 16.232€.
- Estudio de contaminantes orgánicos en matrices ambientales; E. Abad; 02/5/2019 – 31/12/2020; 10.875€
- Estudio de nuevos compuestos de la “2 watch list” por cromatografía de líquidos/espectrometría de masas de alta resolución (HPLC/MS/MS); J. Caixach; 09/04/2018 - 08/01/2019; 18.150€.
- Estudio relacionado con el análisis de compuestos orgánicos en matrices tales como agua de bebida envasada; 01/09/2012 - 31/08/2019; 164.923€.
- Global monitoring plan 2 - supporting developing countries; E. Abad; 14/02/2020 – 30/06/2020; 15.000€
- Screening de contaminantes orgánicos; 27/11/2017 - 26/11/2021; 17.424€.
- Servicio de análisis de NPEOS en muestras de sedimentos fluviales de Catalunya (acciones complementarias del proyecto directiva Marc del ICRA); J. Caixach; 27/05/2019 – 31/12/2019; 4.000€
- Servicio para las actividades de investigación, control y referencia en el ámbito de los contaminantes orgánicos persistentes halogenados en alimentos; Agencia Española Consumo, Seguridad Alimentaria y Nutrición; E. Abad; 01/09/2020 – 31/08/2021; 14.500€

# Global Change and Genomic Biogeochemistry



---

**Group** **Permanent Research Staff**  
Dachs Marginet, Jordi (Group leader)

**Postdoctoral Research Staff**  
Berrojalbiz Castrillejo, Naiara  
Vila Costa, Maria

**PhD Student**  
Casas Papell, Gemma  
Iriarte Martínez, Jon  
Martínez Arimon, Natàlia  
Martínez Varela, Alicia  
Trilla Prieto, Núria

**Technical Staff**  
Alcaráz Rocha, Luis Paulo  
Pizarro Guerrero, Mariana

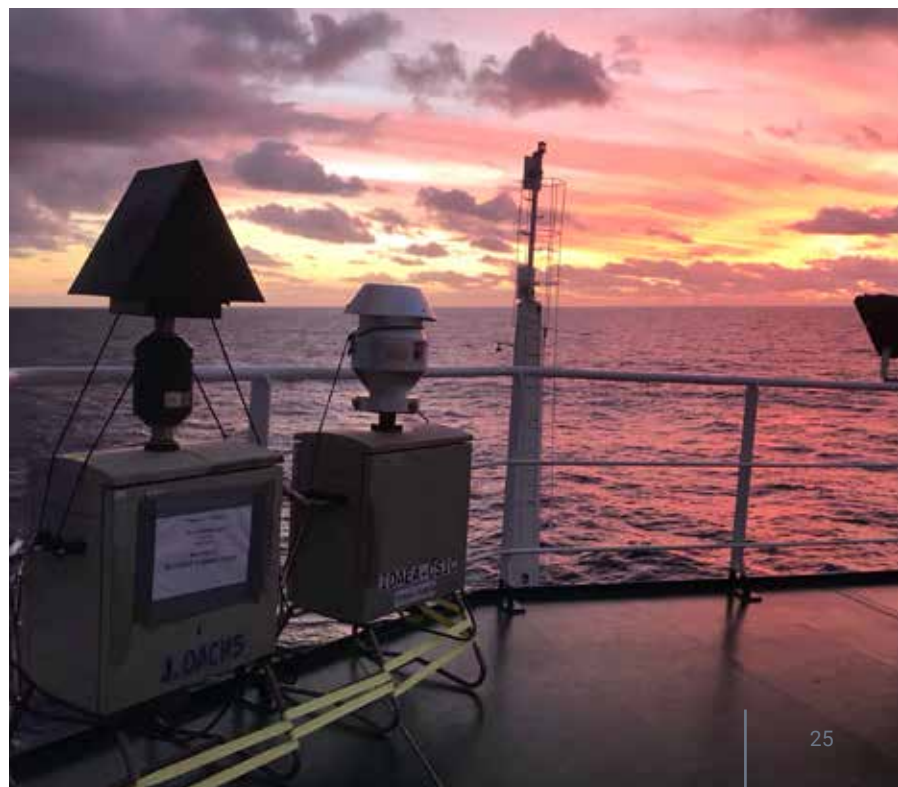


## Global Change and Genomic Biogeochemistry

The Global Change and Genomic Biogeochemistry group focuses its research on the anthropogenic organic component of the carbon and nutrient cycles at regional and global scale. This research is focused on the marine environment, from coasts to global oceans, and in polar environments, mainly in Antarctica.

The research approach combines the use of intensive field work in oceanographic campaigns, combining chemical analysis of anthropogenic compounds in seawater and organisms (plankton, bacteria, krill), characterization of the sources (atmospheric, currents...), the biogeochemistry of anthropogenic organic compounds, and the microbial-pollutant mutual interactions addressed through metagenomic and molecular approaches. The group is international leader on Oceanic and Antarctic research, with contributions addressing the transport, occurrence and fate of anthropogenic chemicals in all oceans, the role of biodegradation mitigating marine pollution, the comparison of the fate of plastics and plasticizers, and the influence of organic pollutants on microbiome's structure and function. The research group has also made important contributions on the atmospheric deposition of organic compounds in the oceans and the polar regions (both Arctic and Antarctica).

The research group combines scientists with expertise on environmental organic chemistry and microbial biogeochemistry and environmental genomics, and its evolution in recent years has involved the merging of chemical and metagenomic approaches to study the biogeochemistry of anthropogenic organic chemicals, their biodegradation by natural microbiomes and their effects on the major anthropogenic cycles of carbon and phosphorus.



## Projects

- COPEBIOME: Effect of pollution on marine eDNA and copepod-associated microbioma composition across a latitudinal oceanic transect; M. Vila, C. Barata; 01/06/2020 – 31/12/2021; 30.000€
- Global change and genomic biogeochemistry; 2017SGR800; Generalitat de Catalunya, AGAUR; Grup de recerca preconsolidat; J. Dachs; 01/01/2018 - 31/12/2020; 15.000€.
- Interacciones entre los contaminantes orgánicos sintéticos y las comunidades microbianas en aguas costeras; ISOMICS; CTM2015-65691-R; MINECO; M. Vila-Costa; 01/01/2016 - 30/06/2019; 174.000€.
- LINKAGES: Exploring the linkages between chemical, functional and taxonomical diversities in the upper ocean: towards a global ocean biogeochemical understanding. Spanish Ministry of Science, Innovation and Universities. Severo Ochoa program (Spain); M. Vila-Costa, P. Gago; From 09-2020; 90.000€.
- Transporte y biogeoquímica de contaminantes emergentes y materia orgánica antropogénica en el océano austral; PGC2018-096612-B-I00; Ministerio de Ciencia, Innovación y universidades / FEDER, Programa Estatal de generación de conocimiento y fortalecimiento cient. y tec. del sistema I+D+I - PEICTI 2017-2020; J. Dachs; 01/01/2019 – 31/12/2021; 234.000€



# Water, Environmental and Food Chemistry (ENFOCHEM)



## Group

### Permanent Research Staff

Barceló Cullerés, Damiá (Group leader)  
 Díaz Cruz, Silvia  
 Eljarrat Esebag, Ethel  
 Farré Urgell, Marinel·la  
 Ginebreda Martí, Antoni  
 López de Alda Villaizán, Miren  
 Pérez Solsona, Sandra

### Postdoctoral Research Staff

Álvarez Muñoz, Diana  
 Köck Schulmeyer, Marianne Alejandra  
 Llorca Casamayor, Marta  
 Montemurro, Nicola  
 Postigo Rebollo, Cristina  
 Žonja, Božo

### PhD Student

Aznar Alemany, Òscar  
 Balasch García, Aleix  
 Barbieri, Maria Vittoria  
 Contreras Llin, Albert  
 Fernández Arribas, Julio

Filatova, Daria

García Vara, Manuel  
 Gómez Navarro, Olga

Labad Roig, Francesc

López García, Ester

Manjarrés López, Diana

Pérez López, Carlos

Peña Herrera, Juan Manuel

Peris Domes, Andrea

Picardo, Massimo

Quintana López, Gerard

Sala Solà, Berta

Savva, Katerina

Schirinzi, Gabriella Francesca

Serra Roig, Maria Pau

Sunyer Caldú, Adrià

Vega Herrera, Albert

### Technical Staff

Borrell Díaz, Xavier

Romano Gude, Daniel

Sabater Liesa, Laia

## Water, Environmental and Food Chemistry (ENFOCHEM)

The Water, Environmental and Food Chemistry (ENFOCHEM) group focuses its research on the presence, impact and fate of organic pollutants in the water cycle, terrestrial environment, biota, food and humans, including not only those that are already regulated by legislation (priority contaminants), such as pesticides, polycyclic aromatic hydrocarbons, alkylphenols, phthalates, and brominated flame retardants, but also contaminants of emerging concern such as pharmaceuticals, personal care products, chlorinated paraffins, organophosphate plasticizers, plastic additives, drugs of abuse, perfluorinated compounds, silicones, nanomaterials and micro- and nano-plastics for which environmental occurrence and ecotoxicity data are very scarce. This involves their monitoring in field samples and assessment of their degradation/metabolism in different types of water matrices, particulate matter, sediments, soils, sewage sludge, air, aquatic and terrestrial organisms, crops, food and biological samples from humans. It further deals with the bioaccessibility, bioaccumulation and biomagnification through the food web of contaminants in biota and humans.

These objectives are achieved based on the development of advanced analytical methodologies (including non-target analysis by HRMS) as well as new techniques such as biosensors. This research line has a long history of monitoring activities, which have been carried out in very diverse areas, including aquatic environments: rivers, seas and remote, pristine areas such as the Antarctic; and terrestrial environments: agricultural and industrial areas, and National Parks such as Doñana.

## Projects

- Análisis del potencial de antibiosis de la biomasa de bofedales altoandinos en la Reserva Nacional de Salinas y Aguada Blanca, Arequipa, Peru; MHE-200050; Programa EMHE-CSIC 2017, ERANET-LAC; S. Díaz-Cruz; 01/01/2018 - 31/12/2020; 23.171€.
- Assessment of microplastics elimination in WWTPs and further water regeneration through soil-aquifer treatment to meet the new EU Regulation 2020/741 on requirements for water reuse concerning microplastics pollution. Spanish Ministry of Science, Innovation and Universities. Severo Ochoa program; S. Diaz-Cruz y J. Carrera; 1/9/-2020- 31/8/2023; 90.000 €.
- Contaminantes emergentes y prioritarios en las aguas reutilizadas en agricultura: riesgos y efectos en suelos, producción agrícola y entorno ambiental; LINKB20030, programa CSIC conexión internacional I-link+ para la promoción de la colaboración científica internacional del CSIC con instituciones extranjeras; D. Barceló; 01/01/2020 – 31/12/2021: 24.000€
- Desarrollo de metodologías analíticas para la determinación de plaguicidas en aguas y suelos y su aplicación en la evaluación de nuevos procesos de bioremediación ambiental (BECAS); CTM2016-75587-C2-2-R; MINECO; M. López de Alda, E. Eljarrat; 30/12/2016 - 31/12/2020; 121.000€.





- Enfoque innovador para la detección de sustancias citotóxicas y reprotóxicas en agua regenerada y potable (ENFOCAR); Fundación General del CSIC - ComFuturo; C. Postigo; 01/09/2018 - 31/08/2021; 124.800€.
- EUROpean quality Controlled Harmonization Assuring Reproducible Monitoring and assessment of plastic pollution (EUROQCHARM); H2020-CLIMATE/0775 – 101003805; European Commission, Coordination and Support Action (CSA); M. Farre; 01/11/2020 – 30/10/2023; 95.933€
- Evaluación de la exposición humana a aditivos químicos asociados al plástico; PID2019-110576RB-I00; Ministerio de Ciencia, Innovación y Universidades, Programa Estatal de I+D+I orientada a los retos de la sociedad; E. Eljarrat, T. Moreno; 01/06/2020 – 31/05/2023; 193.600€
- Evaluación del destino de plaguicidas y de los contaminantes orgánicos transmitidos por el riego con aguas residuales a los cultivos agrícolas y sus riesgos ambientales; PCIN-2017-067; MINECO, Acciones de Programación Conjunta Internacional; D. Barcelò. 01/10/2017 - 30/09/2020; 222.770€.
- Herramientas y tecnologías inteligentes para la evaluación del destino ambiental y el riesgo de los contaminantes en un nuevo escenario de cambio climático; RTI2018-097158-B-C33; Ministerio de Ciencia, Innovación y Universidades / FEDER, Programa Estatal de I+D+I orientada a los retos de la sociedad; S. Perez; 01/01/2019 – 31/12/2020; 134.000€
- Identificación de XENObioticos bioacumulables en mejillón siguiendo un enfoque METABOLOMI-Co: exposicion humana y ambiental; (XENOMETABOLOMIC); CTM2015-73179-JIN; MINECO, AEI/ FEDER/UE; D. Álvarez; 01/01/2017 - 31/12/2019; 194.810€.
- Impacto de la degradación de biomicroplasticos en el medioambiente; RTI2018-097860-J-I00; Ministerio de Ciencia, Innovación y Universidades, Programa Estatal de I+D+I orientada a los retos de la sociedad; M. Llorca; 01/11/2019 – 30/10/2022; 140.000€
- Impacto de las actividades agrícolas en la fauna de los Parques Nacionales; 2392/2017; Ministerio de Agricultura, Alimentación y Medio Ambiente, Proyectos de investigación científica en la red de parques nacionales; E. Eljarrat; 11/12/2019 – 11/12/2022; 69.340€
- Innovative tools enabling drinking WATER PROTECTIon in rural and urban environments; (Water-Protect); H2020-FOOD/0284 -727450; European Commission, Research and Innovation Act. (RIA); A. Ginebreda, M. López de Alda; 01/06/2017 - 31/05/2020; 214.186€.
- Life cycle effects from removing hazardous substances in sludge and plastic through thermal treatment; 302371; Research Council of Norway, MILJØFORSK programme; D. Barcelò; 16/03/2020 – 15/03/2024; 56.286€



- Managing the effects of multiple stressors on aquatic ecosystems under water scarcity (Globaqua); FP7- ENV.2013.6.2-1 – 603629; European Commission, Cooperation Environment; D. Barceló; 01/01/2014 - 31/01/2019; 899.177€
- Microplastics and microcontaminants in the Mediterranean coast: Toxicity and environmental and human health impacts (PLAS-MED); CTM2017-89701-C3-1-R; MINECO; M. Farré, E. Abad; 01/01/2018 - 31/12/2021; 177.870€.
- Nanopartículas inorgánicas y filtros solares comerciales en la Antártida: destino y efectos en comunidades microbianas naturales (INCSA RT\_12-19). Instituto Antártico Chileno (INACH). Ministerio de Relaciones Exteriores (Chile). S. Diaz-Cruz; 01/01/2020-31/12/2022. 63.000 €.
- Natural Toxins and Drinking Water Quality - From Source to Tap (NaToxAq); H2020-MSCA-ITN-2016 - 722493; European Commission, Marie Skłodowska-Curie Actions, Innovative Training Networks (ITN); M. Farré; 01/01/2017 - 31/12/2020; 460.000€.
- Nutritious, safe and sustainable seafood for consumers of tomorrow (SEAFOODTOMORROW); H2020-FOOD/0370 – 773400; European commission, Innovation Action (IA); E. Eljarrat; 01/11/2017 - 31/10/2020; 145.037€.
- Quality and management of intermittent rivers and associated groundwaters in the Mediterranean basins; 201980E121; CSIC, Proyecto Intramural; S. Perez; 01/07/2019 – 30/06/2022; 165.000€
- Recarga gestionada de acuíferos: abordando los riesgos de recargar agua regenerada (MARadentro); PCI2019-103603; Ministerio de Ciencia, Innovación y Universidades, Proyectos Programación conjunta internacional; S. Diaz-Cruz; 17/05/2019 – 16/04/2022; 149.090€
- Recàrrega gestionada d'aquífers i ús de substrats orgànics per accelerar la renaturalització de l'aigua (RESTORA- CA210/18/00040). Agència Catalana de l'Aigua (ACA). 01/2020- 12/2022. J. Carrera y S. Diaz-Cruz; 211.254€.
- Red científica sobre los riesgos de la contaminación y escasez del agua en ecosistemas acuáticos ibéricos en un contexto de cambio global: recomendaciones de gestión; RED2018-102737-T; Ministerio de Ciencia, Innovación y Universidades, Acciones de dinamización redes de investigación; D. Barceló; 01/01/2020 – 31/12/2021; 125.000€
- Riesgos emergentes de contaminación química y microbiológica en la reutilización de aguas residuales para riego agrícola: estudio integrado (ROUSSEAU); CTM2017-89767-C3-1-R; MINECO; S. Díaz-Cruz, Co-IP D. Barceló; 01/01/2018 –30/06/2021; 139.150€.

- Synergising International Research Studies into the environmental Fate and Behaviour of Toxic Organic Chemicals in the Waste Stream (INTERWASTE); H2020-MSCA-RISE/0253 – 734522; European Commission, Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE); E. Eljarrat; 01/01/2017 - 31/12/2020; 49.500€.
- Unidad de calidad del agua y suelos; 2017SGR1404; Agència de Gestió d'Ajuts Universitaris i de Recerca, Generalitat de Catalunya; (SGR); M.J. Lopez de Alda; 01/01/2018 – 30/09/2021; 44.480€

## Contracts

- Anàlises de pesticides em águas, solos e plantas, no âmbito do projeto fitofarmgest - código pdr2020-101-030926; M. Lopez de Alda; 02/03/2019 –31/12/2022; 51.000€
- Anàlisi de metabolits de drogues en aigües residuals per fer estimacions de consums poblacionals; M. López de Alda; 01/04/2019-31/12/2019; 17.533 €
- Anàlisi de metabolits de drogues en aigües residuals per fer estimacions de consums poblacionals; M. López de Alda; 29/06/2020-31/12/2020; 8.893 €
- Análisis de benzotriazoles en muestras de material vegetal mediante PLE-UHPLC-HRMS. Universidad Politécnica de Catalunya (UPC) S. Díaz-Cruz. 15/4/2019-1/6/2019; 2.440 €
- Análisis de composición de microplásticos en peces marinos, en el marco del proyecto MEDSEALITTER; 1134; Facultad de Biología, Universidad de Barcelona; E. Eljarrat; 01/11/2018 - 31/08/2019; 6.000€.
- Análisis de contaminantes orgánicos en muestras de aguas subterráneas mediante SPE-LC-MS/MS. Universidad Politécnica de Catalunya (UPC). S. Díaz-Cruz. 1/4/2019-31/5/2019; 2.974€
- Análisis de DDX y Dicofol en muestras de biota de Catalunya (acciones complementarias del proyecto directiva Marc del ICRA); E. Eljarrat; 17/05/2019 – 31/09/2019; 4.400€
- Análisis de HBCDDS en muestras de aguas superficiales continentales y aguas marinas/costeras y análisis de PBDES en muestras de biota de Catalunya (acciones complementarias del proyecto directiva Marc del ICRA); E. Eljarrat; 07/05/2019 – 31/03/2020; 5.530€
- Análisis de PAHS en muestras de sedimentos fluviales de Catalunya (acciones complementarias del proyecto directiva Marc del ICRA); E. Eljarrat; 15/05/2019 – 30/12/2019; 2.000€
- Análisis de plaguicidas en muestras de agua subterránea de Catalunya (acciones complementarias del proyecto directiva Marc del ICRA); M. Lopez de Alda; 01/04/2019 – 11/01/2020; 7.986€



- Análisis de retardantes de llama bromados (BFRS) y organofosforados (OPFRS) en muestras de aire y polvo en el marco del proyecto Flamerisk; E. Eljarrat; 15/01/2020 – 14/11/2020; 20.000€
- Análisis HCHS en muestras de sedimentos fluviales de Catalunya y (Acciones complementarias del proyecto directiva Marc del ICRA); E. Eljarrat; 17/05/2019 – 31/12/2019; 2.000€
- Assistència tècnica especialitzada per evaluar i confeccionar una llista de contaminants orgànics prioritaris i emergents al tram baix del riu Llobregat i reutilització de l'aigua de l'edar del prat per controlar i reduir el risc d'alteració ambiental; Agència Catalana de l'Aigua (ACA); D. Barceló y A. Ginebreda; 31/01/2018 - 31/01/2019; 14.375€.
- Desarrollo de un método analítico para la determinación y cuantificación de cloroalcanos en muestras de aguas superficiales continentales basado en la norma española une-en iso 12010; E. Eljarrat; 30/10/2019 – 30/10/2020; 30.000€
- Determinación de antibióticos y metabolitos en purines. Universidad de Zaragoza. S. Díaz-Cruz. 1/10/2019-30/4/2020; 9.075 €
- Determinación de contaminantes emergentes en fangos de estaciones depuradoras de aguas residuales (EDARs) del Consorci Besos Tordera. CCB SERVEIS MEDIAMBIENTALS. S. Díaz-Cruz. 1/7/2020-30/6/2022. 5.269 €
- Determination of UV filters in beach sand and water samples from Hawaii. Haereticus Environmental Laboratory (U.S.A). S. Díaz-Cruz. 13/4/2020- 8/7/2020. 2.520 €
- Determination of UV filters in beach sand samples from Hawaii: Haereticus Environmental Laboratory (U.S.A) S. Díaz Cruz. 1/4/2020- 30/2020. 2.700 €
- Development and validation of 2 analytical methods to determine two new sunscreens in sand and in water samples. Haereticus Environmental Laboratory (U.S.A). S. Díaz-Cruz. 10/2/2020- 13/3/2020. 2.725 €
- Estudio de contaminantes de la lista de observación según la Decisión (EU) 2015/495, conforme a la Directiva 2008/105/EC, en las masas de agua del País Vasco; M. López de Alda; 01/01/2019- 31/12/2019; 17.424 €
- Estudio de contaminantes de la lista de observación según la Decisión (EU) 2015/495, conforme a la Directiva 2018/840/EC, en las masas de agua del País Vasco; M. López de Alda; 24/03/2020- 23/02/2021; 14.520 €
- Servicio de análisis de plaguicidas en muestras de agua subterránea de Catalunya (acciones complementarias del proyecto directiva Marc del ICRA); M. Lopez de Alda; 16/05/2019 – 31/12/2019; 6.600€



# Human exposure to organic chemicals



---

**Group** **Postdoctoral Research Staff**  
Gago Ferrero, Pablo (Group leader)  
Gil Solsona, Ruben

---

### Human exposure to organic chemicals

Chemicals are part of our daily lives, and we are exposed to multiple chemicals through multiple pathways. Significant questions and huge gaps remain about their adverse human health impacts and societal costs. Relevant scientific evidence contributing to regulation of hazardous chemicals requires a holistic approach to assess simultaneous exposure to multiple compounds.

We use the last advances in analytical chemistry (advanced HRMS-based approaches) to obtain a more comprehensive understanding of the universe of chemicals that accumulate (or pseudo-accumulate) in humans and their link with the environment. Also, we link the exposure to those compounds with adverse health effects by (I) investigating changes in the metabolic pathways (applying metabolomics) and (II) evaluating adverse health outcomes in collaboration with epidemiologists. We also focus our research on the development of early warning systems for the detection of chemicals that may pose a threat to human health to prevent possible threats.

---

### Projects

- LINKAGES: Exploring the linkages between chemical, functional and taxonomical diversities in the upper ocean: towards a global ocean biogeochemical understanding. Spanish Ministry of Science, Innovation and Universities. Severo Ochoa program (Spain); M. Vila-Costa, P. Gago; From 09-2020; 90,000€.
- Mixing and dispersion in the transport of energy and solutes (MEDISTRAES). Funded by I+D+i Retos Investigación (Plan Nacional, Spain); P. Gago; From 01/01/2020; €151.196.
- Towards a comprehensive understanding of human exposure to hazardous chemicals, La Caixa Foundation (EU H2020); P. Gago; From 09-2020; 310.000€

## Geosciences Department



## Environmental Geochemistry and Atmospheric Research (EGAR)

---

### Group

**Permanent Research Staff**

Alastuey Urós, Jose Andrés  
 Amato, Fulvio  
 Minguillón Bengochea, María Cruz  
 Moreno Palmerola, Natalia  
 Moreno Pérez, Teresa  
 Querol Carceller, Xavier (Group leader)  
 Tobías Garcés, Aurelio  
 Viana Rodríguez, Mar

**Postdoctoral Research Staff**

Córdoba Sola, Patricia  
 Giró Paloma, Jessica  
 Izquierdo Ramonet, María  
 Karanasiou, Angeliki  
 Pandolfi, Marco  
 Pérez Lozano, Noemí  
 Reche Andúgar, Cristina

**PhD Student**

Carnerero Quintero, Cristina  
 Fernández Iriarte, Amaia

López Olivé, Maria  
 Massagué Obradors, Jordi  
 Ribalta Carrasco, Carla  
 Salmatonidis, Apostolos  
 Trechera Ruiz, Pedro  
 in't Veld, Marten  
 Via González, Marta  
 Yus Díez, Jesús

**Technical Staff**

Bartrolí Solé, Rafael  
 Blanco Zarcero, Diana  
 Cabañas Albero, Mercè  
 Canals Angerri, Anna  
 Font Piqueras, Oriol  
 García Martínez, Miriam  
 Gil Sánchez, Jordi  
 Martínez Sánchez, Silvia  
 Olmos Liberal, Mar  
 Parga Toledo, Jesús  
 Vázquez de la Hera, Rebeca

## Environmental Geochemistry and Atmospheric Research (EGAR)

The Environmental Geochemistry and Atmospheric Research group investigates the chemical and physical processes responsible for the emission, transport, fate and removal of atmospheric pollutants that impact on human health and ecosystems. A major objective is to investigate measures (technological and non-technological) to improve air quality and reduce human exposure to air pollution. Main research lines include, air quality research, source apportionment assessment, atmospheric processes affecting air quality, aerosols and climate change (interpreting optical aerosol radiative effects), human exposure to air pollutants, including commuting, schools, occupational and other indoor and outdoor environments, industrial emissions and industrial wastes (environmental impact and utilisation).

### Projects

- Aerosol, Clouds and Trace Gases Research Infrastructure Implementation Project (ACTRIS-IMP); H2020-INFRA/0614 – 871115; European Commission, Research and Innovation Act. (RIA)- INFRAS; A. Alastuey; 01/01/2020 – 31/12/2023; 12.235€
- Aerosols, Clouds and Trace gases Preparatory Phase Project (ACTRIS PPP); H2020-INFRA/ 0274 – 739530; European Commission, CSA (COOR. & SUP. ACTION); A. Alastuey; 01/01/2017-31/12/2019; 24.535€.
- Aerosols, Clouds, and Trace gases Research Infrastructure (ACTRIS 2); H2020-INFRA/0038 - 654619; European Commission, Research and Innovation action (RIA); A. Alastuey; 01/04/2015 - 31/03/2019; 108.863€.
- Calidad del aire en el interior de autobuses de transporte public (BUSAIR); CGL2016-79132-R; Plan Nacional Retos; T. Moreno; 31/12/2016 - 31/12/2019; 128.000€.
- Cambios en la composición de los aerosoles y sus implicaciones en calidad del aire y clima en el NE de España (CAIAC); PID2019-108990RB-I00; Ministerio de Ciencia, Innovación y Universidades, programa estatal de I+D+I orientada a los retos de la sociedad; X. Querol, M. Pandolfi; 01/06/2020 – 31/05/2023; 235.000€
- Chemical On-Line cOmpoSition and Source Apportionment of fine aerosol (COLOSSAL); European Commission, COST Action CA16109; MC. Minguillón; 03/03/2017 - 02/09/2021; 583.512€.
- Co-development of Climate Services for adaptation to changing Marine Ecosystems; OPE01726; Swedish Research Council Formas, ERA-NET ERA4CS, X. Querol, A. Alastuey, F. Amato; 15/09/2017 – 28/02/2021; 40.000€
- Detección de episodios naturales de aportes transfronterizos de partículas y otras fuentes de contaminación de material particulado, y de formación de ozono troposférico; 17CAES010; Minis-



terio de Agricultura y Pesca, Alimentación y Medio Ambiente (MAPAMA); X. Querol y A. Alastuey; 17/04/2018 - 16/11/2021; 551.634,27€.

- Emisión de partículas en áreas portuarias generación, destino y gestión; RTI2018-098095-B-C21; Ministerio de Ciencia, Innovación y Universidades / FEDER, programa estatal de I+D+I orientada a los retos de la sociedad; M. Viana; 01/01/2019 – 31/12/2021; 80.000€
- Emisiones non-exhaust por tráfico rodado: desarrollo de medidas basadas en el impacto en calidad del aire, salud e implicaciones de la penetración de vehículos eléctricos; PID2019-110623RB-I00; Ministerio de Ciencia, Innovación y Universidades, programa estatal de I+D+I orientada a los retos de la sociedad; F. Amato; 01/06/2020 – 31/05/2023; 140.000€
- Episodios de altos niveles de ozono, partículas ultrafinas y aerosoles secundarios en ambientes de fondo urbano y regional en el NE de España; CGL2016-78594-R; Ministerio de Ciencia e Innovación; X. Querol, A. Alastuey; 01/12/2016 - 31/12/2019; 322.000€.
- Evaluación de la exposición humana a aditivos químicos asociados al plástico; PID2019-110576RB-I00; Ministerio de Ciencia, Innovación y Universidades, Programa Estatal de I+D+I orientada a los retos de la sociedad; E. Eljarrat, T. Moreno; 01/06/2020 – 31/05/2023; 193.600€
- Evaluación de la presencia y de la eficiencia de desinfección de SARS-CoV-2 en superficies y aire de autobuses de transporte público; CSIC-COV19-154; CSIC, Fondos COVID; T. Moreno; 22/06/2020 – 21/06/2021; 30.000€
- Evaluation and improvement of the parameterization of aerosol hygroscopicity in global climate models using in-situ surface measurements; DE-SC0016541; US Department of Energy; DE-FOA-0001430; G. Titos; 01/11/2016 - 30/10/2019; 608.033US\$ (CSIC: 43.267,89€).
- FRontiers in dust minerAlogical coMposition and its Effects upoN climate (FRAGMENT); H2020-ERC-COG/0392 - 773051; European commission, European Research council, ERC-Consolidator Grant; X. Querol; 01/10/2018 - 30/09/2023; 503.256€.
- Geoquímica Ambiental e Investigación Atmosférica (EGAR); 2017 SGR 00041; Generalitat de Catalunya, AGAUR, SGR; X. Querol; 01/01/2018 - 31/12/2020; 44.480€.
- Las chicas son de ciencias; FCT-19-14462; Fundación Española Ciencia y Tecnología-FECYT, Programa de la cultura Científica y de la Innovación; M. Viana; 01/07/2020 – 29/06/2021; 12.000€
- Pre-natal exposure to urban AIR pollution and preand post-Natal Brain development - AIR-NB; H2020-ERC-ADG/0526 – 785994; European commission, European Research council, ERC-Advanced Grant; X. Querol, 01/09/2018 – 31/08/2023; 142.000€





- Producción y manipulación segura de nanomateriales en la industria cerámica; PCIN-2015-173-C02-01; Ministerio de Economía y Competitividad, acciones de Programación Conjunta Internacional; M. Viana; 01/12/2015 – 31/07/2019; 181.655€
- Recovery of added-valuable Elements from Copper Primary Production: fast track (RECOPP); H2020-EIT/0657 – EIT18398; European Commission, EIT RAW Materials; P. Cordoba; 29/07/2019 – 28/12/2019; 47.555€
- Reducing risks from Occupational exposure to Coal Dust (ROCD); H2020-RFCS/0323 - 754205; European Commission, Research Fund for Coal and Steel; T. Moreno; 01/07/2017 – 30/09/2020; 216.520€
- Traffic-related air pollution and birth weight: the roles of noise, placental function, green space, physical activity, and socioeconomic status (FRONTIER); 4959-RFPA15-1/18-1; Health Effects Institute, RFA 17/1; X. Querol; 01/06/2019 – 31/05/2021; 27.509€
- Validación y puesta a punto de un equipo de fluorescencia de rayos-x por dispersión de energías (EDXRF) para el análisis de muestras ambientales y su comparación con el método de digestión ácida y posterior análisis por ICP-AES y ICP-MS; 201830I035; CSIC; N. Moreno; 22/11/2018 - 21/11/2019; 5.000,00€
- Wildfire emissions, exposure and human health risks in a changing climate; EIN2019-103405; Ministerio de Ciencia, Innovación y Universidades, acciones de Dinamización Europa Investigación; M. Viana; 01/06/2019 – 31/05/2021; 8.055€

---

### Contracts

- Análisis semanales de muestras sólidas y líquidas procedentes de la Desulfuración de la central térmica de Teruel; Endesa Generación SA; P. Córdoba y X. Querol; 13/02/2018 – 31/12/2019; 13.650€.
- Analysis of aerosol particles obtained by using instruments provided by the Company; CSIC and AEROSOL D.O.O.; M. Pandolfi y A. Alastuey; 01/12/2018 - 30/06/2020; 83.853€.
- Avaluació de l'eficàcia de murs vers i eco-xamfrans ecològics en la millora de la qualitat de l'aire i en l'àmbit de la reducció de la contaminació atmosfèrica, a diverses escoles de la ciutat, dintre del projecte escola respira; F. Amato; 01/01/2019 – 31/12/2019; 18.082€
- Chemical characterization and source apportionment of personal exposure samples to PM10; F. Amato; 22/01/2020 – 21/07/2020; 13.857€

- Elemental analysis of PM10 and PM2.5 filter samples by ICP-AES and ICP MS; CSIC and Federal Office for the Environment (FOEN); A. Alastuey; 01/06/2018 - 30/11/2019; 100.000€.
- Estudio de contribución de las emisiones atmosféricas de la planta de valorización energética de las lomas a la contaminación detectada en las proximidades del parque tecnológico de valdemingomez; A. Alastuey; 02/09/2019 – 01/03/2021; 198.700€
- Estudio presencia de SARS-CoV2 en superficies de autobuses y metros; TMB. T. Moreno; 03/12/2020 – 02/03/2021; 5.000€
- Identificació de fonts contaminants atmosfèrics en diferents zones de Catalunya; X. Querol; 26/03/2018 - 26/03/2019; 195.778€.
- Interpretación de la monitorización de la calidad del aire en pistas de atletismo; M. Viana; 01/06/2020 – 31/08/2021; 25.306€
- Mineralogical and geochemical characterization of coal and coal-related samples; X. Querol; 20/07/2020 – 19/01/2021; 12.420€
- The first service contract entitled service contract n° ecmwf/copernicus/2019/cams\_21a\_cnrs-ige/sc1; A. Alastuey; 11/02/2020 – 11/01/2021; 13.011€

# Groundwater and Hydrogeochemistry



## Group

### Permanent Research Staff

Ayora Ibáñez, Carlos  
Carrera Ramírez, Jesús (Group leader)  
Cama Robert, Jordi  
Dentz, Marco  
Queralt Mitjans, Ignasi  
Soler Matamala, Josep Maria  
Vázquez Suñé, Enric  
Vilarrasa Riaño, Víctor

### Postdoctoral Research Staff

de Campos Aquino, Tomás  
Carrero Romero, Sergio  
Criollo Manjarrez, Rotman A.  
Hidalgo González, Juan José  
Holtzman, Ran  
Jurado Elices, Anna  
Lapeyre, Gerald John

Macías Suárez, Francisco  
Parisio, Francesco  
Pujades Garnes, Estanislao  
Puyguiraud, Alexandre  
Rahimzadeh Kivi, Iman  
Rodríguez Dono, Alfonso  
Rusiñol Arantegui, Marta  
Scheiber, Laura Pagès  
Valhondo González, Cristina

### PhD Student

Bertran Oller, Oriol  
Bulboa Foronda, Ignacio  
Fernández Rojo, Lidia Cristina  
Giannetta, Max  
Goyetche, Tybaud  
Gutiérrez León, Joan  
Hassanzadeh, Ashkan  
Lozano Letellier, Alba

Marazuela Calvo, Miguel Ángel  
Martínez Pérez, Laura  
Ortiz Montealegre, Sara  
Palacios Perluissi, Andrea  
Pérez Fonseca, Lázaro Jorge  
Pérez Hueros, Paloma  
Sciandra, Dario  
Vaezi Anzeha, Iman  
Vafaie, Atefeh  
del Val Alonso, Laura  
Valdivielso Mijangos, Sonia  
de Vriendt, Kevin

### Technical Staff

Bellés Felip, Jordi  
Palau Capdevila, Jordi



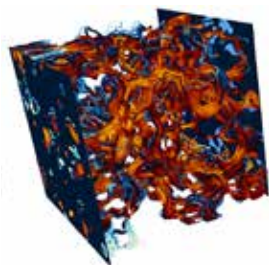
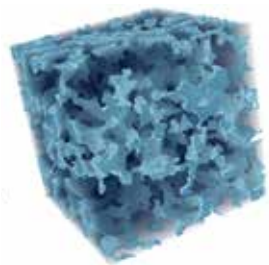
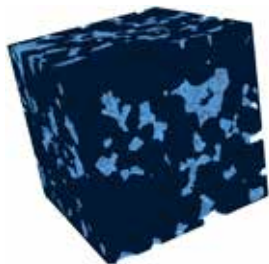
## Groundwater and Hydrogeochemistry

The Groundwater and Hydrogeochemistry group studies the hydraulic, chemical, thermal and mechanical processes that take place in porous media from pore to regional scale. The group employs mathematical and numerical approaches as well as laboratory and field scale experiments and sampling methods (using hydraulic, hydro-geochemical and environmental isotope data sampled directly or through specifically designed tests). The group is active in the development of numerical and mathematical models and modelling techniques for complex porous media processes across spatial and temporal scales, laboratory and field scale experimentation and sampling and data analysis. This includes geospatial data and information management. Applications include the assessment and management of groundwater resources, groundwater and soil remediation, the management of urban aquifers, the study of emerging pollutants in urban aquifers and artificial recharge facilities, the study of wetlands, seawater intrusion in coastal aquifers, water management in mining operations, civil works, storage of waste and/or its recovery, water decontamination methodologies, the study of the unsaturated zone, the study of the hydro-thermo-mechanical and chemical processes associated with the injection and extraction of fluids at great depth (storage of CO<sub>2</sub>, storage of nuclear waste, geothermal energy, shale gas, induced seismicity).

## Projects

- Aislamiento Zonal Perforación y Explotación EGS; PCI2018-093272; Ministerio de Ciencia, Innovación y Universidades, acciones de Programación Conjunta Internacional; J. Carrera, V. Villarrasa; 03/09/2019 – 02/08/2021; 100.000€
- Biogeoquímica urbana: integrar el aire, el agua, el suelo y la ciencia microbiológica para la gestión de la contaminación; RTI2018-097346-B-I00; Ministerio de Ciencia, Innovación y Universidades, programa estatal de I+D+I orientada a los retos de la sociedad; E. Vázquez; 01/01/2019 – 31/12/2021; 160.000€
- Contaminantes de preocupación emergente en acuíferos urbanos: ¿son un problema para el uso del agua subterránea?; PID2019-107945RJ-I00; Ministerio de Ciencia, Innovación y Universidades, programa estatal de I+D+I orientada a los retos de la sociedad y CSIC; A. Jurado; 01/12/2020 – 30/11/2023; 145.000€
- El problema del cromo hexavalente en un sector de la cuenca del Matanza-Riachuelo: Evaluación de Estrategias de Remediación en las aguas subterráneas; MHE-200039; CSIC; C. Ayora; 01/03/2017 - 31/12/2019; 25.500€.
- Equipment for high performance scientific computing in the simulation of coupled processes in heterogeneous porous and fractured media, and complex hydrological systems; EQC2019-005754-P; Plan Estatal de Investigación Científica y Técnica y de Innovación 2017-2020; M. Dentz; 01/01/2019 – 31/12/2021; 99.518,27€.





- European training network for in situ imaging of dynamic processes in heterogeneous subsurface environments (ENIGMA); H2020-MSCA-ITN-ETN/0212 - 722028; European Commission, Marie Skłodowska-Curie Actions, Innovative Training Networks (ITN); J. Carrera, M. Dentz; 01/01/2017 - 31/12/2020; 495.745€.
- Geoquímica de escandio, ytrio y tierras raras en drenajes ácidos de mina. Implicaciones económicas; CGL2016-78783-C2-2-R; Ministerio de Economía y Competitividad. Programa Estatal de Investigación, Desarrollo e Innovación orientada a los Retos de la Sociedad; C.Ayora, I.Queral; 01/01/2017 - 31/12/2020; 102.000€.
- Herramientas y criterios para la gestión de las aguas subterráneas en zonas urbanas; PCI2019-103616; Ministerio de Ciencia, Innovación y Universidades, Programación Conjunta Internacional; E. Vázquez; 01/09/2019 – 31/08/2022; 154.877€
- Interacción cemento Portland – roca en medios ácidos: secuestro geológico del CO<sub>2</sub> y gestión de residuos de minas de sulfuros (PCROCKSS); CGL2017-82331-R; Ministerio de Economía y Competitividad. Programa Estatal de Investigación, Desarrollo e Innovación orientada a los Retos de la Sociedad; J. Cama, JM. Soler; 01/01/2018 - 31/12/2020; 108.900€.
- MEzcla y DISpersión en el TRANsporte de Energía y Solutos (MEDISTRAES); CGL2016-77122-C2-1-R; Ministerio de Economía, Industria y Competitividad; J.Carrera; 30/12/2016 - 29/12/2019; 102.850€.
- Mezcla y dispersión en el transporte de energía y solutos; PID2019-110212RB-C21; Ministerio de Ciencia, Innovación y Universidades, programa estatal de I+D+I orientada a los retos de la sociedad; J. Carrera; 01/01/2020 – 31/12/2022; 151.000€
- Mixing in Heterogeneous Media Across Spatial and Temporal Scales: From Local Non-Equilibrium to Anomalous Chemical Transport and Dynamic Uncertainty (MHetScale); I-ERC/3313 - 617511; European Commission, European research council; ERC-Consolidator Grant; M. Dentz; 01/04/2014 - 31/03/2020; 1.904.186,00€.
- MOdular Recovery process services for hydrometallurgy and water treatment (Morecovery); H2020-EIT/0550 – EIT18190; European Commission, EIT RAW Materials; J.M. Soler, C. Ayora; 01/01/2019 – 31/12/2021; 121.235€
- Nitrogen removal from waste rock (NITREM); H2020-EIT/0437 - EIT17013; European Commission, EIT RAW Materials; J. Carrera; 01/01/2018 – 31/03/2021; 149.271,51€
- predictinG EaRthquakES induced by fluid injection (GEOREST); H2020-ERC-STG/0479 – 801809; European Commission, European research council; ERC-Starting Grant; V. Vilarrasa, 01/02/2019 – 31/01/2024; 1.438.201€

- Quantification of mixing and dynamic uncertainty for transport in heterogeneous porous media (MIXUQ); H2020-MSCA-IF-EF-ST/0680 – 895152; European Commission, Marie Skłodowska-Curie Actions, Individual fellowship (IF); M. Dentz; 01/12/2020 – 28/02/2023; 160.932,48€
- REcàrrega gestionada d'aqüífers i ús de SubsTrats ORgànics per Accelerar la renaturalització del aigua (RESTORA); ACA/210/18/0040; Agencia Catalana del Agua (ACA), Proyectos de investigación en la gestión del agua y la preservación y mejora del medio acuático; J. Carrera; 28/01/2020 – 27/01/2023; 211.254€
- Un nuevo enfoque para el escalado de flujo multifásico, deformación mecánica y transporte hidrodinámico en medios permeables: nuevos enfoques estocásticos y teoría de escalado; PID2019-106887GB-C31; Ministerio de Ciencia, Innovación y Universidades, Programa Estatal de generación de conocimiento y fortalecimiento cient. y tec. del sistema I+D+I - PEICTI 2017-2020; M. Dentz, J.J. Hidalgo; 01/06/2020 – 31/05/2023; 145.200€

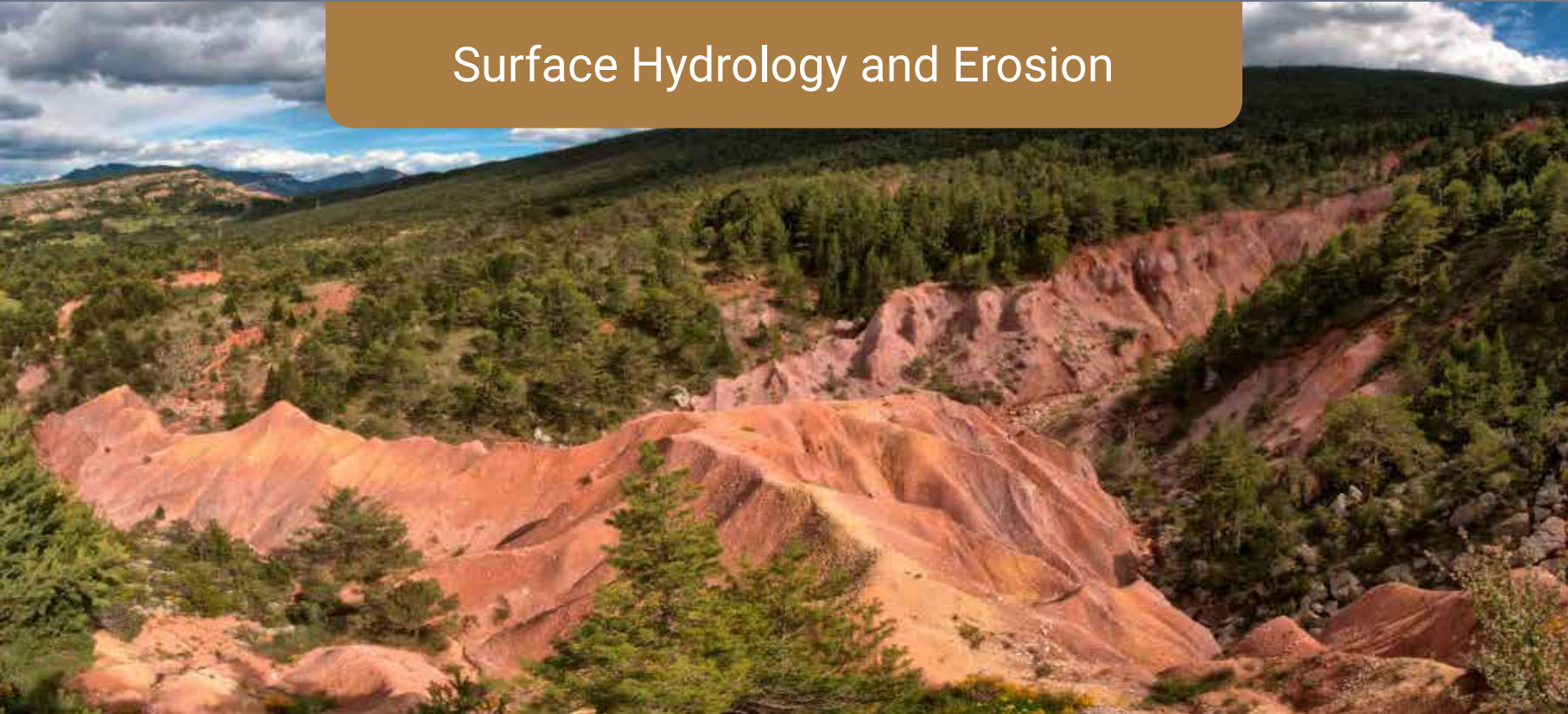
## Contracts

- Anàlisi hidrogeològica de les deformacions del terreny al túnel urbà de la línia Llobregat-Anoia, E. Vázquez; 19/06/2019 – 18/06/2020; 12.500€
- Apoyo tecnológico para la validación, sistematización y apoyo de la implementación de un modelo hidrológico e hidrogeológico de la cuenca de Katari y lago menor del Titicaca; E. Vázquez; 08/10/2019 – 12/12/2019; 53.800€
- Asesoría para el diseño, seguimiento y adecuación de la implementación de los sistemas de drenaje y el control hidráulico de la conexión de los pozos verticales con el túnel del ave (tramo Sants - Sagrera); E. Vázquez; 16/09/2020 – 15/03/2021; 33.000€
- Establecimiento de porcentajes de mezcla en las aguas de corta (CLC); E. Vázquez; 03/07/2017 - 02/07/2019; 66.005,50€.
- Estudio de la aplicación eficiente de los procesos de lavado domésticos y concienciación en el consumo responsable del agua; E. Vázquez; 01/06/2020 – 28/11/2021; 11.000€
- Estudio de la intrusión marina en los acuíferos del Poble Nou y su posible evolución futura en el mar de las obras de la Plaça les Glòries; E. Vázquez; 27/01/2020 – 26/01/2021; 46.827€
- Evaluation of the SKB Task Force on Modeling of Groundwater Flow and Transport of Solutes, Increasing the realism in solute transport modeling – Modeling the field experiments of REPRO and LTDE-SD; JM. Soler; 03/05/2018 – 15/05/2021; 74.073€.



- Modelado del flujo subterráneo en el ámbito del trazado de la línea 8 y evaluación de efectos sobre los acuíferos de la ciudad de Barcelona; E. Vázquez; 20/11/2020 – 19/03/2021; 25.219€
- Modeling of the ci-d experiment at Mont Terri; J. Soler; 20/10/2020 – 30/06/2022; 36.416€
- Modelización de transporte reactivo para el diseño de una planta de tratamiento pasivo de aguas de mina; C. Ayora; 30/10/2019 – 29/04/2020; 30.094€
- Modelling of the monopole-2 in situ diffusion experiment and predictive modelling of the Phase 4 in situ test (Grimsel Test Site – Long-Term Diffusion project); JM. Soler; 12/04/2018 - 11/01/2019; 14.660€.
- Modelo hidrogeológico 3d de los acuíferos del delta del Llobregat; E. Vázquez; 15/02/2019 – 14/12/2019; 39.000€
- Realización del proyecto de investigación y desarrollo titulado “aiblocks4water”, en colaboración con la empresa Neuritelab; J. Carrera; 11/11/2020 – 10/07/2021; 14.500€
- Redacció d un informe tècnic especialitzat de la problemàtica de filtracions de les aigües freàtiques als soterrani de les promocions d’habitatges de la Rambla Prim 160-166 de Barcelona; E. Vázquez; 13/07/2020 – 13/09/2020;
- Revisión cálculos hidrogeológicos y seguimiento de los efectos producidos por el agotamiento del freático en el ámbito de la ejecución del túnel de la Plaza de las Glorias; Ajuntament de Barcelona / BIMSA; E. Vázquez; 01/05/2018 – 31/05/2020; 39.200€.
- Scientific and technical assistance related to modelling of poroelastic effects relevant for risk assessment of induced seismicity; V. Vilarrasa; 21/02/2018 - 28/02/2019; 25.000€
- Scoping calculations for gts-cim (grimsel test site - in situ migration of c-14 and i-129 in cement) at the grimsel test site (gts); JM. Soler; 16/07/2018 - 15/01/2019; 10.247€.
- Trabajos de modelación hidrogeológica SQM-Salar; SQM, Chile; E. Vázquez; 20/04/2018 - 19/04/2021; 304.793€.

# Surface Hydrology and Erosion



---

**Group** **Permanent Research Staff**  
Gallart Gallego, Francesc (Group leader)  
Latron, Jérôme  
Llorens García, Pilar

**Postdoctoral Research Staff**  
Molina Herrera, Antonio Jaime  
Moreno de las Heras, Mariano

**PhD Student**  
Cayuela Linares, Carles  
Luckert, Andreas  
Pinos Flores, Juan Andrés

**Technical Staff**  
Bertran Creus, Gisela  
Blanco Romero, Alejandro  
Sánchez Costa, Elisenda

## Surface Hydrology and Erosion

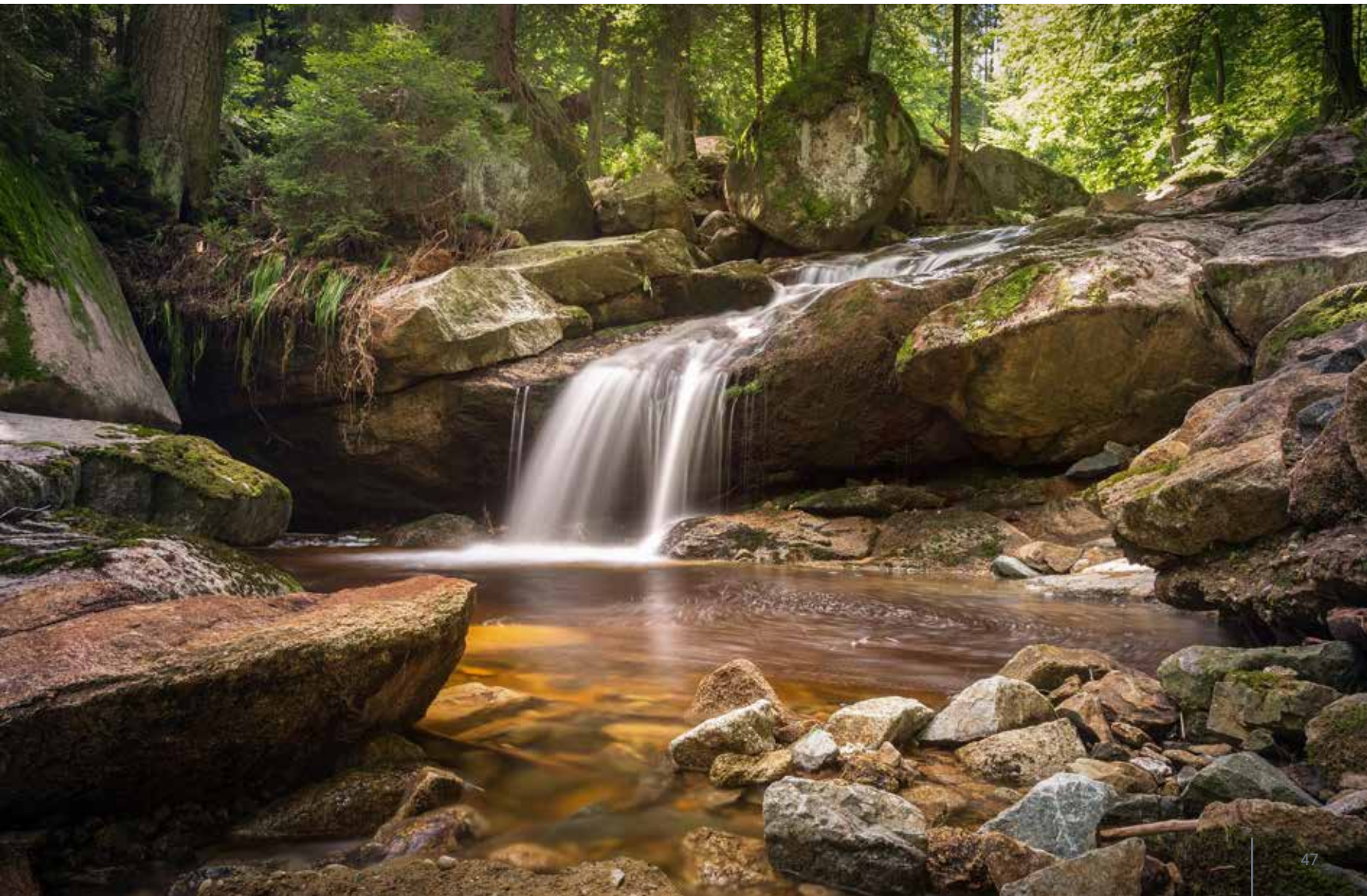
The Surface Hydrology and Erosion group is oriented towards the study of the hydrological dynamics of Mediterranean mountain areas using a multidisciplinary and multiple-scale approach. Several aspects of the hydrological cycle are investigated, utilising the Vallcebre Research Catchments (NE Spain) as a field laboratory to observe, quantify and model hydrological processes at the plot and catchment scale. The role of forests on hydrological processes and balances, the societal challenges induced by intense erosion processes and the regime of temporary rivers are among the main research subjects studied by this unit.

### Projects



- DYNAMIcs of abandoned TERRace Mediterranean landscapes under global change (MASCC DYNAMITE); PCIN-2017-061/AEI; Arimnet2 Call (2014)-ERA-NET European Commission's 7th Framework Programme – MINECO, Programa Estatal de I+D+I Retos; J. Latron; 01/01/2017 - 31/12/2019; 48.600€.
- Estat ecològic dels rius temporals: mètodes d'avaluació de les bases desconnectades (TRivers-P); ACA/210/18/0022; Agencia Catalana del Agua (ACA), Proyectos de investigación en la gestión del agua y la preservación y mejora del medio acuático; F. Gallart; 01/01/2020 – 27/01/2022; 39.270€
- Patrones espacio-temporales de transferencia de agua en cuencas mediterráneas de cabecera. Conexiones entre vegetación y respuesta hidrológica; CGL2016-75957-R AEI/FEDER, UE; MINECO. Programa Estatal de I+D+I Retos; P. Llorens; 01/12/2016 - 31/12/2019; 121.000€.
- The impacts of forest management and climate change on rainfall partitioning: their effects on soil moisture and groundwater recharge; LINKA20045, programa CSIC conexión internacional I-link+ para la promoción de la colaboración científica internacional del CSIC con instituciones extranjeras; P. Llorens; 01/01/2019 – 31/12/2020; 18.512€
- Utilizando los isotopos estables del agua para desenredar el funcionamiento eco-hidrológico de las cuencas de cabecera mediterráneas; PID2019-106583RB-I00; Ministerio de Ciencia, Innovación y Universidades, Programa Estatal de I+D+I orientada a los retos de la sociedad; J. Latron; 01/06/2020 – 31/05/2023; 140.000€

- Contracts**
- Avaluació de la gestió forestal sobre recursos hídrics a vallcebre; J. Latron; 01/05/2019 – 31/12/2019; 12.040€
  - Convenio entre la AE CSIC-IDÆA y la Universidad de Barcelona -ub- para la colaboración institucional para financiar las tareas que tienen que realizar el grupo FEHM del IDÆA-CSIC Trivers; 2017SGR01643; AGAUR y UB; F. Gallart; 01/02/2019 – 01/02/2021; 15.000€
  - Tractament de la informació hidrològica pre-actuació dins el marc del projecte Life+ CLIMARK; 20183167; Centre Tecnològic Forestal de Catalunya; J. Latron y P. Llorens; 01/01/2018 - 31/12/2020; 19.421€.





---

### Gas Chromatography

#### Staff

Fernández Escobar, Inmaculada  
(Service supervisor)

This service has currently twelve gas chromatographs equipped with different detectors (FID, ECD, NPD). Most of them have automated systems to introduce liquid samples or by SPME into Split/Splitless, On-Column or PTV injectors. The service is available to users as self-service who are supported by a technician assigned to the service. The greater part of applications that are carried out within this service are related to environmental pollution, for example Alkenone determination in paleoclimatic studies (GC -FID), Trihalomethane analysis (HS- SPME -GC -ECD), Priority organic pollutants (PCBs, pesticides, ...) in environmental and biological samples (GC -ECD), Monitoring organic synthesis reactions (GC-FID).



---

## High Resolution Mass Spectrometry

### Staff

Sauló Dalmau, Jordi  
(Service supervisor)

This service is suitable for analysis at trace levels and sub-traces and is currently used mainly for the analysis of persistent organic pollutants in environmental matrices and food. The service includes:

1. High resolution HRMS: High Resolution Mass Spectrometer, AutoSpec Ultima NT. (Waters), MS magnetic sector coupled to a high-resolution gas chromatograph.
2. Low Resolution LRMS: Low resolution Mass Spectrometer ISQ, (Thermo Scientific) MS single quadrupole, coupled to a high-resolution gas chromatograph.

---

## Advanced Mass Spectrometry Analysis: Orbitrap

### Staff

Flores Rubio, Cintia  
(Service supervisor)

The primary role of this Service is the analysis of substances at trace levels in environmental and food matrices by liquid chromatography coupled to high resolution mass spectrometry and electrospray ionization (LC-ESI-HRMS). The performance of LC-HRMS-Orbitrap system that differentiates against other LC-MS systems is the accurate mass measurements of isolated compounds and their fragmentation products on food and environmental samples.

Examples of priority and emerging organic compounds studied: Drugs, cytostatic compounds, haloacetic acids, surfactants, perfluorinated compounds, pharmaceuticals, pesticides, marine toxins, cyanotoxins, lipids, triglycerides, etc.





### Laboratory of Mass Spectrometry – Organic Pollutants

The main research activity of the service focuses in developing analytical methodologies based on mass spectrometry for different organic compounds like: persistent organic pollutants, priority and emerging substances.

#### Staff

Caixach Gamisans, Josep  
(Service supervisor)

Bartolomé Rodríguez, Arancha  
Cortina Masana, Montserrat  
Flores Rubio, Cintia  
Herrera Hernández, Eva María  
Mateo Pérez, Bárbara  
Planas Pasto, Carles

- Research and development of analytical methodologies based on High Resolution Mass Spectrometry (HRMS) and Mass Spectrometry in Tandem (MS/MS) for the analysis of persistent, emerging and priority organic contaminants in environmental and food matrices.
- Transformation of organic pollutants in the water treatment processes.
- Analysis of biotoxins in water.
- Characterization of dissolved organic matter.
- Research of substances capable of giving tastes and smells in consumer beverages.



---

### Mass Spectrometry-Special Techniques

The Mass Spectrometry-Special Techniques Service is composed by a large number of mass spectrometers hyphenated to gas and liquid chromatographs. It is devoted to trace organic analysis in all sort of samples, namely environmental matrices and foodstuffs. These instruments are very powerful and allow the analysis of pure compounds, and also complex mixtures.

#### Staff

Chaler Ferrer, Roser  
(Service supervisor)

In GC-MS, we analyze volatile and semi-volatile compounds. The service encompasses priority pollutants (as pesticides, aromatic hydrocarbons PAHs, polychlorinated biphenyls PCBs, phthalates, and brominated flame retardants PBDEs), and also emergent ones (pharmaceuticals, bisphenol).

García Barrera, Alexandre  
Fanjul Insa, Dori

In LC-MS, we analyze non-volatile and polar compounds. The service encompasses priority pollutants (as pesticides), and also emergent ones (abuse drugs, pharmaceuticals, biocides).



---

**Laboratory  
of Dioxins  
(Accredited)**

**Staff**

Abad Holgado, Esteban  
(Service supervisor)

Ábalos Navarro, Manuela  
Adrados León, Miguel Ángel  
Martrat Castellví, María Generosa  
Parera Costa, Jordi  
Sauló Dalmau, Jordi

The Laboratory of Dioxins focuses on the development and application of analytical methodologies for the study of these compounds, both in environmental samples and food and feed matrices. Accredited according to UNE-EN-ISO/IEC 17025, the laboratory also participates in projects related with toxicological and epidemiological studies in which the effects on humans are subject of investigation. It is also noticeable, that the laboratory participated in a Circumnavigation study, in which, among other items, it was reported as for the first time the levels of some persistent organic pollutants, including dioxins and dioxin-like compounds, in open oceans and their role in the global distribution of these pollutants worldwide.

---

## Oil Spill Analysis (Accredited)

### Staff

Domínguez Fernández, Carmen  
(Service supervisor)

Pulgar García, Sandra  
Bayona, Josep Maria

This service is another accredited IDÆA laboratory, in this case awarded the accreditation by ENAC (ISO 17025) and based on the chemical characterization of oil spills in the aquatic environment according to the CEN 15522-2 legal standard, which is based on the principles of environmental forensics. The products capable of being assayed include crude oil and its derivatives which contain a significant proportion of hydrocarbons with a boiling point higher than 200°C. The method is based on a comparative study of ratios of molecular markers between the different candidate sources and the contaminated samples. Even though the laboratory has a great expertise in the determination of a wide range of environmental samples, the accreditation scope is specifically limited to seawater, sampling nets, emulsified samples and tar balls. This IDÆA marine geochemistry laboratory is responsible for all the steps in the analytical process of the oil spills except sampling and transportation.

---

## Volatile Organic Compounds Analysis

### Staff

Marco Asensio, Esther  
(Service supervisor)

The service provides sampling, identification and quantification of volatile organic compounds (VOCs) emitted into the environment from anthropogenic and biogenic sources. Dynamic methods onto sorbent cartridges are used for atmospheric samples and BIO-VOC™ devices and sorbent cartridges for exhaled breath samples. These samples are analyzed by thermal desorption coupled to gas chromatography and mass spectrometry. Aldehydes are determined by high-performance liquid chromatography with ultraviolet detector. VOCs present in water samples are analyzed by purge and trap coupled to gas chromatography and mass spectrometry. The service also provides analysis of VOCs emitted by textile materials and present in pharmaceutical products.



---

## Mercury Analysis In Environmental Samples

### Staff

Díez Salvador, Sergi  
(Service supervisor)

This laboratory has the capability to analyse total mercury (Hg) in any kind of solid and liquid samples (e.g. water, sediment, soil, particulate material, biological material, food, etc). This service includes two pieces of equipment: the AMA-254 from Leco and a brand-new DMA-80 EVO double beam from Milestone. In both devices, the procedure is based on the thermal decomposition of the solid sample, gold trap amalgamation, thermal desorption and detection by atomic absorption spectrophotometry using the method EPA 7473, as well as the ASTM D-6722-01 and the ASTM D-7623-10 methods.

---

## Environmental Toxicogenomics Laboratory

### Staff

Casado Belloso, Marta  
(Service supervisor)

Barata Martí, Carlos  
Piña Capó, Benjamí

The Environmental Toxicogenomics Service offers a suite of equipment and a highly specialized staff that allow the application of several molecular biology techniques: RNA and DNA extraction and quantification, RNA quality control, agarose gel electrophoresis, gene detection, gene expression analysis, genetic variation analysis, etc.



## Atmospheric Monitoring Network

### Staff

Alastuey Urós, Andrés  
(Service supervisor)

Amato, Fulvio

Blanco Zarcero, Diana

Minguillón Bengochea, María Cruz

Moreno Pérez, Teresa

Pandolfi, Marco

Pérez Lozano, Noemí

Querol Carceller, Xavier

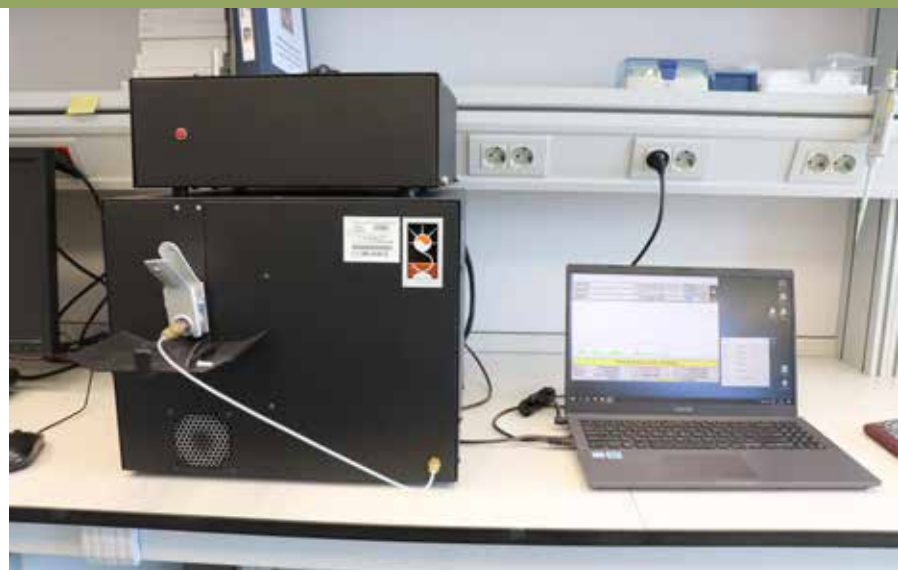
Reche Andúgar, Cristina

Viana Rodríguez, Mar

The IDÆA Atmospheric Research network is a unique infrastructure for atmospheric research located in NE Spain. It is integrated by a Mobile Unit and a cluster of three observational platforms for atmospheric aerosols: Montsec (MSA, mountain site, 1590 m.a.s.l.), Montseny (MSY, Regional background, 720 m.a.s.l.), and Barcelona (BCN, Urban background, 78 m.a.s.l.). The infrastructure is particularly well-equipped for the in-situ characterization of aerosols (optical, physical, and chemical offline and online). All sites are also equipped with instruments for trace gases and two of them (MSY and BCN) will be equipped with instruments for VOCs online. Ceilometers are also operated at MSA and MSY, for remote sensing observation of atmospheric aerosols.

Access to the network permits investigating three different environments, connecting Air Quality, Health and Climate Research. It is the only infrastructure as such in the Western Mediterranean Basin, a unique region for atmospheric research given the high insolation, the specific meteorology, the elevated emissions of pollutants, and the frequent impact of dust outbreaks.





## Atmospheric Geochemistry Lab

The Atmospheric Geochemistry Laboratory provides all the elementary tools and materials for the complete physicochemical characterization of environmental samples:

### Staff

Blanco Zarcero, Diana  
(Service supervisor)

Olmos Liberal, Mar  
(Service supervisor)

- Filter treatments for sampling atmospheric particulate matter
- Total acid digestion and subsequent ICP-AES and ICP-MS analyses
- Leaching test and subsequent chromatography and selective electrodes analyses
- Organic carbon and Elemental carbon analyses
- Ion Chromatography analyses
- Quantitative ammonium concentrations analyses
- Quantification of mercury in solid and liquid samples
- Gravimetric analysis
- Particle-size distribution by laser method
- Aerosol chemical speciation monitor
- Potentiometry/Electrometric analysis (pH, conductivity, selective electrodes)





---

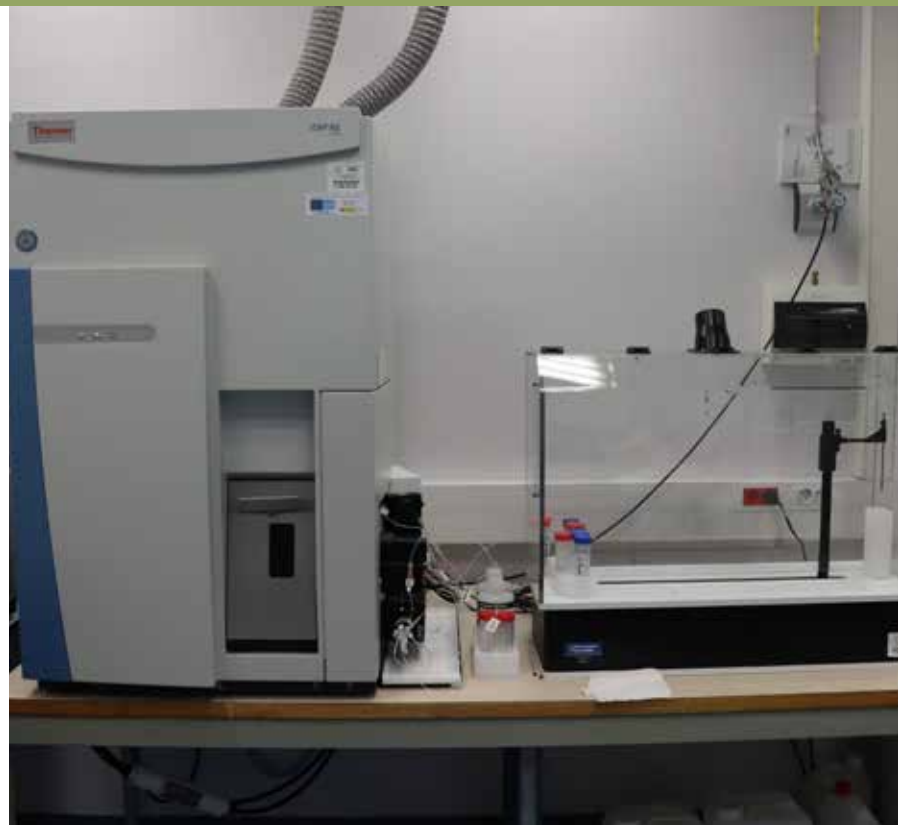
## Vallcebre Research Catchment

**Staff**  
Llorens García, Pilar  
(Service supervisor)

This service includes a network of long-term (30 years) instrumented small hydrological catchments located in the South-Eastern Pyrenees (1100-1700 m a.s.l.) with a mean annual precipitation around 880 mm.

The scientific infrastructure and the available datasets in the Vallcebre research catchments consist of:

- A network of rainfall gauges to measure and sample rainfall. Precipitation is recorded (3 locations) at 5-min intervals and sampled for water stable isotopes (1 location) each 5-mm of rainfall and weekly (2 locations).
- Two complete meteorological stations, which record air temperature and relative humidity, net radiation and wind speed and direction at 5-min intervals.
- A network of gauging stations at the outlets of catchments ranging from 0.025 to 4.17 km<sup>2</sup>. These gauging stations record stream discharge (5 locations) and suspended sediment concentrations (3 locations) at 5-min intervals. Stream water is also sampled weekly and during runoff events for water stable isotopes.
- A network of sensors for soil water content recording at 5-min intervals in the first 90 cm of the soil (3 locations).
- A network of piezometers for groundwater level recording at 10-min intervals (20 locations). Groundwater is also sampled weekly for stable isotopes.
- Two forest plots (*Pinus sylvestris* and *Quercus pubescens*) for eco-hydrological processes studies. These plots record throughfall, stemflow, soil water content and trees transpiration at 5-min intervals.



---

### Laboratory ICP-MS/AES

This laboratory provides semiquantitative and quantitative inorganic analysis of major and trace elements by ICP-AES, and quantitative inorganic analysis of trace and ultratrace elements by ICP-MS.

#### Staff

The samples can come from atmospheric particulate matter, soils, waste mining water and coals.

Cabañas Albero, Mercè  
(Service supervisor)

Bartrolí Solé, Rafael  
García Martínez, Miriam  
Martínez Sánchez, Silvia



---

## Environmental Geochemistry: Combustion and Residues

### Staff

Córdoba Sola, Patricia  
(Service supervisor)

Font Piqueras, Oriol

This service provides all the elementary tools and materials for the complete characterisation of fuels and residues:

- Acid-digestion of samples with different matrices for further determination of major, minor, and trace elements
- % Carbonate determination in solid samples
- Mercury determination
- Grain size distribution

## GIS Geospatial Data Management and Analysis

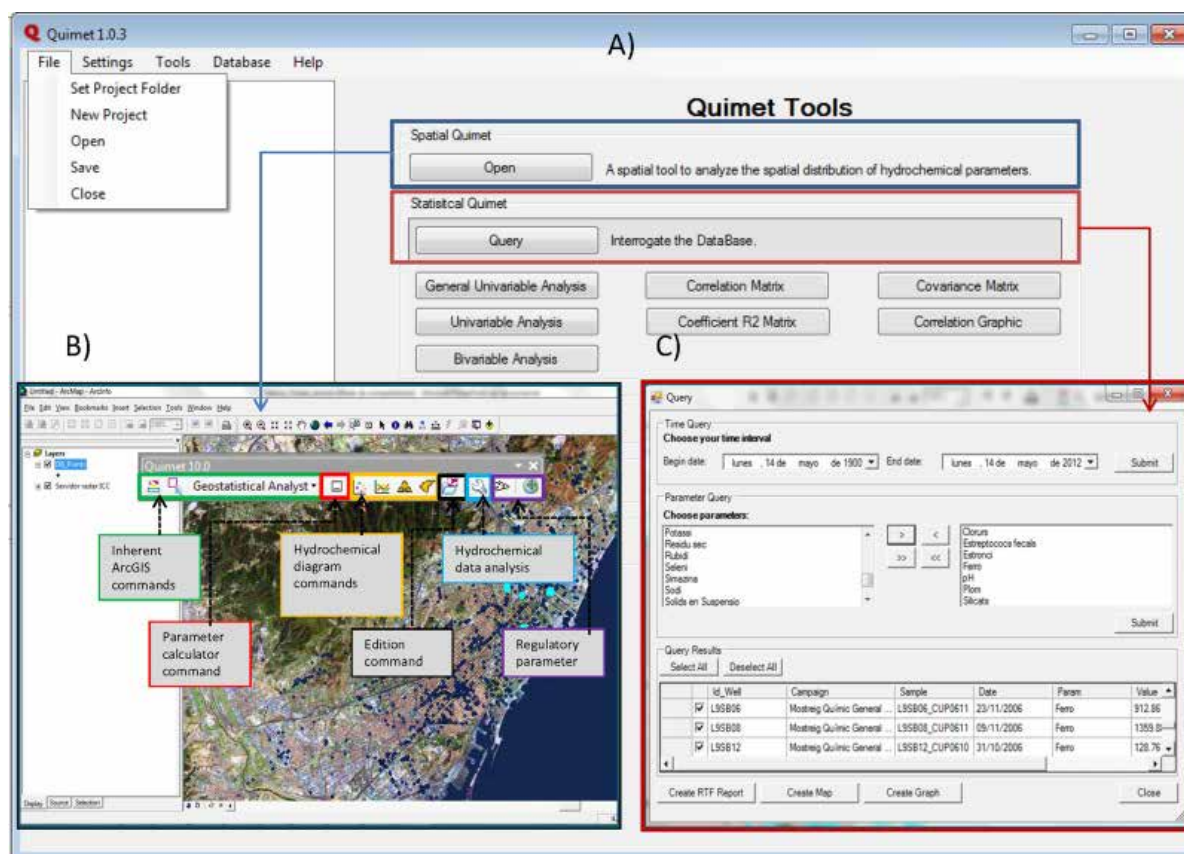
### Staff

Vázquez Suñé, Enric  
(Service supervisor)

The GIS Geospatial Data Management and Analysis service provides solutions for the management, visualization and analysis of environmental data at both professional and scientific levels.

The service designs and develops tools for the optimization of management, data mining (data science), analysis, pre-processing, post-processing, visualization, time series, geospatial mapping, space-time representation, etc. The applications are varied, but until now the service has mainly focused in geosciences (geology, hydrogeology, geotechnics, mining, hydrometeorology, hydrology, water resources, etc.), although the application field can expand much broader (for example, in biota and ecosystem models, soil, water and atmosphere pollution, atmospheric and oceanographic variables, etc.).

This is a user-friendly service, whose application allows carrying out scientific or professional environmental assessments. Applications can be based on standard tools or custom tools. The standard tools are based on Databases, Geographic Information Systems and in spreadsheets, whereas the custom tools are coded in different programming languages. Training and courses are also offered to improve the skills and usage of all this software.





---

## X-ray Diffraction (XRD)

### Staff

Moreno Palmerola, Natalia  
(Service supervisor)

The X-ray Diffraction (XRD) laboratory is the reference analytical technique for the study of the mineralogical composition of a wide range of materials, organic and inorganic, natural and synthetic. Materials can be minerals, metals, ceramic, glass, plastic, drugs, paper among others. Samples may be in powder form, solid, tablets and thin films. The shape and size can be quite variable.

Service techniques:

- Crystalline phases identification
- Crystalline structure determination
- Polymorph determination
- Impurities determination
- Semi-quantitative and quantitative analysis of crystalline phases
- Clay analysis, with prior preparation of oriented aggregates.
- Grazing Incidence X-ray Diffraction (GIXRD) analysis
- Crystal structure refinement by Rietvel method



### Communication and Outreach

#### Staff

Arroyo, Alicia  
(Department manager)

Sotres Fernández, Ana  
Rodríguez Bermejo, Alejandro

The Communication and Outreach Department is responsible for the overall leadership in the communication strategy and dissemination of the IDÆA's research production. Department's activities target the scientific community, media and the general public, including educational organisations, business companies and public administration.

Founded in 2019, the Department fosters the working relationships with the press, mass media outlets and journalists. It also develops and oversees the creation of specialized and proactive public outreach and information programs of high visibility to generate interest in and focus on environmental issues and activities relating to IDÆA's mission. Web-based content, digital media, video streaming events and graphic material are also developed to target specific audiences.

### Projects

- Las chicas son de ciencias (CSIC4Girls); FCT-19-1446; Con la colaboración de la Fundación Española para la Ciencia y la Tecnología - Ministerio de Ciencia e Innovación. M. Viana and Communication and Outreach Department; 01/07/2020 - 30/09/2021; 12.000€
- MinerMat: Minerales, materiales, medio ambiente y desarrollo sostenible; FGCC-2020-0023; Fundación General CSIC. I. Queralt; 01/01/2020 - 31/12/2020; 2.000€



---

## EU Programmes and Fundraising

### Staff

Ratera Bastardas, Mercè  
(Department manager)

de Campos Paus, Sergio

The IDÆA's EU Programmes and Fundraising Office (EUoffice) is focused on supporting the researchers to increase their participation in European Funding instruments, as well as increasing IDÆA's visibility at EU level. Founded in 2019, the office works closely with the researchers to translate their ideas and expertise into opportunities to apply for EU Research and Innovation programmes. EUoffice's activities embraces from the surveillance of EU Programmes, the definition of strategies to build collaborative consortia, the development of methodologies to efficiently coordinate projects (collaborative tools, templates, contents, etc...), up to supporting the researchers to transfer their knowledge and project results into environmental, social and economic impacts. EUoffice also guides and provide advice to the whole innovation process, from the initial idea to the potential exploitation of the research outcomes.

IDÆA is a high-impact research institute. Over the two years covered by this report, IDÆA has continued to consolidate and develop itself as a reference research institute. We have increased our number of publications in SCI journals, attaining a new record of 598 papers (524 in Q1 journals) and continue to

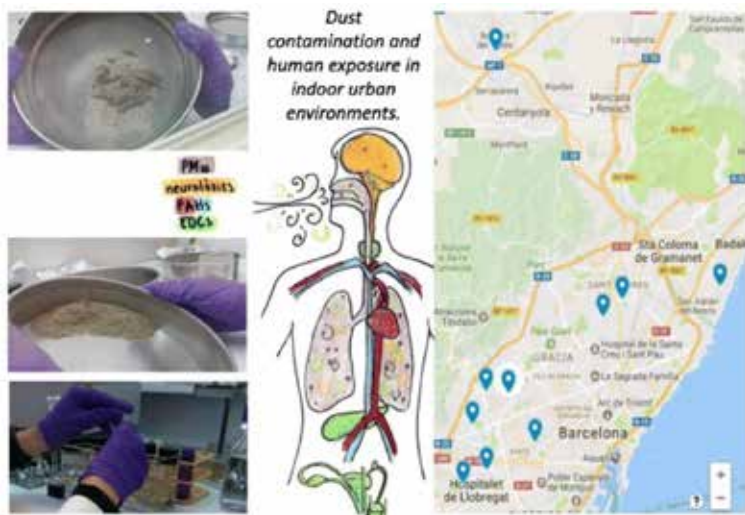
be one of the most productive institutes in CSIC. A selection of these publications from all IDÆA research groups in 2019-2020 period is shown below, this corresponding to the papers published in 2019 with highest citations at present and those published in 2020 in the journals with highest impact factor.

## ENVIRONMENTAL CHEMISTRY DEPARTMENT

### Chemometrics

**Velázquez-Gómez M., Hurtado-Fernández E., Lacorte S. 2019. Differential occurrence, profiles and uptake of dust contaminants in the Barcelona urban area. *Science of the Total Environment*, 648, 1354-1370. DOI: [10.1016/j.scitotenv.2018.08.058](https://doi.org/10.1016/j.scitotenv.2018.08.058)**

Dust is a complex but increasingly used matrix to assess human exposure to organic contaminants both in indoor and outdoor environments. Knowledge concerning the effects of organic pollution on health outcome is crucial. This study aims to determine the presence of legacy compounds (DDTs and polychlorinated biphenyls, PCBs), compounds used in recent times (organophosphorus flame retardants, organophosphorus pesticides, BPA, phthalates and alkylphenols) and compounds originated from combustion processes (polycyclic aromatic hydrocarbons, PAHs) as well as nicotine in indoor environments along the metropolitan area of Barcelona. Monitored sites include public areas with a high turnout (high schools, museums samples) and libraries and private spaces (houses and cars). Almost all compounds were found in each dust sample, and libraries and schools were the most contaminated. Statistical analysis revealed that sampling place influenced the observed con-

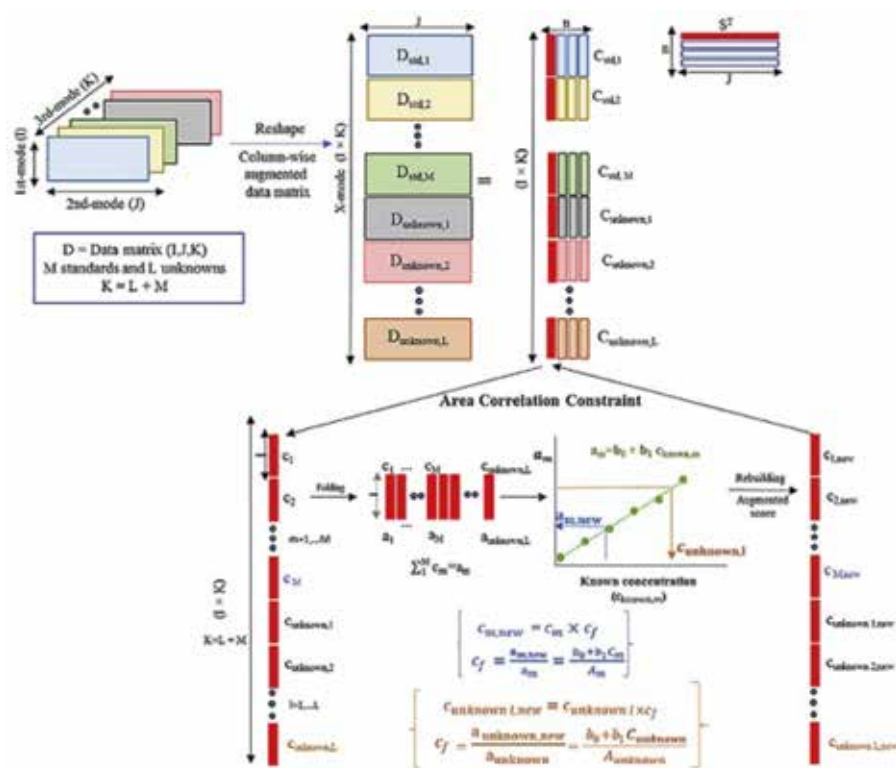


tamination profiles and clearly differentiates public and private environments w. Finally, based on the concentrations detected, a deterministic calculation was performed to estimate the total daily intakes of each compound via dust. This information was used to evaluate the human exposure for toddlers, teenagers and adult workers. Consistently, the highest concentrations coming from plasticisers and flame retardants gave significant exposure rates. As expected, toddlers were the most affected group, followed by museum and library workers, although the levels were below the reference doses.



Bayat M., Marín-García M., Ghasem, J.B., Tauler R. 2020. Application of the area correlation constraint in the MCR-ALS quantitative analysis of complex mixture samples. *Analytica Chimica Acta*, 1113, 52-65. DOI: 10.1016/j.aca.2020.03.057.

The Multivariate Curve Resolution–Alternating Least Squares (MCR-ALS) method with the area correlation constraint is proposed to improve the quantitative determination of the constituents of unresolved complex mixtures with highly overlapped responses in the analysis of two different data sets. In the first data set, a mixture of PAHs (both in synthetic mixtures and river water samples dissolved organic matter) was analysed using EEM fluorescence, giving highly overlapped emission and excitation spectra. In this case, MCR-ALS results are comparable with the results obtained with methods based on the fulfilment of the trilinear model, like PARAFAC. In the second data set, mixtures of lipids in their synthetic mixture and cell cultures samples were analysed quantitatively by LC-MS, where the trilinear model does not hold. The applicability of the proposed area correlation constraint is assessed and proposed as a general tool for the quantitative determination of unknown mixtures of analytes in complex natural samples with severe profile overlapping and unknown composition, whatever the data structure is.



---

**Environmental  
Pollution and  
Agriculture (EPA)**

**Margenat A., Matamoros V., Díez S., Cañameras N., Comas J., Bayona J.M. 2019. Occurrence and human health implications of chemical contaminants in vegetables grown in peri-urban agriculture. *Environment International* 124, 49-57. DOI: [10.1016/j.envint.2018.12.013](https://doi.org/10.1016/j.envint.2018.12.013)**

Peri-urban agriculture has been considered as a sustainable source of fresh vegetables for nearby cities. However, urban infrastructure and industry are a source of mobile and stationary sources of pollution which may increase to environmental pollution (water and soil) and crops grown in these areas.

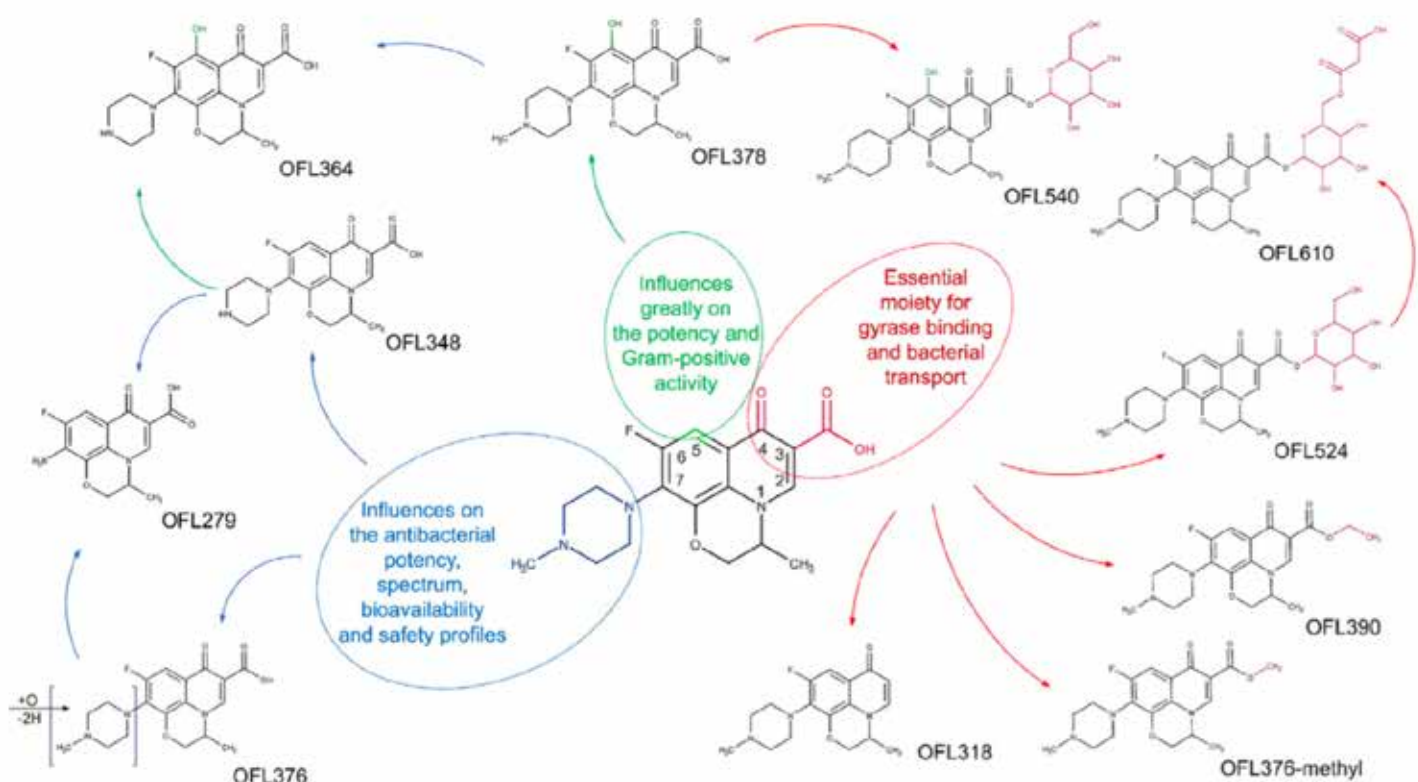
In this paper, 16 trace elements and 33 organic microcontaminants were assessed in commercial crops (lettuce, tomato, cauliflower and broad beans) grown nearby Barcelona (Parc Agrari Baix Llobregat) where irrigation water contains a variable portion of fresh water and reclaimed depending on the season and the location. In addition, a rural area at 400 asl (Begues, Littoral Range) where organic agriculture is performed was used as background concentrations. Although, Pb and some fungicides concentrations were higher in the periurban area than the rural site, the concentrations of chemical contaminants were more dependent of type of crop than the area where they are grown. Moreover, based on current risk assessment approaches, the detected vegetable concentrations do not affect to human health.



Tadic D., Gramblicka M., Mistrik R., Flores C., Piña B., Bayona J.M. 2020. Elucidating biotransformation pathways of ofloxacin in lettuce (*Lactuca sativa* L). *Environmental Pollution* 26, 11402. DOI: [10.1016/j.envpol.2020.114002](https://doi.org/10.1016/j.envpol.2020.114002)

Antibiotics are widely used for human health and veterinary applications including fish farms. They are excreted largely in the non metabolized forms and are not completely removed in the conventional activated sludge treatment plants. As a consequence, they are introduced in the water cycle and can be uptaken by crops from irrigation water and soils.

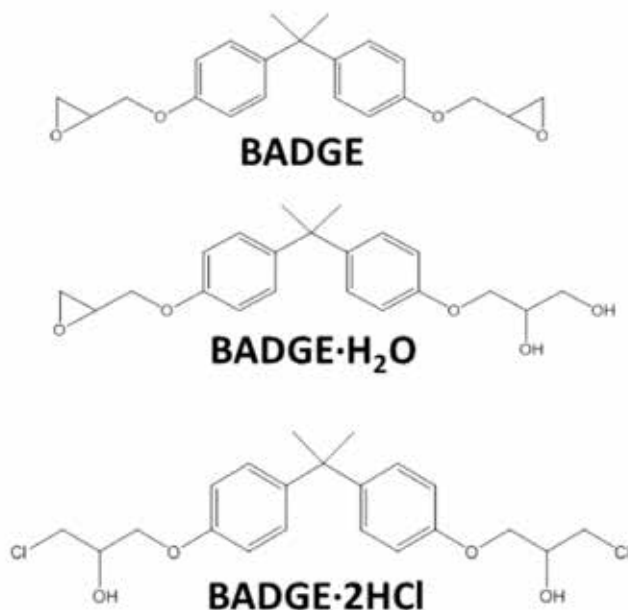
In this paper, a systematic characterization of ofloxacin (fluoroquinolone) biotransformation pathways in lettuce has been carried out by LC-HRMS/MS. A total of 11 metabolites were identified, 5 of them for the first time in plants. The influence of biotransformation on the residual antimicrobial activity shows that some metabolites retain the activity of the parent compound. As a consequence, plant metabolites of antibiotics should be considered in risk assessment to do not underestimated their risk.



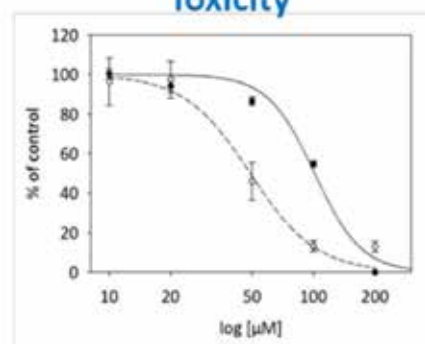
Environmental  
Toxicology

Marqueño A., Pérez-Albaladejo E., Flores C., Moyano E., Porte, C. 2019. Toxic effects of bisphenol A diglycidyl ether and derivatives in human placental cells. *Environmental Pollution* 277, 513-521. DOI: [10.1016/j.envpol.2018.10.045](https://doi.org/10.1016/j.envpol.2018.10.045)

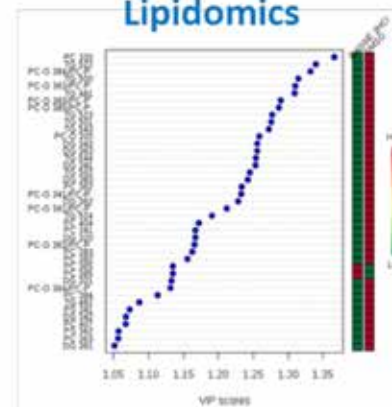
BADGE (bisphenol A diglycidyl ether) is a synthesis product of bisphenol A (BPA), which, like other plastic additives, can cross the human placenta and reach the foetus. However, compared to BPA, there is almost no toxicological information. This work evidenced that BADGE and its hydrolyzed and chlorinated derivatives showed a much higher cytotoxicity and a greater ability to act as endocrine disruptors (BADGE·H<sub>2</sub>O) in JEG-3 cells than the precursor BPA. In addition to the endocrine function, placental cells play a key role in lipid metabolism and transfer of lipids, which is essential for a healthy pregnancy and for foetal growth. JEG-3 cells lipidome was significantly altered by exposure to BADGE·2HCl and BADGE at concentrations at the low  $\mu\text{M}$  range. BADGE·2HCl lead to a strong decrease of diacyl- and triacyl-glycerides (DGs, TGs) together with some membrane lipids, while BADGE lead to an accumulation of TGs. The observed lipidic changes occurred at experimental concentrations of BADGE well below 1  $\mu\text{M}$ , and they are likely to affect placental nutrient handling and ultimately, induce pro-adipogenic changes in the foetus. The work highlights for the first time the need to monitor human exposure to these compounds, at least as intensely as BPA is monitored.



## Toxicity

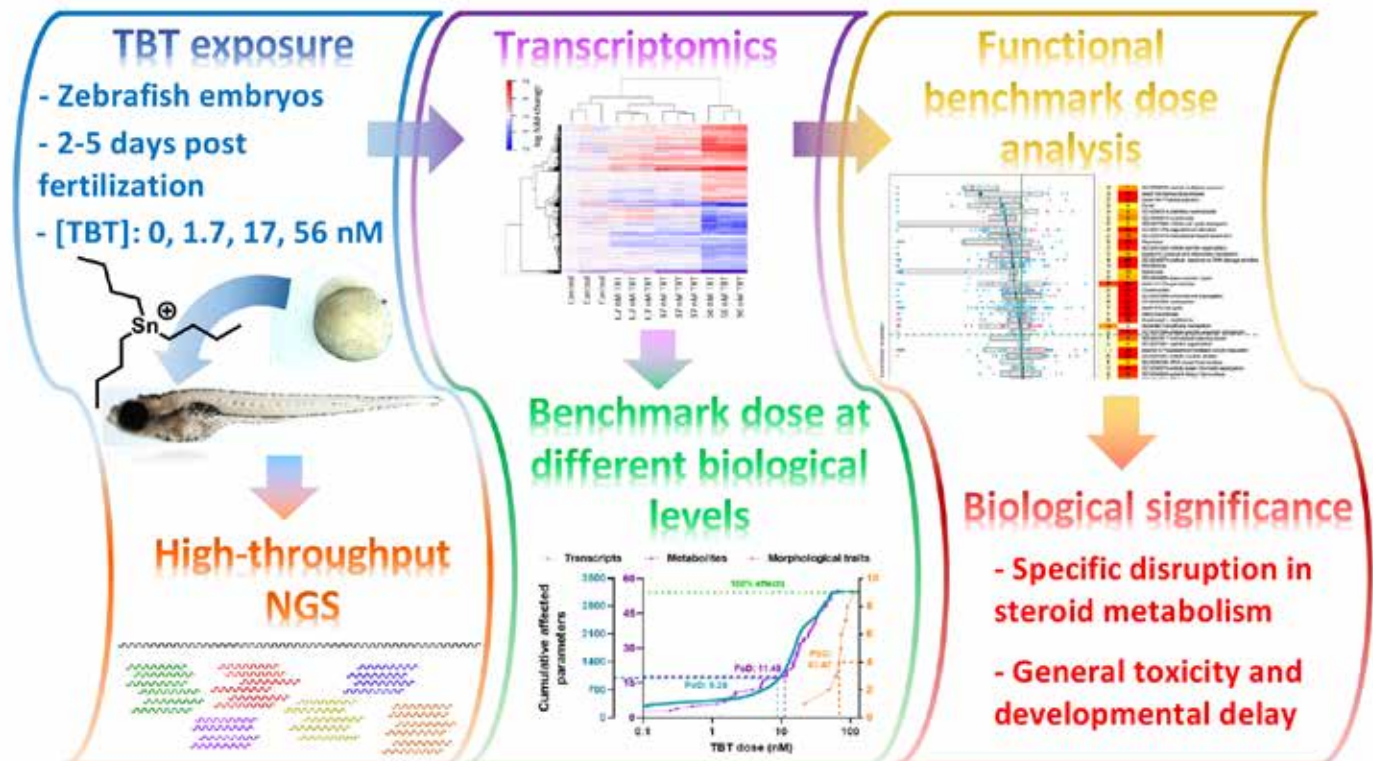


## Lipidomics



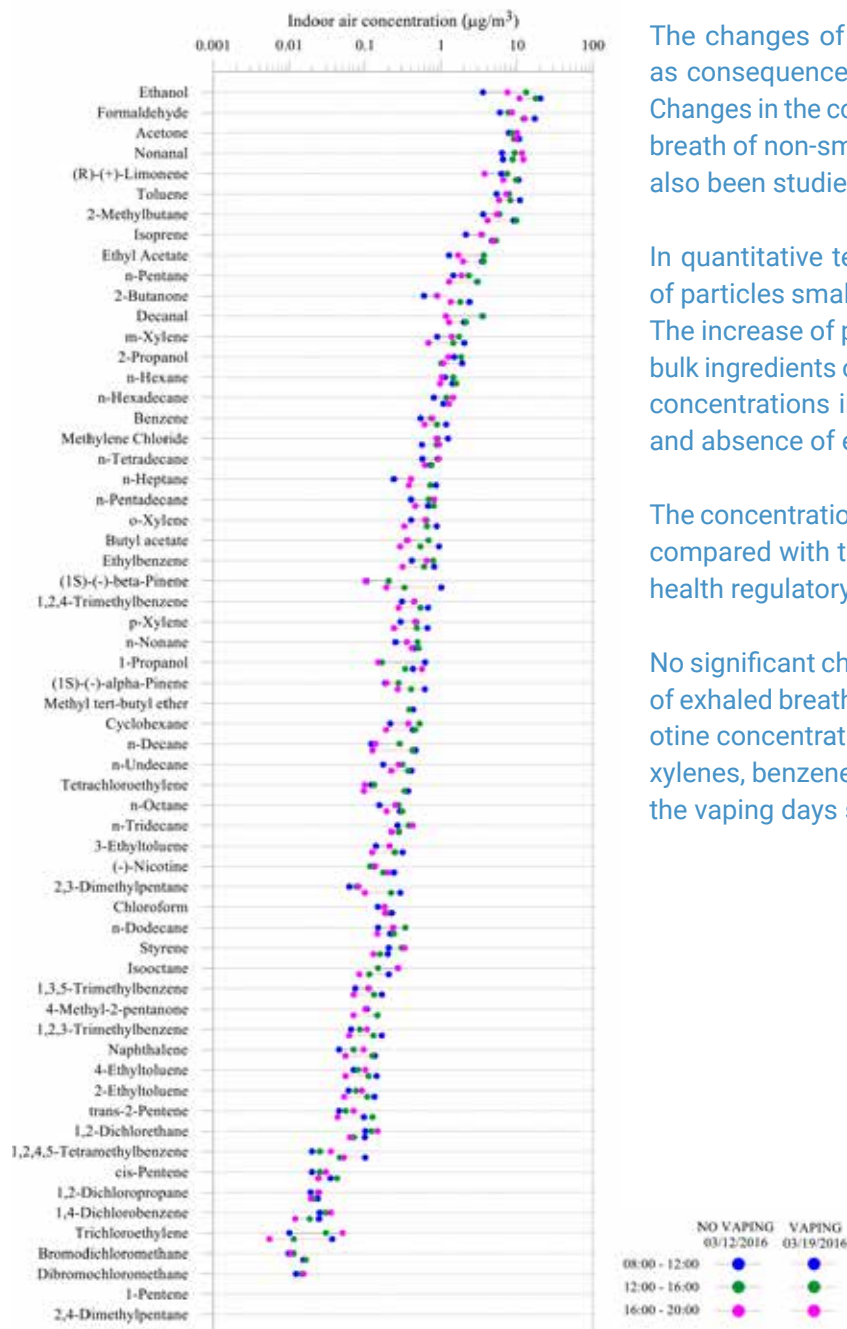
Martínez R., Codina A.E., Barata C., Tauler R., Piña B., Navarro-Martín L. 2020. Transcriptomic effects of tributyltin (TBT) in zebrafish eleutheroembryos. A functional benchmark dose analysis. *Journal Hazardous Materials* 398,122881. DOI: [10.1016/j.jhazmat.2020.122881](https://doi.org/10.1016/j.jhazmat.2020.122881)

Exposure to the antifouling tributyltin (TBT) has been related to imposex in mollusks and to obesogenicity, adipogenesis and masculinization in fish. To understand the underlying molecular mechanisms, we evaluated dose-response effects of TBT (1.7-56 nM) in zebrafish eleutheroembryos transcriptome exposed from 2 to 5 days post-fertilization. RNA-sequencing analysis identified 3238 differentially expressed transcripts in eleutheroembryos exposed to TBT. Benchmark dose analyses (BMD) showed that the point of departure (PoD) for transcriptomic effects (9.28 nM) was similar to the metabolomic PoD (11.5 nM) and about one order of magnitude lower than the morphometric PoD (67.9 nM) or the median lethal concentration (LC<sub>50</sub>: 93.6 nM). Functional analysis of BMD transcriptomic data identified steroid metabolism and cholesterol and vitamin D<sub>3</sub> biosynthesis as the most sensitive pathways to TBT (<50% PoD). Conversely, transcripts related to general stress and DNA damage became affected only at doses above the PoD. Therefore, our results indicate that transcriptomes can act as early molecular indicators of pollutant exposure, and illustrates their usefulness for the mechanistic identification of the initial toxic events. As the estimated molecular PoDs are close to environmental levels, we concluded that TBT may represent a substantial risk in some natural environments.



Geochemistry and Pollution

van Drooge B.L., Marco E., Perez N. and Grimalt J.O. 2019. Influence of electronic cigarette vaping on the composition of indoor organic pollutants, particles, and exhaled breath of bystanders. *Environmental Science and Pollution Research* 26, 4654-4666. DOI: [10.1007/s11356-018-3975-x](https://doi.org/10.1007/s11356-018-3975-x)



The changes of particles and organic pollutants in indoor atmospheres as consequence of vaping with electronic cigarettes have been analyzed. Changes in the composition of volatile organic compounds (VOCs) in exhaled breath of non-smoking volunteers present in the vaping environments have also been studied.

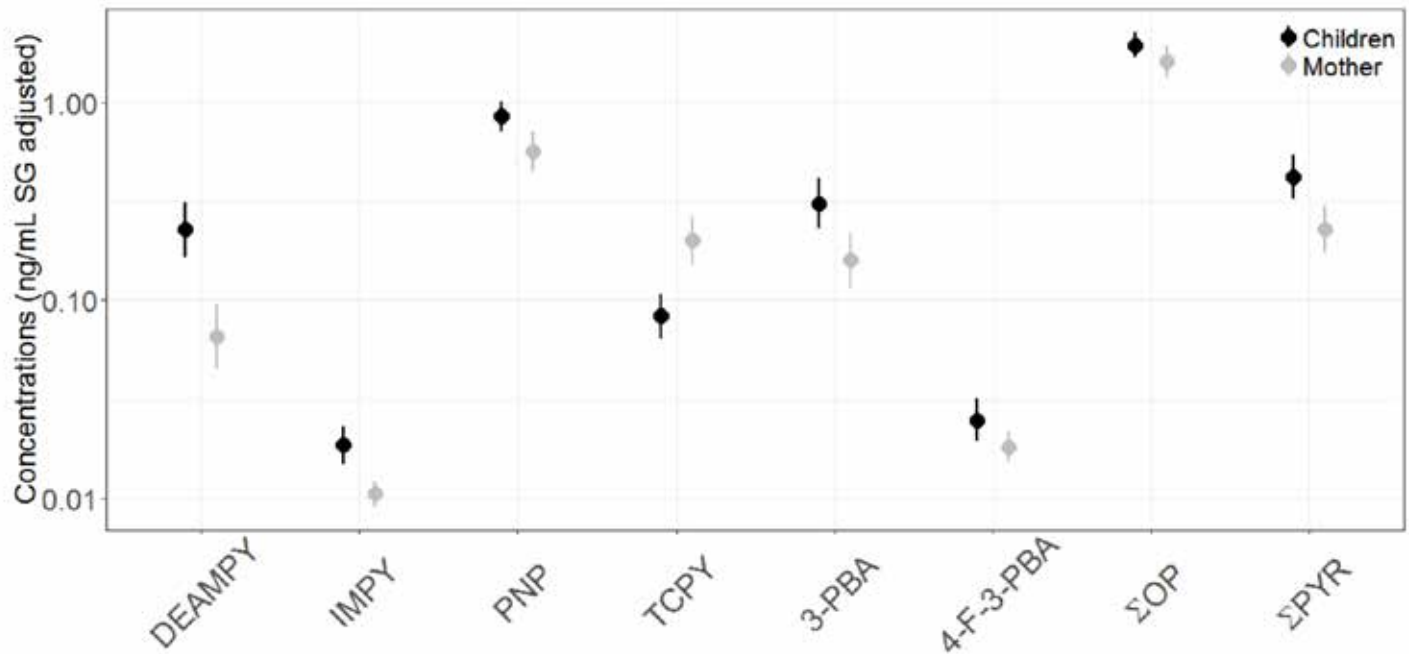
In quantitative terms, vaping involved doubling the indoor concentrations of particles smaller than 10 µm, 5 µm and 1 µm observed during no vaping. The increase of particle mass concentrations was probably produced from bulk ingredients of the e-liquid exhaled by the e-cigarette users. Black carbon concentrations in the indoor and outdoor air were similar in the presence and absence of electronic cigarette emissions.

The concentration increases of nicotine and formaldehyde were small when compared with those described in other studies of indoor atmospheres or health regulatory thresholds.

No significant changes were observed when comparing the concentrations of exhaled breath in vaping and no vaping days. Even the exhaled breath nicotine concentrations in both conditions were similar. As expected, toluene, xylenes, benzene, ethylbenzene and naphthalene did not show increases in the vaping days since combustion was not involved.

Bravo N., Grimalt J.O., Mazej D., Tratnik J.S., Sarigiannis D.A. and Horvat M. 2020. Mother/child organophosphate and pyrethroid distributions. *Environment International* 134, 105264. DOI: [10.1016/j.envint.2019.105264](https://doi.org/10.1016/j.envint.2019.105264)

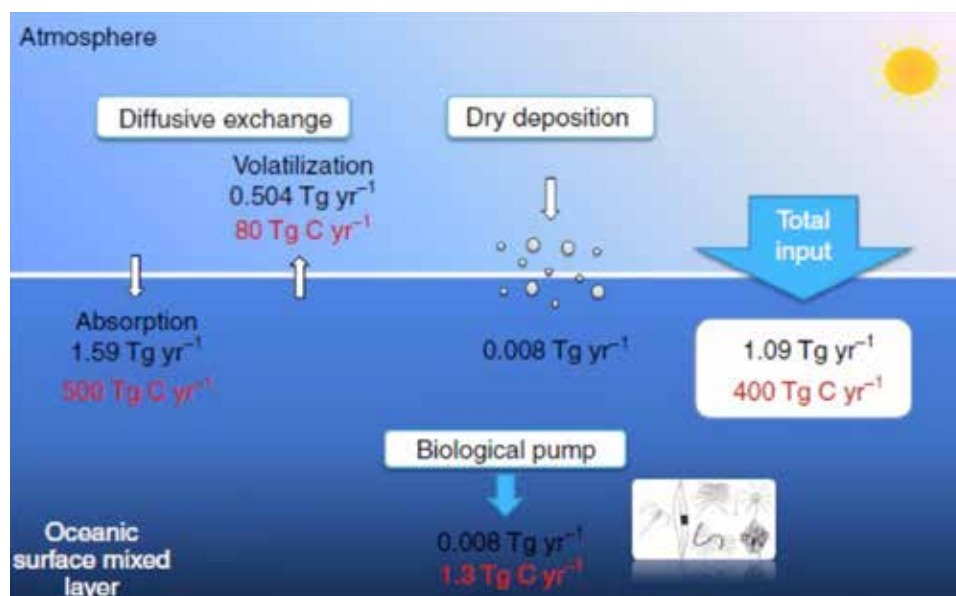
The present study reports one of the few cases in which organophosphate (OP) and pyrethroid (PYR) pesticide human exposure is evaluated in family contexts by the analysis of mother/child pair samples. Urinary concentrations of organic metabolites of organophosphates and pyrethroids were measured in mothers and their 7-to 8-year-old children (n = 168) in a general population from the central area of Slovenia. The most abundant OP metabolite in children was 4-nitrophenol (PNP) (median 0.7 ng/ml) and in mothers (0.45 ng/ml), representing parathion exposure. 3-Phenoxibenzoic acid (0.26 ng/ml), the general metabolite of pyrethroids, and 3,5,6-trichloro-2-pyridinol (TCPY) (0.16 ng/ml; chlorpyrifos) were the second most abundant compounds in children and mothers, respectively. The geometric mean specific gravity adjusted concentrations of OPs and PYRs were statistically significantly higher in children than in their mothers (between 3% and 24% higher), with the exception of TCPY (26% lower). All OP and PYR metabolites found in higher concentration in children showed significant positive correlations with the metabolite concentrations found in the mothers ( $p < 0.05$  and  $0.01$ ), involving the fact that higher maternal concentrations were associated with higher children levels. These differential mother-children distributions and significant correlations were observed for the 2 types of pesticides studied, OPs and PYRs, which have different chemical properties. This agreement is consistent with the incorporation of the pesticides because of the general activities developed in the family context, instead of pesticide-dependent specific inputs.



Global Change  
and Genomic  
Biogeochemistry

González-Gaya B., Martínez-Varela A., Vila-Costa M., Casa P., Cerro-Gálvez E., Berrojalbi N., Lundin D., Vida M., Mompeán C., Bode A., Jiménez B., Dachs J. 2019. Biodegradation as an important sink of aromatic hydrocarbons in the oceans. *Nature Geoscience* 12, 119-125. DOI: [10.1038/s41561-018-0285-3](https://doi.org/10.1038/s41561-018-0285-3)

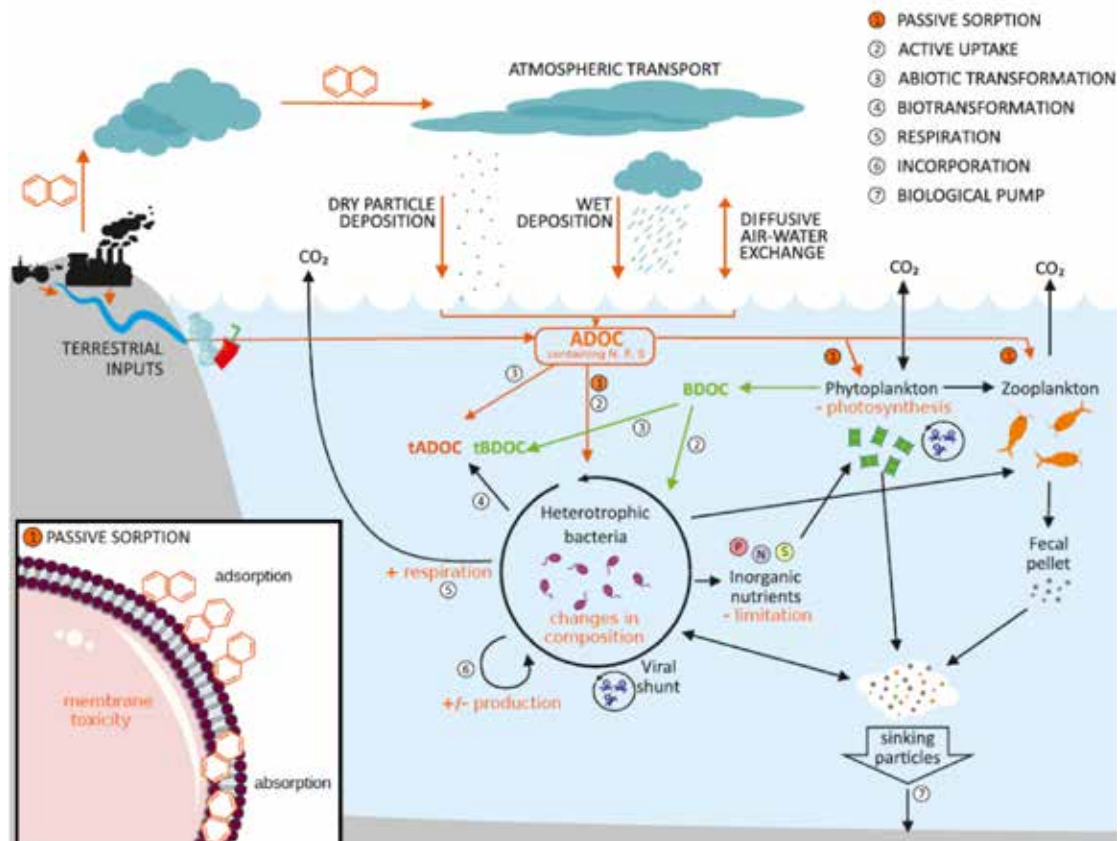
Atmospheric deposition of semivolatile aromatic hydrocarbons accounts for an important input of organic matter to the surface ocean. Nevertheless, the long-range transport and distribution, biogeochemical cycling and sinks of semivolatile aromatic hydrocarbons in the ocean remain largely uncharacterized. In this work, we show the measurements of 64 polycyclic aromatic hydrocarbons in air, seawater and plankton from the Atlantic, Pacific, Indian and Southern Oceans from samples taken during the Malaspina circumnavigation cruise. In addition, we show the results of an assessment of the degradation of aromatic hydrocarbons, including the demonstration of a widespread occurrence of microbial degradation genes. Concentrations of the more hydrophobic compounds decreased when the plankton biomass was higher, consistent with the relevance of the biological pump. The mass balance for the global oceans showed that the settling fluxes of aromatic hydrocarbons in the water column were two orders of magnitude lower than the atmospheric deposition fluxes. This imbalance was high for low molecular weight hydrocarbons, such as phenanthrene and methylphenanthrenes, highly abundant in the dissolved phase, and which can be efficiently degraded in the water column. Parent polycyclic aromatic hydrocarbons were depleted to a higher degree than alkylated polycyclic aromatic hydrocarbons, and the degradation genes for polycyclic aromatic hydrocarbons were found to be ubiquitous in oceanic metagenomes. These observations point to a key role of biodegradation in depleting the bioavailable dissolved hydrocarbons and to the microbial degradation of atmospheric inputs of organic matter as a relevant process for the marine carbon cycle.





Vila-Costa M., Cerro-Gálve, E., Martínez-Varela A., Casas G. and Dachs J. 2020. Anthropogenic dissolved organic carbon and marine microbiomes. *The ISME Journal*, 14(10), 2646-2648. DOI: [10.1038/s41396-020-0712-5](https://doi.org/10.1038/s41396-020-0712-5)

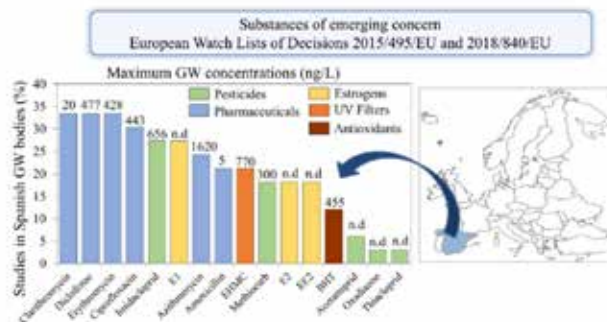
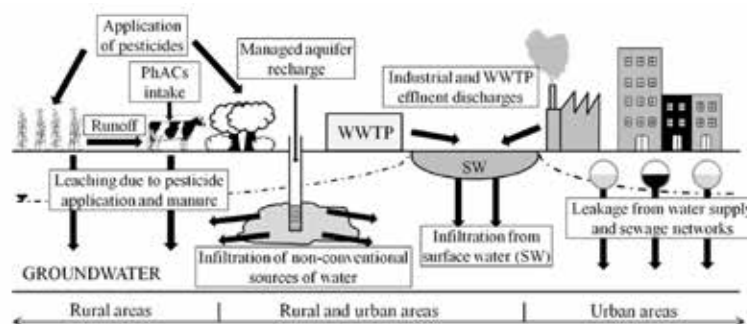
The paper published in ISME Journal (IF = 9.18) is an overview of the anthropogenic dissolved organic carbon (ADOC) in the marine environment. ADOC is composed by thousands of synthetic chemicals and hydrocarbons that reach the marine environment by terrestrial inputs and atmospheric deposition. Most ADOC is disproportionately hydrophobic, and consequently, its concentrations in the cell membranes are between a thousand and hundred million fold higher than those in the dissolved phase. The paper summarizes the global environmental concentrations of representative ADOC families and the impact of ADOC pollution on the composition, structure, and function of microbial communities, that ranges from degradation to detoxifying metabolisms. The authors argue that the increasing concentrations of ADOC in the oceans deriving from rivers, atmospheric deposition, and plastic leachates can have an effect on the health of the oceans and influence the major biogeochemical cycles, thus influencing the Earth system during the Anthropocene.



Water, Environmental and Food Chemistry (ENFOCHEM)

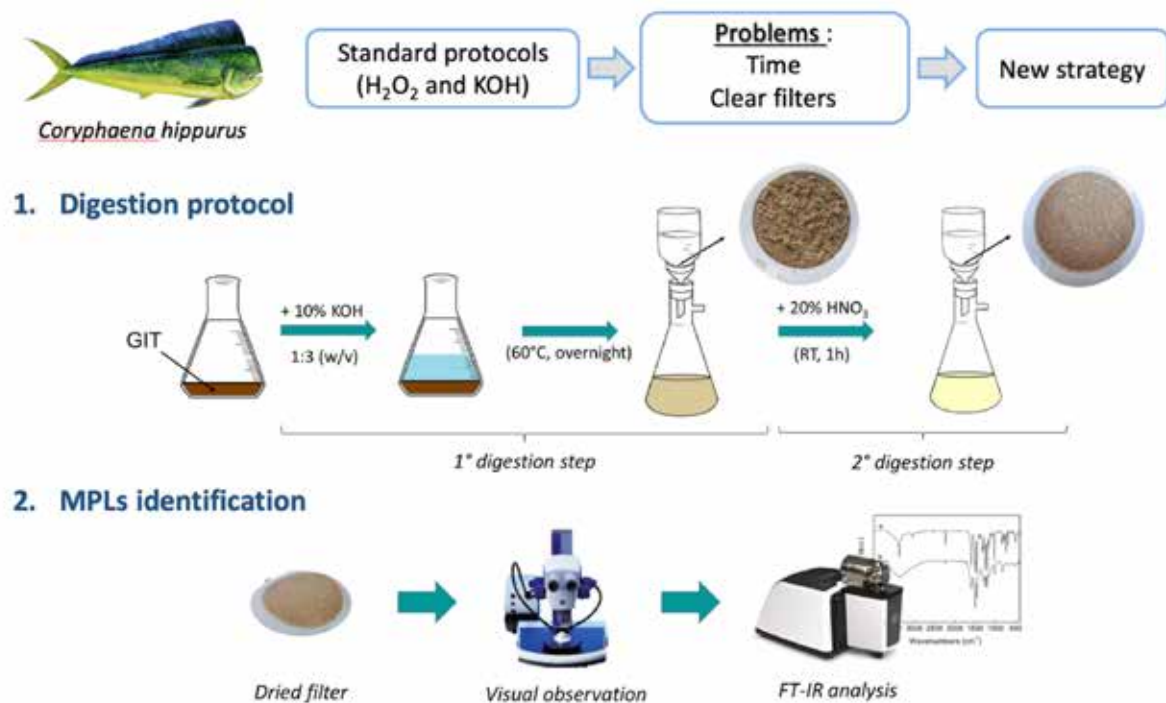
Jurado M., Walther M., Diaz-Cruz S. 2019. Occurrence, fate, and environmental risk assessment of the organic microcontaminants included in the Watch Lists set by EU Decisions 2015/495 and 2018/140 in the groundwater of Spain. *Science of the Total Environment* 663, 285-296. DOI: 10.1016/j.scitotenv.2019.01.270

In this paper we compiled the existing occurrence data in Spanish groundwater (GW) for the emerging organic contaminants (EOCs) defined in the Watch Lists of Decisions 2015/495/EU and 2018/840/EU. Based on these data sets, we evaluated the associated environmental risk of these pollutants. The two lists include 20 substances: 9 pesticides (5 neonicotinoids, 2 carbamates, 1 oxadiazole, and 1 semicarbazone), 6 pharmaceuticals (diclofenac and 5 antibiotics), 3 estrogens, 1 UV filter (2-ethylhexyl-4-methoxycinnamate, EHMC) and 1 antioxidant (2,6-di-tert-butyl-4-methylphenol, BHT). Drinking water standards, and/or GW threshold quality values are required because GW is a valuable water resource worldwide. Overall, GW is less contaminated than other water bodies, such as rivers, suggesting that aquifers possess a natural attenuation capacity and/or are less vulnerable than rivers to contamination. Nevertheless, the natural hydrogeochemical processes that control the fate and transformation of these substances during infiltration and in the aquifer have been barely investigated so far. The concentrations of the target EOCs were used to calculate hazard quotients (HQs) in the Spanish GW bodies as an estimation of their ecotoxicity and in order to compare somehow their chemical quality with respect to those of surface water. Results showed that most HQs were very low indicating no risk. However the HQ = 21 for diclofenac against *Ceriodaphnia d.* pointed out the high risk posed by this anti-inflammatory compound at GW measured concentrations.



Scirinzi GF, Pedà C, Battaglia P, Laface F, Galli M, Consoli P, Scotti G, Esposito V, Faggio C, Farré M, Barceló D, Fossi MC, Andaloro F, Romeo T. 2020. A new digestion approach for the extraction of microplastics from gastrointestinal tracts (GITs) of the common dolphinfish (*Coryphaena hippurus*) from the western Mediterranean Sea. *Journal of Hazardous Materials* 397, 122794. DOI: [10.1016/j.jhazmat.2020.122794](https://doi.org/10.1016/j.jhazmat.2020.122794)

Plastic ingestion is one of the main impacts of marine litter on organisms. The occurrence of microplastics (MPs < 5 mm) in the stomachs of Mediterranean species was already reported in several studies with one-way digestion. In this context, the present study aims to develop a new approach of several steps digestion for the identification of MPs in the gastrointestinal tracts (GITs) of marine organisms. The new approach combines two digestion protocols, including potassium hydroxide (KOH) and nitric acid (HNO<sub>3</sub>), to remove most organic and inorganic materials. This digestion allows recording small MPs that are difficult to find via routinely stomach content analysis and also to minimize the overestimation of the phenomenon through the control of airborne contamination. The new approach was tested on a voracious pelagic opportunistic predator, the common dolphinfish, a fishery resource exploited in several Mediterranean areas. The results showed that a large amount of ingested meso- and microplastics, such as fragments or sheets, was recorded in GITs (F = 65.5 %). The FTIR analysis on litter samples allowed to identify polyethylene, polypropylene and polystyrene as dominant constituent polymers of microplastics. These results confirmed that our novel combined digestion protocol represents a reliable approach to detect MPs in opportunistic pelagic predators.



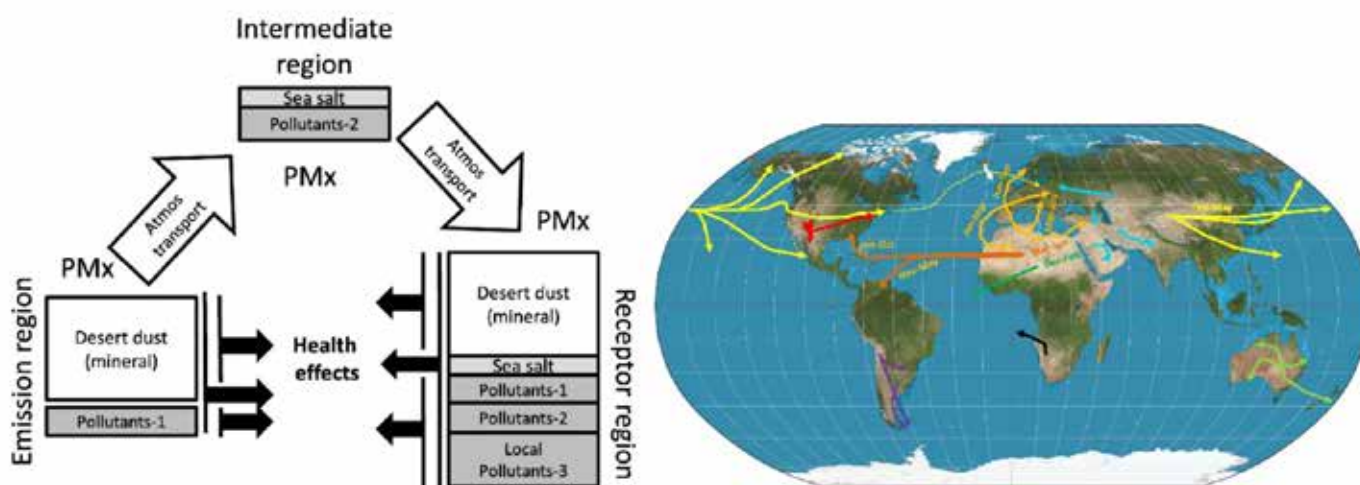
GEOSCIENCES  
DEPARTMENT

Environmental  
Geochemistry  
and Atmospheric  
Research (EGAR)

Querol X., Tobías A., Pérez N., Karanasiou A., Amato F., Stafoggia M., Pérez García-Pando C., Ginoux P., Forastiere F., Gumy S., Mudu P., Alastuey A. 2019. Monitoring the impact of desert dust outbreaks for air quality for health studies. *Environment International* 130, 104867. DOI: [10.1016/j.envint.2019.05.061](https://doi.org/10.1016/j.envint.2019.05.061)

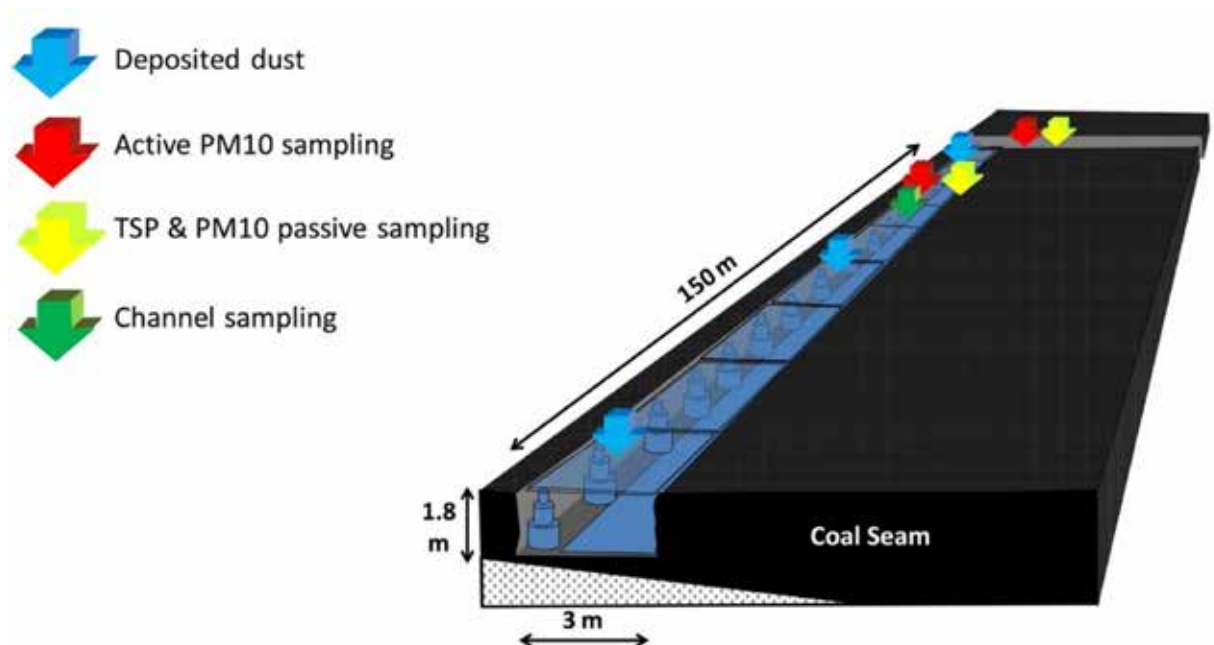
This paper reviews the major features of desert dust outbreaks that are relevant to the assessment of dust impacts upon human health. The ultimate goal is to provide scientific guidance for the acquisition of relevant population exposure information for epidemiological studies tackling the short and long term health effects of desert dust. Authors first describe the source regions and the typical levels of dust particles in regions close and far away from the source areas, along with their size, composition, and bio-aerosol load. They then describe the processes by which dust may become mixed with anthropogenic particulate matter (PM) and/or alter its load in receptor areas. Short term health effects are found during desert dust episodes in different regions of the world, but in a number of cases the results differ when it comes to associate the effects to the bulk PM, the desert dust-PM, or non-desert dust-PM. These differences are likely due to the different monitoring strategies applied in the epidemiological studies, and to the differences on atmospheric and emission (natural and anthropogenic) patterns of desert dust around the world. Authors finally propose methods to allow the discrimination of health effects by PM fraction during dust outbreaks, and a strategy to implement desert dust alert and monitoring systems for health studies and air quality management.

The manuscript summarises the first part of a WHO-report on the Health Effects of Dust and Sand Storms. This report consists of a systematic review of the scientific evidence on the health effects of desert dust and sand storms, undertaken within the framework of the WHO air pollution global activities and the current update of the WHO Air Quality Guidelines (AQGs).



Trechera P, Moreno T, Córdoba P, Moreno N, Zhuang X, Li B, Li J, Shangguan Y, Kandler K, Dominguez A.O., Kelly F, Querol X. 2020. Mineralogy, geochemistry and toxicity of size-segregated respirable deposited dust in underground coal mines. *Journal of Hazardous Materials* 399, 122935. DOI: [10.1016/j.jhazmat.2020.122935](https://doi.org/10.1016/j.jhazmat.2020.122935)

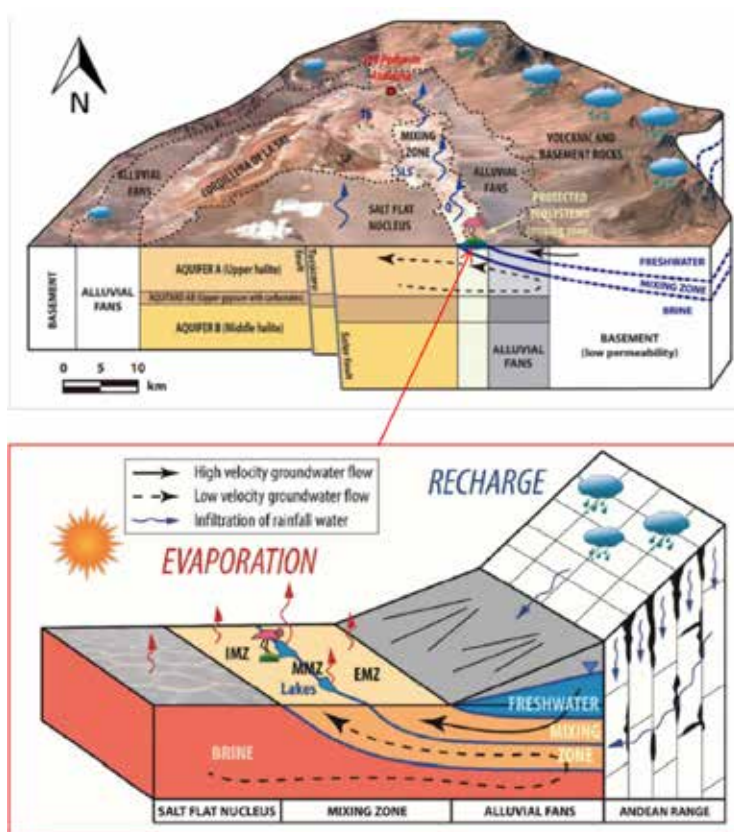
Coal mining and its associated environmental impact, including exposure to coal mine dust, remain high on the list of global health issues to be ameliorated. The main impacts of coal mining activities result from emissions of atmospheric pollutants, with implications for both climate change and air quality. While the climatic effects arise from the increased emissions of greenhouse pollutants associated with mining activities and deforestation, the problems linked to air quality are largely associated with the local dust emissions created by mining work, waste disposal, coal/waste fires, the transport and handling of coal and the increases in population and industry around mining areas. Although much has been written on the problem of worker exposure to coal dust, there remain few data on the mineralogy, chemistry and toxicology of inhalable-sized dust samples collected directly from inside mines. In this context, the purpose of this study is to characterize coal mine dust from diverse areas in four different underground coal mines in China, with the aim of evaluating dust particle sizes, mineralogical and geochemical patterns and their potential impacts on health, as well as to identify source origins by combining geochemical, mineralogical and toxicological tools. We also investigate how dust deposited in coal mines can be used to predict the mineralogical and chemical patterns of respirable dust in the mine. We adopt a novel approach involving separating out the respirable component present in deposited dust and comparing compositional patterns in samples of total suspended ambient particles (TSP) and PM10.



## Groundwater and Hydrogeochemistry

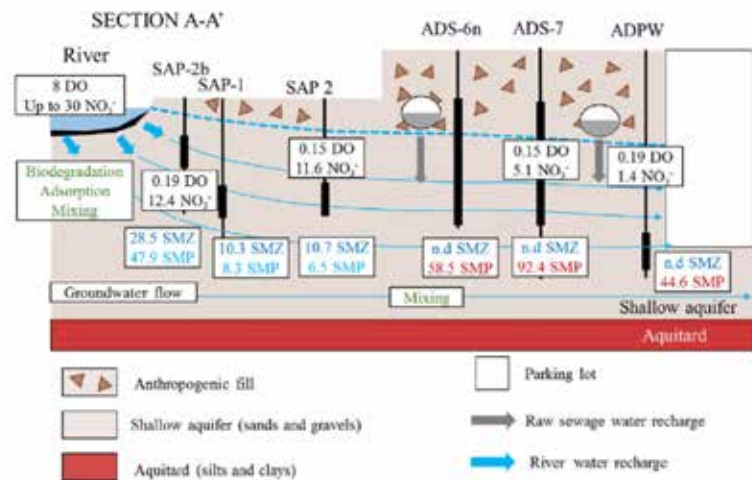
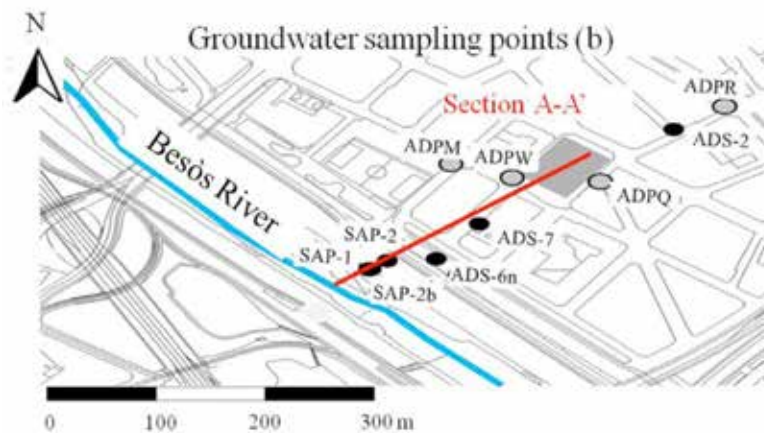
Marazuela M.A., Vázquez-Suñé E., Ayora C., García-Gil A., Palma, T. 2019. Hydrodynamics of salt flat basins: The Salar de Atacama example. *Science of the Total Environment* 651, 668-683. DOI: [10.1016/j.scitotenv.2018.09.190](https://doi.org/10.1016/j.scitotenv.2018.09.190)

The Salar de Atacama is one of the most well-known saline endorheic basins in the world. It accumulates the world main lithium reserves and contains very sensitive ecosystems. The objective of this work is to characterize the hydrodynamics of the Salar de Atacama, and to quantify its complex water balance prior to the intense brine extraction. The methodology and results can be extrapolated to the groundwater flow and recharge of other salt flats. A three-dimensional groundwater flow model using low computational effort was calibrated against hundreds of hydraulic head measurements. The water infiltrated from the mountains ascends as a vertical flux through the saline interface (mixing zone) produced by the density contrast between the recharged freshwater and the evaporated brine of the salt flat nucleus. This water discharges and is largely evaporated from lakes or directly from the shallow water table. On the other hand, the very low hydraulic gradients, coupled with the presence of the mixing zone that operates as barrier, leads the salt flat nucleus to act as a hydrodynamically quasi isolated area. The computed water table shows the lowest hydraulic head in the salt flat nucleus near the discharge at the mixing zone.



Jurado A., Margareto A., Pujades E., Vázquez-Suñé E., Diaz-Cruz S. 2020. Fate and risk assessment of sulfonamides and metabolites in urban Groundwater. *Environmental Pollution* 267, 115480. DOI: [10.1016/j.envpol.2020.115480](https://doi.org/10.1016/j.envpol.2020.115480)

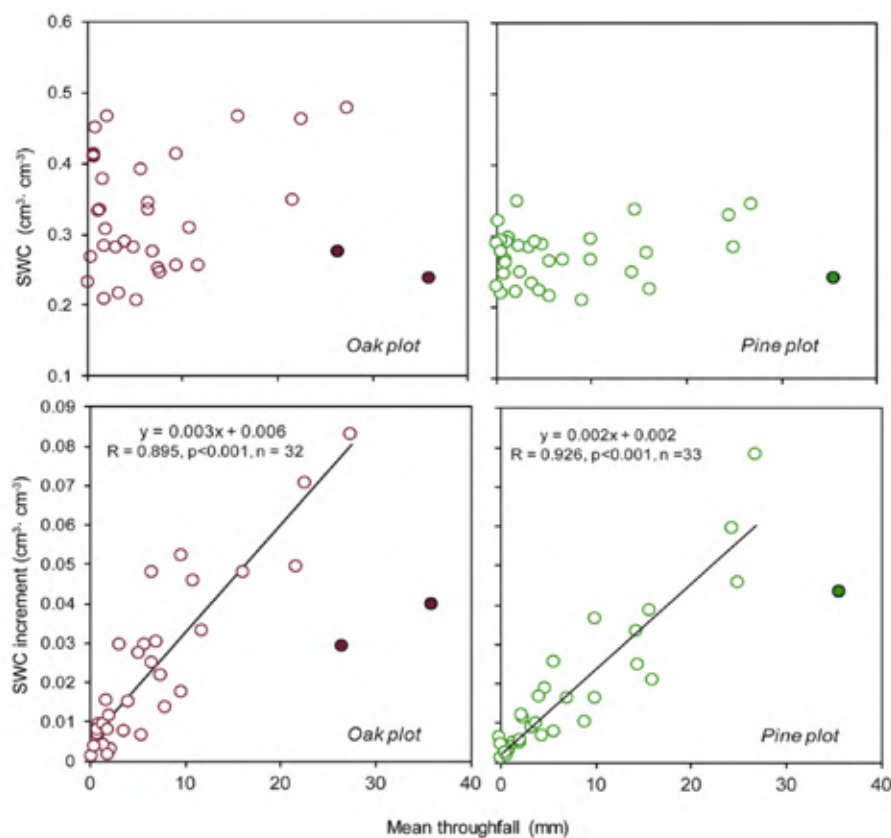
Antibiotics, such as sulfonamides (SAs), have recently raised concern as wastewater treatment plants (WWTPs) partly remove them, and thus, SAs continuously enter the aquifers. In this context, the aims of this work are to (1) investigate the temporal evolution of SAs and metabolites in an urban aquifer recharged by a polluted river; (2) identify the potential geochemical processes that might affect SAs in the river-groundwater interface and (3) evaluate the ecological and human health risk assessment of SAs. To this end, 14 SAs and 4 metabolites were analyzed in river and urban groundwater from the metropolitan area of Barcelona (NE, Spain) in three different sampling campaigns. These substances had a distinct behavior when river water, which is the main recharge source, infiltrates the aquifer. Mixing of the river water recharge into the aquifer drives several redox reactions such as aerobic respiration and denitrification. This reducing character of the aquifer seemed to favor the natural attenuation of some SAs as sulfamethoxazole, sulfapyridine, and sulfamethizole. However, most of the SAs detected were not likely to undergo degradation and adsorption because their concentrations were constant along groundwater flow path. In fact, the intensity of SAs adsorption is low as the retardation factors are close to 1 at average groundwater pH of 7.2 for most SAs. Concerning the environmental risk assessment, SAs do not pose any risk for algae, fish and crustaceans as the RQs evaluated are further < 0.1.



Surface Hydrology  
and Erosion

Molina A. J., Llorens P., Garcia-Estringana P., de Las Heras M. M., Cayuela C., Gallart F. and Latron J. 2019. Contributions of throughfall, forest and soil characteristics to near-surface soil water-content variability at the plot scale in a mountainous Mediterranean area. *Science of the Total Environment* 647, 1421-1432. DOI: [10.1016/j.scitotenv.2018.08.020](https://doi.org/10.1016/j.scitotenv.2018.08.020)

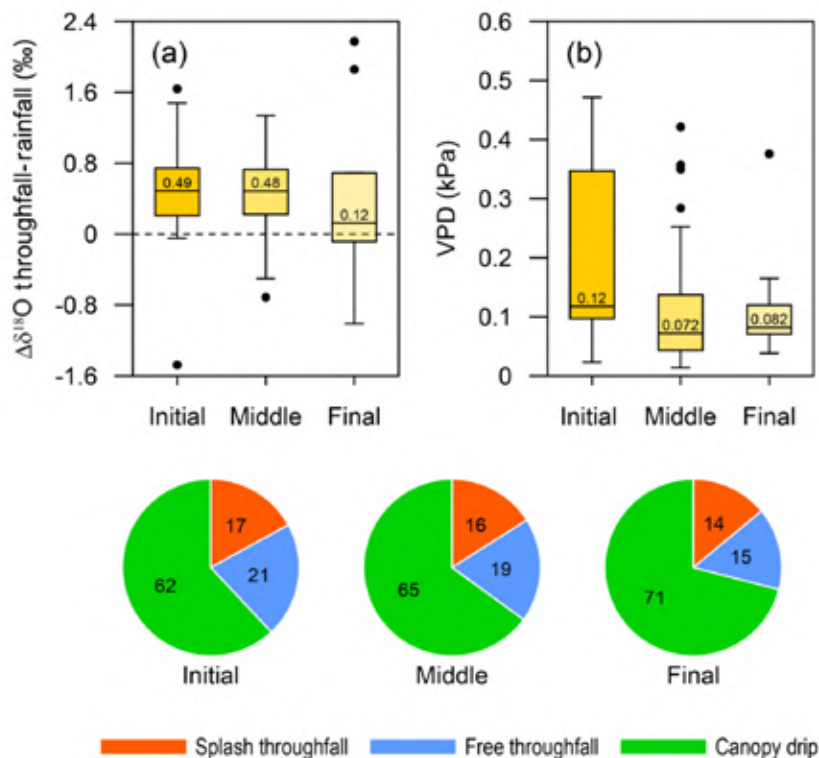
Soil water-content (SWC) variability in forest ecosystems is affected by complex interactions between climate, topography, forest structure and soil factors. However, detailed studies taking into account the combined effects of these factors are scarce. Throughfall and the related shallow SWC were monitored in two stands, covered by Scots pine and pubescens oak, located in the Vallcebre Research Catchments (IDÆA research facility, NE Spain). The results highlight how complex the local spatio-temporal variation of soil water-content is in mature forests of heterogeneous forest structure and developed organic layers. As expected, throughfall amount showed linear relationships with soil water-content responses. In contrast soil properties provide high heterogeneity in SWC response, with litter layer playing an important role in controlling the soil water-content dynamics. According to our results, further research is recommended into the role of litter but also into the effects of stemflow and throughfall at lower distances from tree trunks in order to improve our understanding of dynamics on soil water content in forests.





Pinos J., Latron J., Nanko K., Levia, D.F. and Llorens P. 2020. Throughfall isotopic composition in relation to drop size at the intra-event scale in a Mediterranean Scots pine stand. *Hydrology and Earth System Sciences* 24(9), 4675-4690. DOI: 10.5194/hess-24-4675-2020

The major fraction of water reaching the forest floor is throughfall, which consists of free throughfall, splash throughfall and canopy drip. Research has shown that forest canopies modify the isotopic composition of throughfall by means of evaporation, isotopic exchange, canopy selection and mixing of rainfall waters. However, the effects of these factors in relation to throughfall isotopic composition and the throughfall drop size reaching the soil surface are unclear. Based on research in a mountainous Scots pine stand in Vallcebre Research Catchments (IDÆA research facility, NE Spain), this study sought to fill this knowledge gap by examining the isotopic composition of throughfall in relation to throughfall drop size. In the experimental stand, throughfall consisted on average of 65% canopy drip, 19% free throughfall and 16% splash throughfall. The dynamics of the isotopic composition of throughfall and rainfall showed complex behaviour throughout events. The isotopic shift showed no direct relationship with meteorological variables and rainfall characteristics. The major contribution of splash throughfall at the initial phase of rain events matched the highest vapour pressure deficit (VPD) and, at the same time, corresponded to higher isotopic enrichment, which implies that splash droplet evaporation occurred. Future applications of our approach will improve understanding of how throughfall isotopic composition may vary with drop type and size during rainfall events across a range of forest types.





EXCELENCIA  
SEVERO  
OCHOA

**Apoyo a Centros de Excelencia Severo Ochoa; Ministerio de Ciencia, Innovación y Universidades, Programa Estatal Fomento de la investigación científica y técnica de excelencia; IDÆA; 16/12/2019 – 15/12/2023; 4.000.000€. Scientific Director: Teresa Moreno.**

The Severo Ochoa Distinctive has allowed us to promote existing actions, as well as to achieve new ones such as the formation of new five committees, the creation of the call on talent attraction, reinforcement of the technical staff and its expansion with new positions for PhDs and postdoctoral, improve the infrastructure of the Institute through the acquisition of additional state-of-the-art equipment, and increase our scientific production.

During 2020, the Communication and Outreach Department has been given a boost with the recruitment of a Communication Officer, increasing the dissemination actions and visibility of the institute, and a EU Programmes and Fundraising Office has been established to assist researchers in the preparation and management of European projects, with focus on innovation and knowledge transfers.

During 2020, the following staff has been hired by the project Severo Ochoa:

- Three new managers: A Severo Ochoa Project Manager, a Project Funding – Transfer Manager and a Communication Officer.
- 4 Predoctoral students (2 PhDs partially funded with SO funds, 2 SO PhDs)
- 4 Technician contracts

---

### External Scientific Advisory Committee

The IDÆA External Scientific Advisory Committee is formed by 8 internationally recognized scientists. The first visit to IDÆA was in November 2019, and a second meeting was hosted online due to pandemic restrictions in February 2021. These meetings are annually repeated to discuss the progress and future actions for improvement in the institute.

### Staff

Diana Aga – *College of Arts and Sciences, University of Buffalo, Buffalo, U.S.A.*

Juliane Hollender – *Department Environmental Chemistry, Eawag – Swiss Federal Institute of Aquatic Science and Technology, Dübendorf, Switzerland*

Roy Harrison – *School of Geography, Earth and Environmental Sciences, University of Birmingham, UK*  
Kevin Jones – *Lancaster Environmental Centre, Lancaster Environment Center, Lancaster, UK*  
María José Sanz Sánchez – *BC3 Basque Center for Climate Centre, Leioa, Spain*  
Jordi Sunyer Deu – *Childhood and Environment Programme, ISGlobal, Barcelona, Spain*  
Dörte Tetzlaff – *Department of Ecohydrology, Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany*  
Bert van Bavel – *Center for Freshwater Research, Norwegian Institute for Water Research (NIVA), Oslo, Norway*

---

## Severo Ochoa Committees

### Talent Attraction

#### Staff

Amato, Fulvio  
Dachs, Jordi  
Díaz, Silvia

Grimalt, Joan  
Moreno, Teresa  
Raldúa, Demetrio  
Tauler, Romà  
Vázquez, Enric

IDÆA aims to attract new researchers who can contribute to achieving the strategic targets of our research priorities. This is being done by using open competitive calls to hire young postdoc researchers and by attracting national and international talented researchers with proven profile success at a postdoctoral or early senior level. The aim is that these researchers will constitute a nucleus for future projects and collaborations with EU and International Institutes.

They will act as independent researchers and they should be open to research collaboration with other IDÆA researchers.

Work done by the members of the TALENT commission:

- Evaluation of CVS and research projects
- Interview of the candidates
- Live/Online (covid) discussion and evaluation

Three TALENT calls and 57 candidates have been evaluated in 2020.

- **First call** (March 2020): 21 CVs applications evaluated. 1 contract awarded.
- **Second call** (September 2020): 18 CVs applications evaluated. 2 contracts awarded.
- **Third call** (December 2020): 18 CVs applications evaluates. 3 contracts awarded.

---

## Seminars

### Staff

Faria, Melissa  
 Gilabert, Alejandra  
 Jaumot, Joaquim

Minguillón, María Cruz  
 Pérez, Sandra  
 Trechera, Pedro  
 Žonja, Božo

IDÆA organizes:

1. Biweekly seminars with and audience between 10 to 50 participants.

There are 3 types of seminars:

- Internal seminars. For predoctoral, postdoctoral and staff researchers and visiting researchers. Where we speak about tenured, talent attraction, new projects, presentations, sinergia projects results...
- Invited speakers. Seminars given by national and international recognized scientists.
- Special seminars. Skills workshops for the development of scientific and transversal competences, scientific conferences hosted at IDÆA, debates, round tables...

Collaboration with other Research Centers. Announcement of the activities of other centers (similar research fields). For example Institute of Marine Sciences (ICM-CSIC), Blanes Centre for Advances Studies (CEAB-CSIC), Institute of Aquatic Ecology (IEA-UdG).

Skills workshops

- Communication skills: How to do an elevator pitch in 3 minutes (Scientists Dating Forum)
- Getting your PhD but keeping your sanity: A systems thinking workshop (Scientists Dating Forum)
- Prismàtic Platform (Veronica Couto, IDÆA) PIs oriented

## Goals

- Joint research topics
- Increase the seminar's audience

21 Seminars during 2020 have been organized, 6 face-to-face and 15 online.

---

## Gender Balance

### Staff

Alastuey, Andrés  
Barata, Carlos  
Blanco, Diana  
Carnerero, Cristina

Fernández, Pilar  
Gallart, Francesc  
Lacorte, Sílvia  
Moreno, Teresa  
Viana, Mar

### Objectives:

- Planning and participation in annual educational and dissemination activities.
- Increasing awareness of gender inequalities in science and at the institute.
- Identification and inversion of attitudes and practices that stimulate gender inequalities.
- Promotion of inclusive language in official documents and communications.
- Informing and preventing sexual harassment and violence.

### On-going and Future Actions:

- Elaboration of an Equality Plan (assessment, implementation, monitoring)
- Study of gender balance in authorship of IDÆA publications.
- Collaboration with other Gender Committees.
- Hosting female scientists coming from developing countries (stays).

Actions carried out during 2020:

- World Environment Day. Annual cycles of dissemination conferences presented by women in STEM
- Report of gender equality during lockdown. Anonymous survey, with 15 questions (working conditions, family/household characteristics...). 44% of personnel responded (57/43 ♀/♂ ratio).
- CSIC4Girls. Workshops aiming to introduce 6 to 12-year-old girls to scientific and technological culture. M. Viana (PI) co-leading with the Communication and Outreach Department.

## Sustainability

### Staff

Abad, Esteban

Bayona, Josep Maria

Martínez, Laura

Martrat, Belén

Montemurro, Nicola

Moreno, Teresa

Piña, Benjamí

Querol, Xavier

Ratera, Mercè

Valhondo, Cristina

Vila, Maria

The IDÆA Sustainability Committee has as a mission to propose short- Advisory Committee and long-term actions for reducing the environmental footprint of the Institute.

To accomplish the objectives of the Committee, we identified five main action points:

1. **Construction and refurbishment.** Evaluation and Optimization of the energetic efficiency of the Institute. The first proposed action: efficiency assessment.
2. **Recycling and waste reduction.** Minimization of waste generation / optimization of recycling. Scientific Research is a wasteful process. Single-use consumables, highly toxic reagents, biologic agents, protective equipment... Nevertheless, the Committee is analyzing different possibilities to minimize the amount of waster the IDÆA generates.
3. **Travel and transport.** Decarbonization of transport and commuting. Many IDÆA activities involve sampling and motorization campaigns, which require a small operating fleet of vans. The Committee intends to evaluate the CO2 footprint associated to both groups of activities and to set recommendations for its minimization.
4. **Dissemination and environmental education.** Creating and disseminating ecological knowledge and awareness. While being a basic scientific research institution, the IDÆA has long been implicated in many educational activities at multiple levels, from participating in Graduate courses and training stages to performing dissemination activities in primary and high schools ("CSIC a l'aula").

5. **Water management.** Creating models for efficient water use. For historical reasons, the Institute has a dual water distribution, using the public water network for sanitary applications and for the generation of high-quality water for research, and having access to a private groundwater well for research activities that requires large amounts of water. This dual distribution allows us to explore a variety of schemes to promote the responsible use of water. To this end, it is proposed to optimization of the use of groundwater for gardening or dissemination of water dispensers through the building to discourage the use of bottled water among other things.

---

## Synergy Projects

### Staff

Barceló, Damià  
Carrera, Jesús  
Dentz, Marco  
Lacorte, Sílvia  
Llorens, Pilar

López de Alda, Miren  
Matamoros, Víctor  
Moreno, Teresa  
Querol, Xavier  
Tauler, Romà  
Viana, Mar

One of the key points to be strengthened in the IDÆA is the collaboration between researchers from the center on research issues. The SYNERGY PROJECTS promote the research between the different groups financed with Severo Ochoa funds. The objective of the annual calls is to finance projects that will seed future research proposals in national and international calls of longer duration.

There have been two calls:

- **First call** June 2019.

8 projects awarded:

Effect of pollution on marine eDNA and copepod-associated microbioma composition across a latitudinal oceanic transect; M. Vila and C. Barata; 01/06/2020 – 31/12/2021; 30.000€

Evaluation of multi-path personal exposure patterns to classical and emerging pollutants; E. Eljarrat and C. Reche; 01/06/2020 – 31/05/2021; 29.060€

Forest fires: impacts on air quality and spatio-temporal trends; S. Platikanov and M. Viana; 01/06/2020 – 31/05/2021; 12.000€

Modeling bacterial transport and retention during aquifer artificial recharge; B. Piña and JJ. Hidalgo; 01/06/2020 – 31/05/2021; 26.500€

Monitoring of microplastics in air and assessment of human exposure and risks through inhalation

and ingestion; A. Karanasiou y S. Lacorte; 01/06/2020 – 31/05/2021; 30.000€

Phenotypic and metabolomic effects of atmospheric PM on physiologically relevant human lung cell cultures: source apportionment and prediction of biological effects; F. Amato and C. Bedia; 01/06/2020 – 31/05/2021; 29.978€

Spatial Multi-omics: A challenging holistic approach to study the effects of emerging contaminants in ecotoxicological studies; L. Navarro and J. Jaumot; 01/06/2020 – 31/05/2021; 30.000€

Toxicity of aromatic disinfection by-products and their relevance in chlorinated water; C. Porte and C. Postigo; 01/06/2020 – 31/12/2021; 30.000€

- **Second call:** December 2020. 6 projects awarded to start in 2021 (01/01/2021 – 31/12/2021).

Building Urban Resilience: Assessment of Conventional and Upgraded Sustainable Urban Drainage Systems to Enhance Metal and Persistent and Mobile Organic Chemical Removal Prior to Aquifer Recharge; S. Perez and M. Teixido; 01/01/2021 – 31/12/2021; 29.500€

Chronic exposure of zebrafish (*Danio rerio*) to Rare Earth Elements in low doses: speciation effects and ecotoxicological implications; M. Faria and M. Izquierdo; 01/01/2021 – 31/12/2021; 30.000€

Dinámica biológica del CO<sub>2</sub> en aulas dado contexto actual de cambio climático y pandemia provocada por el virus SARS-CoV-2 (enfermedad CoViD-19); B. Martrat and N. Moreno; 01/01/2021 – 31/12/2021; 30.000€

Efectos de la erosión atmosférica y la fotodegradación en la bioaccesibilidad de micro(nano-plásticos) y aditivos plásticos a través de la inhalación; M. Llorca and T. Moreno; 01/01/2021 – 31/12/2021; 30.000€

Environmental risk of complex mixtures of emerging persistent and mobile chemicals in aquatic ecosystems (MixPersiRisk); N. Montemurro and D. Raldua; 01/01/2021 – 31/12/2021; 30.000€

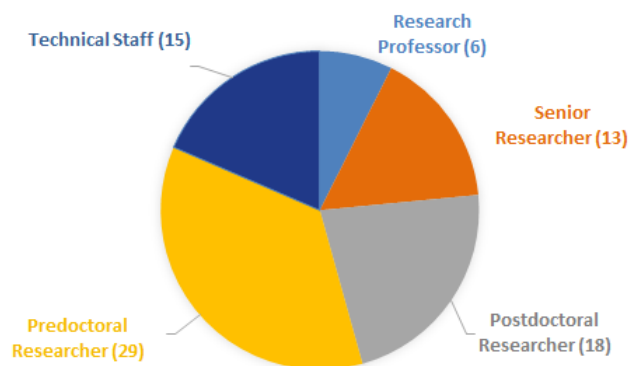
Fármacos en aguas subterráneas urbaNAs: Estudio de los procesos hidrogeológicos y químicos para una óptima gestión de los recursos hídricos urbanos (FANATIC); A. Ginebreda and A. Jurado; 01/01/2021 – 31/12/2021; 29.000€



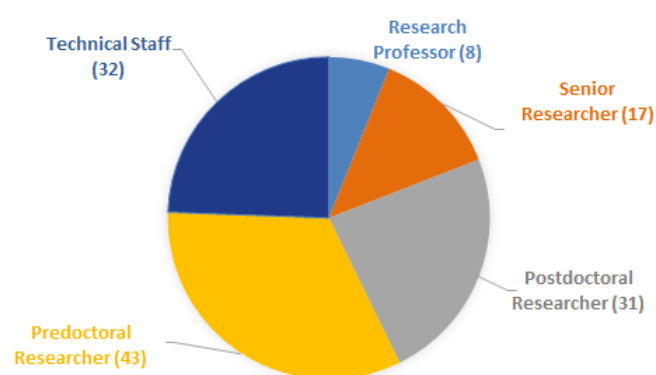


## Scientific career

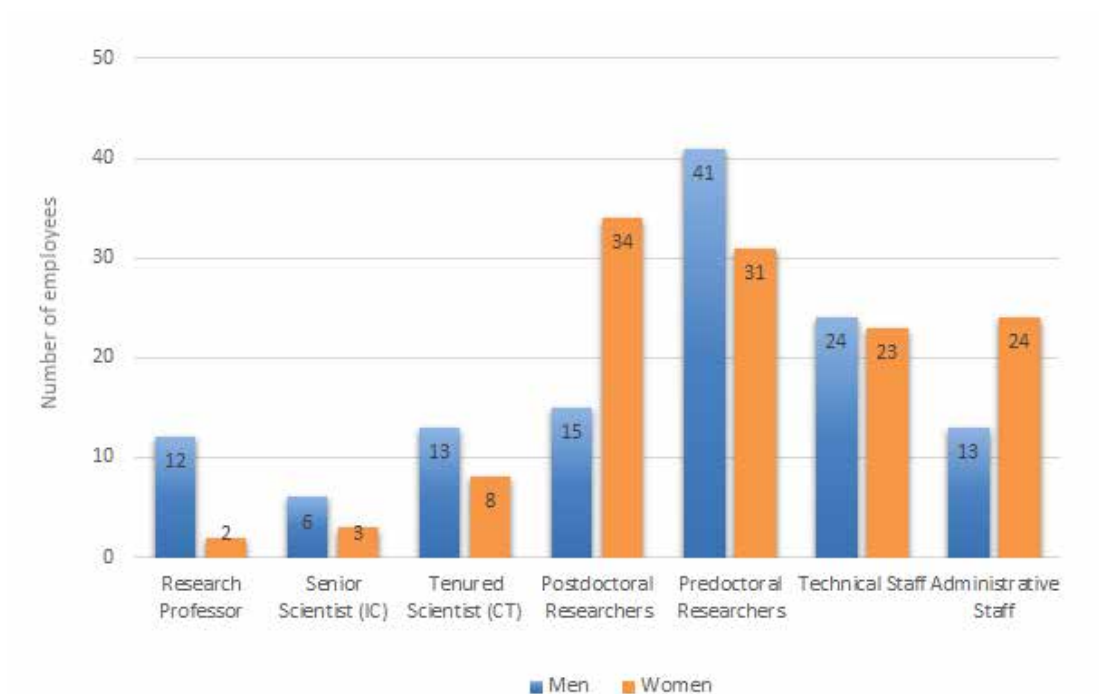
### Geosciences



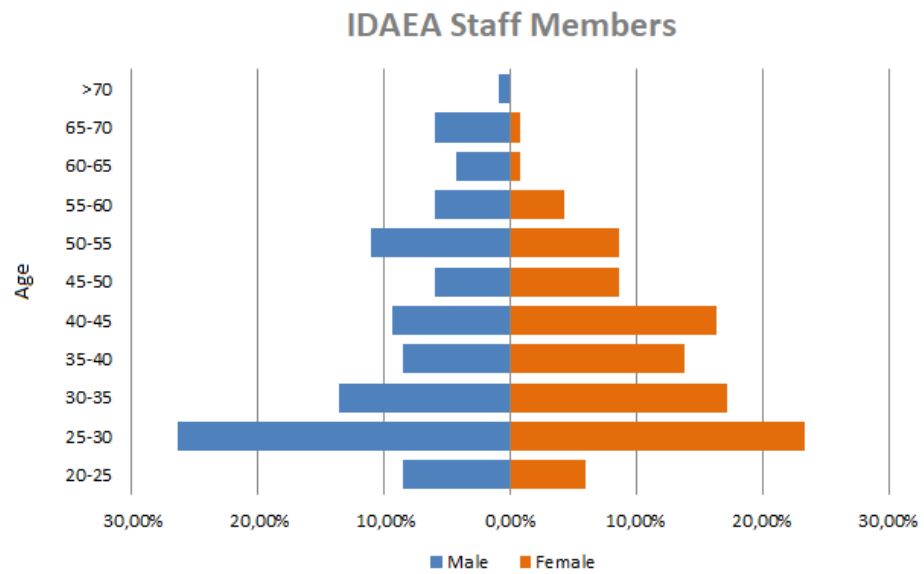
### Environmental Chemistry



## Gender distribution



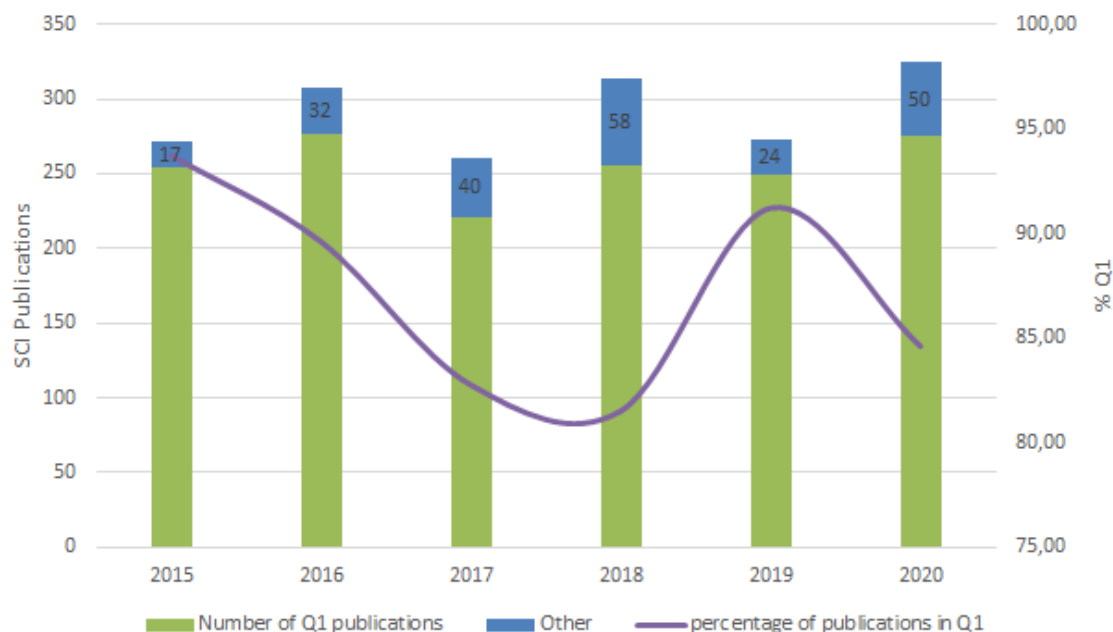
## IDÆA Staff Age



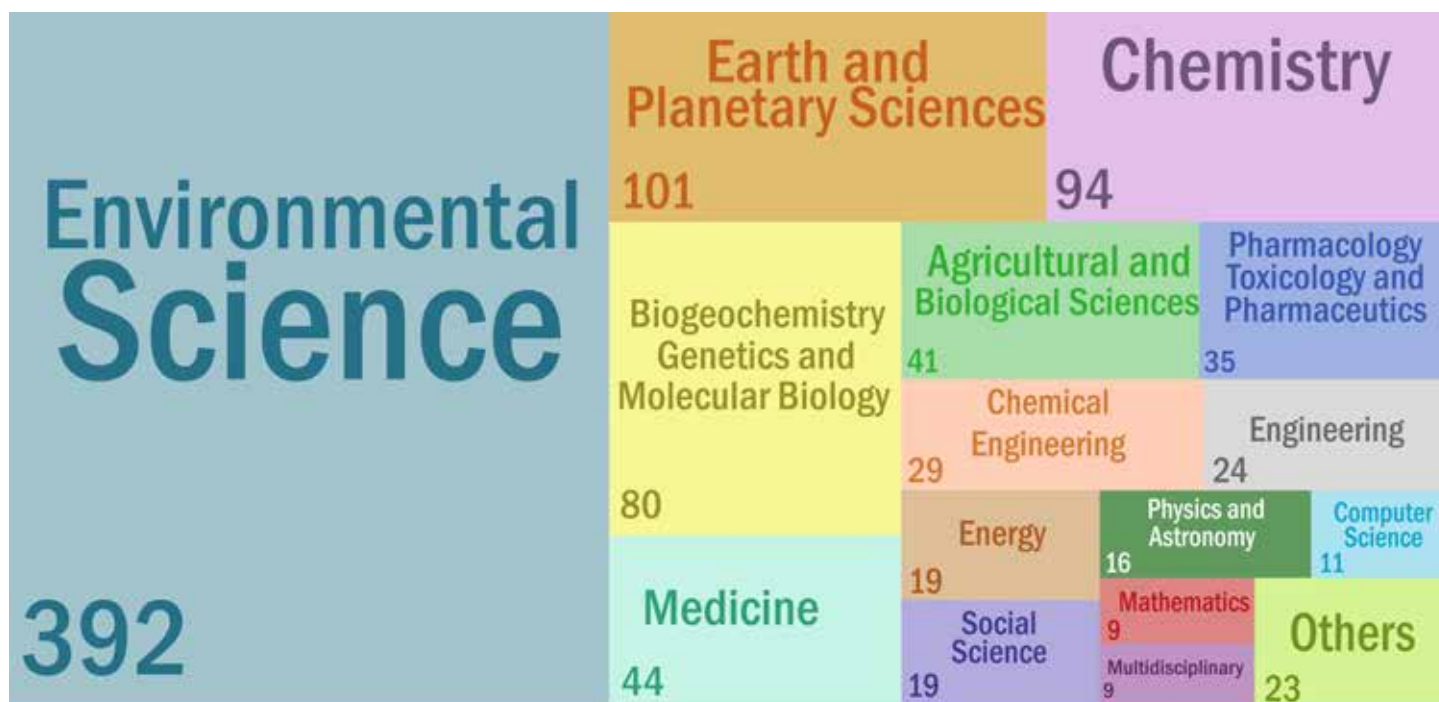
## World visitors to IDÆA



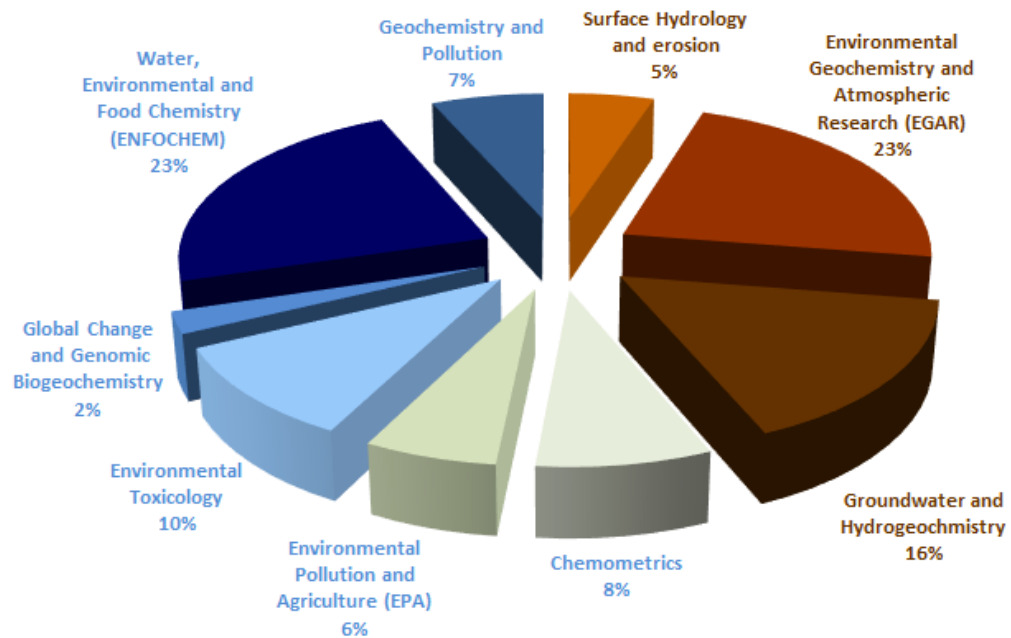
### Number of publications



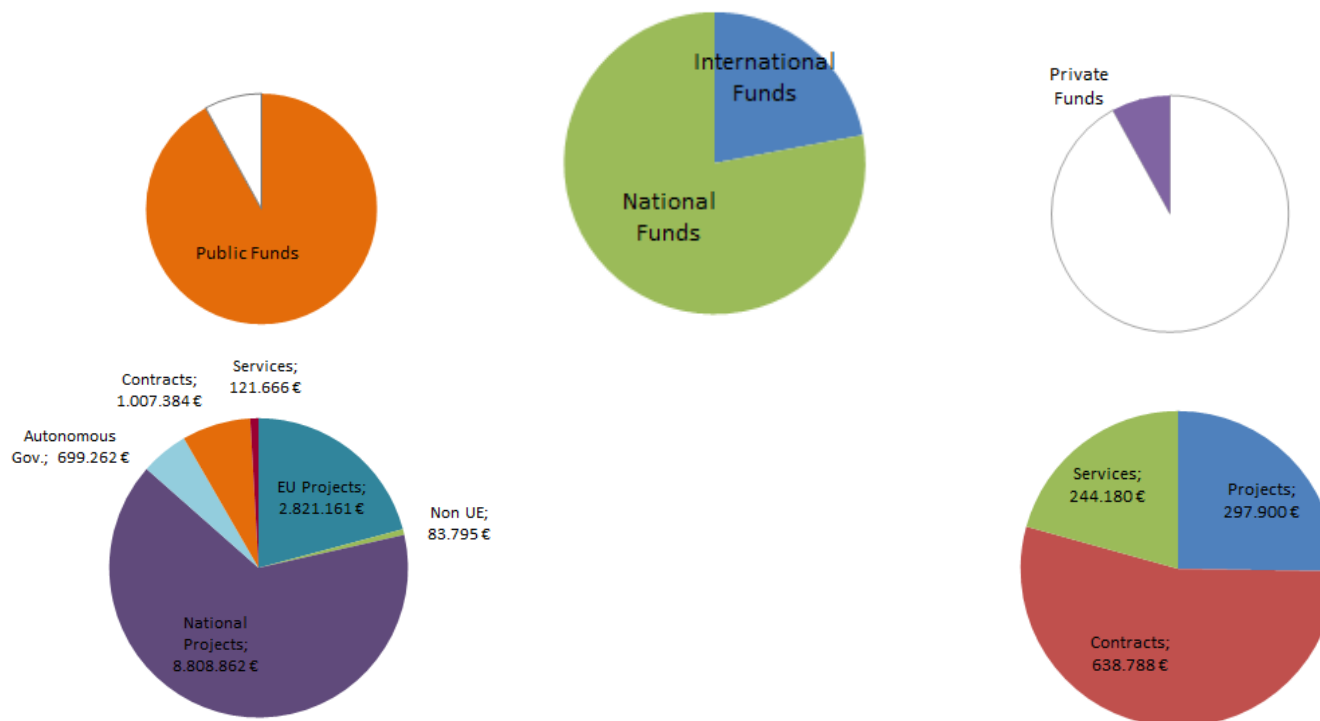
### Subject area of IDÆA publications



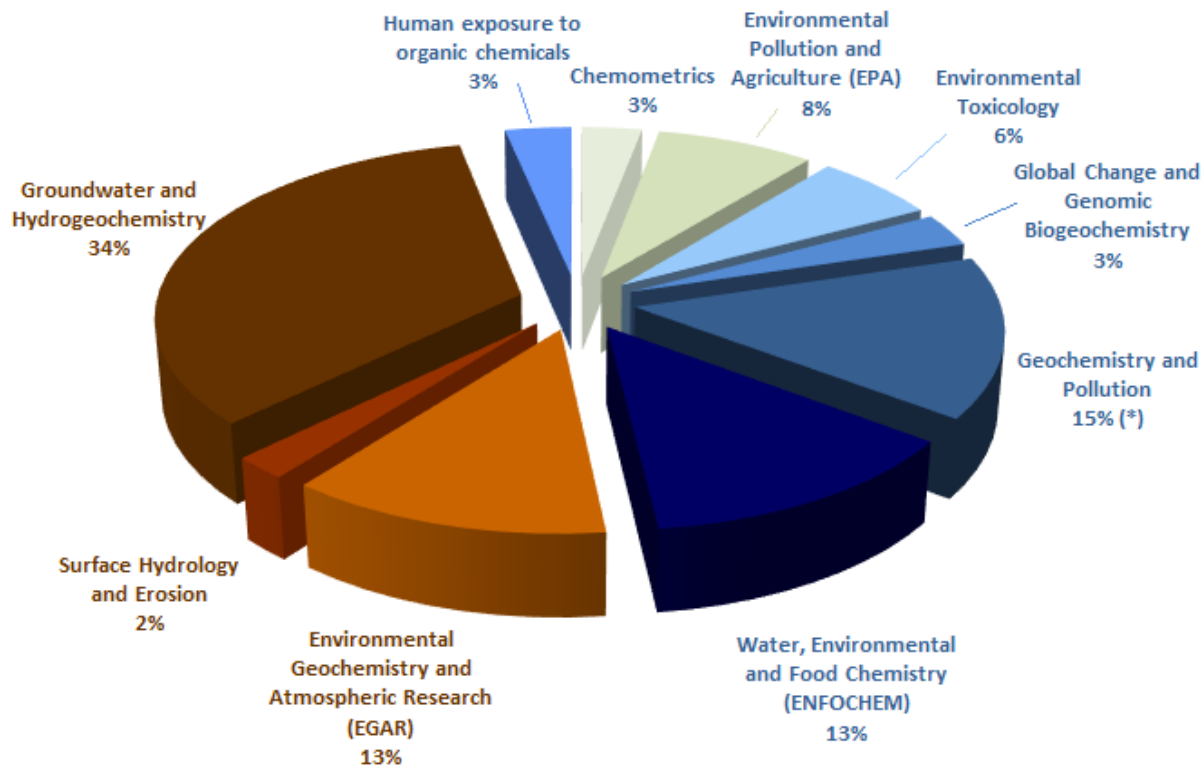
## Publications per research group



## IDÆA 2019-2020 FUNDING



### Funding per research group



(\*) includes the laboratories of Dioxins and Mass Spectrometry - Organic Pollutants and the service of Advanced Mass Spectrometry Analysis - Orbitrap.

## Summary 2019-2020

|   | <b>2019</b> | <b>2020</b> |
|---|-------------|-------------|
| <b>Active international projects</b>    | 33          | 26          |
| <b>Active national projects</b>         | 53          | 57          |
| <b>Active contracts</b>                 | 69          | 53          |
| <b>SCI publications</b>                 | 279         | 312         |
| <b>Other publications</b>               | 11          | 13          |
| <b>Books edited</b>                     | 11          | 18          |
| <b>Book chapters</b>                    | 12          | 30          |
| <b>Oral presentation in conferences</b> | 182         | 73          |
| <b>Doctoral thesis</b>                  | 14          | 13          |

## SCI Publications

- Ábalos, M., Barceló, D., Parera, J., Farré, M.L., Llorca, M., Eljarrat, E., Giulivo, M., Capri, E., Paunović, M., Milačić, R., Abad, E.; **“Levels of regulated POPs in fish samples from the Sava River Basin. Comparison to legislated quality standard values”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.07.371.
- Abellan, A., Sunyer, J., Garcia-Esteban, R., Basterrechea, M., Duarte-Salles, T., Ferrero, A., Garcia-Aymerich, J., Gascon, M., Grimalt, J.O., Lopez-Espinosa, M.-J., Zabaleta, C., Vrijheid, M., Casas, M.; **“Prenatal exposure to organochlorine compounds and lung function during childhood”**; Environment International; 2019; DOI: 10.1016/j.envint.2019.105049.
- Acuña, V., Bregoli, F., Font, C., Barceló, D., Corominas, L.L., Ginebreda, A., Petrovic, M., Rodríguez-Roda, I., Sabater, S., Marcé, R.; **“Management actions to mitigate the occurrence of pharmaceuticals in river networks in a global change context”**; Environment International; 2020; DOI: 10.1016/j.envint.2020.105993.
- Agathokleous, E., Barceló, D., Tsatsakis, A., Calabrese, E.J.; **“Hydrocarbon-induced hormesis: 101 years of evidence at the margin?”**; Environmental Pollution; 2020; DOI: 10.1016/j.envpol.2020.114846.
- Agudelo-Castañeda, D.M., Teixeira, E.C., Braga, M., Rolim, S.B.A., Silva, L.F.O., Beddows, D.C.S., Harrison, R.M., Querol, X.; **“Cluster analysis of urban ultrafine particles size distributions”**; Atmospheric Pollution Research; 2019; DOI: 10.1016/j.apr.2018.06.006.
- Ahmadireskety, A., Aristizabal-Henao, J.J., Marqueño, A., Perrault, J.R., Stacy, N.I., Manire, C.A., Bowden, J.A.; **“Nontargeted lipidomics in nesting females of three sea turtle species in Florida by ultra-high-pressure liquid chromatography–high-resolution tandem mass spectrometry (UHPLC–HRMS/MS) reveals distinct species-specific lipid signatures”**; Marine Biology; 2020; DOI: 10.1007/s00227-020-03747-1.
- Al Wattar, B.H., Murugesu, N., Tobias, A., Zamora, J., Khan, K.S.; **“Management of first-trimester miscarriage: A systematic review and network meta-analysis”**; Human Reproduction Update; 2019; DOI: 10.1093/humupd/dmz002.
- Alkimin, G.D., Daniel, D., Dionísio, R., Soares, A.M.V.M., Barata, C., Nunes, B.; **“Effects of diclofenac and salicylic acid exposure on Lemna minor: Is time a factor?”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2019.108609.



- Alkimin, G.D., Daniel, D., Frankenbach, S., Serôdio, J., Soares, A.M.V.M., Barata, C., Nunes, B.; **“Evaluation of pharmaceutical toxic effects of non-standard endpoints on the macrophyte species Lemna minor and Lemna gibba”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.12.002.
- Alkimin, G.D., Soares, A.M.V.M., Barata, C., Nunes, B.; **“Can salicylic acid modulate biochemical, physiological and population alterations in a macrophyte species under chemical stress by diclofenac?”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.139715.
- Alkimin, G.D., Soares, A.M.V.M., Barata, C., Nunes, B.; **“Evaluation of ketoprofen toxicity in two freshwater species: Effects on biochemical, physiological and population endpoints”**; Environmental Pollution; 2020; DOI: 10.1016/j.envpol.2020.114993.
- Alkimin, G.D.D., Nunes, B., Soares, A.M., Bellot, M., Gómez-Canela, C., Barata, C.; **“Daphnia magna responses to fish kairomone and chlorpromazine exposures”**; Chemico-Biological Interactions; 2020; DOI: 10.1016/j.cbi.2020.109123.
- Allen, B., Coumoul, X., Lacorte, S.; **“Microplastic freshwater contamination: an issue advanced by science with public engagement”** Environmental Science and Pollution Research; 2019; DOI: 10.1007/s11356-019-05300-0.
- Altenburger, R., Brack, W., Burgess, R.M., Busch, W., Escher, B.I., Focks, A., Mark Hewitt, L., Jacobsen, B.N., de Alda, M.L., Ait-Aissa, S., Backhaus, T., Ginebreda, A., Hilscherová, K., Hollender, J., Hollert, H., Neale, P.A., Schulze, T., Schyman-ski, E.L., Teodorovic, I., Tindall, A.J., de Aragão Umbuzeiro, G., Vrana, B., Zonja, B., Krauss, M.; **“Future water quality monitoring: improving the balance between exposure and toxicity assessments of real-world pollutant mixtures”**; Environmental Sciences Europe; 2019; DOI: 10.1186/s12302-019-0193-1.
- Álvarez-Muñoz, D., Rambla-Alegre, M., Carrasco, N., Lopez de Alda, M., Barceló, D.; **“Fast analysis of relevant contaminants mixture in commercial shellfish”**; Talanta; 2019; DOI: 10.1016/j.talanta.2019.04.085.
- Álvarez-Ruiz, R., Picó, Y., Alfarhan, A.H., El-Sheikh, M.A., Alshahrani, H.O., Barceló, D.; **“Dataset of pesticides, pharmaceuticals and personal care products occurrence in wetlands of Saudi Arabia”**; Data in Brief; 2020; DOI: 10.1016/j.dib.2020.105776.
- Alves, C.A., Font, O., Moreno, N., Vicente, E.D., Duarte, M., Tarelho, L.A.C., Querol, X.; **“Mineralogical, chemical and leaching characteristics of ashes from residential biomass combustion”**; Environmental Science and Pollution Research; 2019; DOI: 10.1007/s11356-019-05231-w.
- Alves, C.A., Vicente, A.M.P., Calvo, A.I., Baumgardner, D., Amato, F., Querol, X., Pio, C., Gustafsson, M.; **“Physical and chemical properties of non-exhaust particles generated from wear between pavements and tyres”**; Atmospheric Environment; 2020; DOI: 10.1016/j.atmosenv.2019.117252.
- Alves, C.A., Vicente, E.D., Vicente, A.M.P., Rienda, I.C., Tomé, M., Querol, X., Amato, F.; **“Loadings, chemical patterns and risks of inhalable road dust particles in an Atlantic city in the north of Portugal”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.139596.
- Alves, R.N., Rambla-Alegre, M., Braga, A.C., Maulvault, A.L., Barbosa, V., Campàs, M., Reverté, L., Flores, C., Caixach, J., Kilcoyne, J., Costa, P.R., Diogène, J., Marques, A.; **“Bioaccessibility of lipophilic and hydrophilic marine biotoxins in seafood: An in vitro digestion approach”**; Food and Chemical Toxicology; 2019; DOI: 10.1016/j.fct.2019.04.041.

- Amato, F., Pérez, N., López, M., Ripoll, A., Alastuey, A., Pandolfi, M., Karanasiou, A., Salmatou, A., Padoan, E., Frasca, D., Marcoccia, M., Viana, M., Moreno, T., Reche, C., Martins, V., Brines, M., Minguillón, M.C., Ealo, M., Rivas, I., van Drooge, B., Benavides, J., Craviotto, J.M., Querol, X.; **“Vertical and horizontal fall-off of black carbon and NO<sub>2</sub> within urban blocks”**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2019.05.434.
- Ameer, W.B., Annabi, A., El Megdiche, Y., Mhadhbi, T., Hassine, S.B., Barhoumi, B., Touil, S., Driss, M.R., Barceló, D., Eljarrat, E.; **“Legacy and Emerging Brominated Flame Retardants in Bizerte Lagoon Murex (Hexaplex Trunculus): Levels and Human Health Risk Assessment”**; *Archives of Environmental Contamination and Toxicology*; 2020; DOI: 10.1007/s00244-019-00694-x.
- Aminot, Y., Sayfritz, S.J., Thomas, K.V., Godinho, L., Botteon, E., Ferrari, F., Boti, V., Albanis, T., Köck-Schulmeyer, M., Diaz-Cruz, M.S., Farré, M., Barceló, D., Marques, A., Readman, J.W.; **“Environmental risks associated with contaminants of legacy and emerging concern at European aquaculture areas”**; *Environmental Pollution*; 2019; DOI: 10.1016/j.envpol.2019.05.133.
- Andrews, E., Sheridan, P.J., Ogren, J.A., Hageman, D., Jefferson, A., Wendell, J., Alástuey, A., Alados-Arboledas, L., Bergin, M., Ealo, M., Gannet Hallar, A., Hoffer, A., Kalapov, I., Keywood, M., Kim, J., Kim, S.-W., Kolonjari, F., Labuschagne, C., Lin, N.-H., Macdonald, A., Mayol-Bracero, O.L., McCubbin, I.B., Pandolfi, M., Reisen, F., Sharma, S., Sherman, J.P., Sorribas, M., Sun, J.; **“Overview of the NOAA/ESRL federated aerosol network”**; *Bulletin of the American Meteorological Society*; 2019; DOI: 10.1175/BAMS-D-17-0175.1.
- Anglisano, A., Casas, L., Anglisano, M., Queralt, I.; **“Application of supervised machine-learning methods for attesting provenance in catalan traditional pottery industry”**; *Minerals*; 2020; DOI: 10.3390/min10010008.
- Antić, I., Škrbić, B.D., Matamoros, V., Bayona, J.M.; **“Does the application of human waste as a fertilization material in agricultural production pose adverse effects on human health attributable to contaminants of emerging concern?”**; *Environmental Research*; 2020; DOI: 10.1016/j.envres.2020.109132.
- Aquino, T., Dentz, M.; **“Kinetics of contact processes under segregation”**; *Physical Review E*; 2020; DOI: 10.1103/PhysRevE.101.012114.
- Aquino, T., Lapeyre, G.J., Dentz, M.; **“Survival and confinement under quenched disorder”**; *Physical Chemistry Chemical Physics*; 2019; DOI: 10.1039/c9cp03792f.
- Arambourou, H., Llorente, L., Moreno-Ocio, I., Herrero, Ó., Barata, C., Fuertes, I., Delorme, N., Méndez-Fernández, L., Planelló, R.; **“Exposure to heavy metal-contaminated sediments disrupts gene expression, lipid profile, and life history traits in the midge Chironomus riparius”**; *Water Research*; 2020; DOI: 10.1016/j.watres.2019.115165.
- Arambourou, H., Planelló, R., Llorente, L., Fuertes, I., Barata, C., Delorme, N., Noury, P., Herrero, Ó., Villeneuve, A., Bonninau, C.; **“Chironomus riparius exposure to field-collected contaminated sediments: From subcellular effect to whole-organism response”**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2019.03.384.
- Arambourou, H., Vulliet, E., Daniele, G., Noury, P., Delorme, N., Abbaci, K., Forcellini, M., Tutundjian, R., Barata, C.; **“Comparison in the response of three European Gammarid species exposed to the growth regulator insecticide fenoxycarb”**; *Environmental Science and Pollution Research*; 2019; DOI: 10.1007/s11356-019-04631-2.
- Armengol, S., Ayora, C., Manzano, M., Bea, S.A., Martínez, S.; **“The role of loess weathering in the groundwater chemistry of the Chaco-Pampean Plain (Argentina)”**; *Journal of Hydrology*; 2020; DOI: 10.1016/j.jhydrol.2020.124984.

- Armstrong, B., Sera, F., Vicedo-Cabrera, A.M., Abrutzky, R., Åström, D.O., Bell, M.L., Chen, B.-Y., Coelho, M.S.Z.S., Correa, P.M., Dang, T.N., Diaz, M.H., Van Dung, D., Forsberg, B., Goodman, P., Guo, Y.-L.L., Guo, Y., Hashizume, M., Honda, Y., Indermitte, E., Iñiguez, C., Kan, H., Kim, H., Kysely, J., Lavigne, E., Michelozzi, P., Orru, H., Ortega, N.V., Pascal, M., Ragettli, M.S., Saldiva, P.H.N., Schwartz, J., Scortichini, M., Seposo, X., Tobias, A., Tong, S., Urban, A., Valencia, C.D.L.C., Zanobetti, A., Zeka, A., Gasparini, A.; **“The role of humidity in associations of high temperature with mortality: A multicountry, multicity study”**; Environmental Health Perspectives; 2019; DOI: 10.1289/EHP5430.
- Armstrong, B.G., Gasparini, A., Tobias, A., Sera, F.; **“Sample size issues in time series regressions of counts on environmental exposures”**; BMC Medical Research Methodology; 2020; DOI: 10.1186/s12874-019-0894-6.
- Ascensão, F., D’Amico, M., Barrientos, R.; **“Validation data is needed to support modelling in Road Ecology”**; Biological Conservation; 2019; DOI: 10.1016/j.biocon.2018.12.023.
- Ascensão, F., Kindel, A., Teixeira, F.Z., Barrientos, R., D’Amico, M., Borda-de-Água, L., Pereira, H.M.; **“Beware that the lack of wildlife mortality records can mask a serious impact of linear infrastructures”**; Global Ecology and Conservation; 2019; DOI: 10.1016/j.gecco.2019.e00661.
- Ayala-Cabrera, J.F., Ábalos, M., Abad, E., Moyano, E., Santos, F.J.; **“Feasibility of gas chromatography-atmospheric pressure photoionization–high-resolution mass spectrometry for the analysis of polychlorinated dibenzo-p-dioxins, dibenzofurans, and dioxin-like polychlorinated biphenyls in environmental and feed samples”**; Analytical and Bioanalytical Chemistry; 2020; DOI: 10.1007/s00216-020-02615-7.
- Azimi, A., Riahi Bakhtiari, A., Tauler, R.; **“Polycyclic aromatic hydrocarbon source fingerprints in the environmental samples of Anzali–South of Caspian Sea”**; Environmental Science and Pollution Research; 2020; DOI: 10.1007/s11356-020-09588-1.
- Aznar-Alemany, Ò., Sala, B., Plön, S., Bouwman, H., Barceló, D., Eljarrat, E.; **“Halogenated and organophosphorus flame retardants in cetaceans from the southwestern Indian Ocean”**; Chemosphere; 2019; DOI: 10.1016/j.chemosphere.2019.03.165.
- Aznar-Alemany, Ò., Yang, X., Alonso, M.B., Costa, E.S., Torres, J.P.M., Malm, O., Barceló, D., Eljarrat, E.; **“Preliminary study of long-range transport of halogenated flame retardants using Antarctic marine mammals”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.09.287.
- Barbieri, M.V., Monllor-Alcaraz, L.S., Postigo, C., López de Alda, M.; **“Improved fully automated method for the determination of medium to highly polar pesticides in surface and groundwater and application in two distinct agriculture-impacted areas”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.140650.
- Barbieri, M.V., Postigo, C., Guillem-Argiles, N., Monllor-Alcaraz, L.S., Simionato, J.I., Stella, E., Barceló, D., López de Alda, M.; **“Analysis of 52 pesticides in fresh fish muscle by QuEChERS extraction followed by LC-MS/MS determination”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.10.289.
- Barbieri, M.V., Postigo, C., Monllor-Alcaraz, L.S., Barceló, D., López de Alda, M.; **“A reliable LC-MS/MS-based method for trace level determination of 50 medium to highly polar pesticide residues in sediments and ecological risk assessment”**; Analytical and Bioanalytical Chemistry; 2019; DOI: 10.1007/s00216-019-02188-0.
- Barceló, D., Picó, Y.; **“Microplastics in the global aquatic environment: Analysis, effects, remediation and policy solutions”**; Journal of Environmental Chemical Engineering; 2019; DOI: 10.1016/j.jece.2019.103421.

- Barceló, D., Ruan, T.; **“Challenges and perspectives on the analysis of traditional perfluoroalkyl substances and emerging alternatives”**; TrAC - Trends in Analytical Chemistry; 2019; DOI: 10.1016/j.trac.2019.07.016.
- Barceló, D., Žonja, B., Ginebreda, A.; **“Toxicity tests in wastewater and drinking water treatment processes: A complementary assessment tool to be on your radar”**; Journal of Environmental Chemical Engineering; 2020; DOI: 10.1016/j.jece.2020.104262.
- Barcelo, D.; **“An environmental and health perspective for COVID-19 outbreak: Meteorology and air quality influence, sewage epidemiology indicator, hospitals disinfection, drug therapies and recommendations”**; Journal of Environmental Chemical Engineering; 2020; DOI: 10.1016/j.jece.2020.104006.
- Barcelo, D.; **“Microplastics analysis”**; MethodsX; 2020; DOI: 10.1016/j.mex.2020.100884.
- Barcelo-Ordinas, J.M., Ferrer-Cid, P., Garcia-Vidal, J., Ripoll, A., Viana, M.; **“Distributed multi-scale calibration of low-cost ozone sensors in wireless sensor networks”**; Sensors; 2019; DOI: 10.3390/s19112503.
- Barhoumi, B., Tedetti, M., Peris, A., Guigue, C., Aznar-Alemany, Ò., Touil, S., Driss, M.R., Eljarrat, E.; **“Halogenated flame retardants in atmospheric particles from a North African coastal city (Bizerte, Tunisia): Pollution characteristics and human exposure”**; Atmospheric Pollution Research; 2020; DOI: 10.1016/j.apr.2020.01.011.
- Basallote, M.D., Cánovas, C.R., Olías, M., Pérez-López, R., Macías, F., Carrero, S., Ayora, C., Nieto, J.M.; **“Mineralogically-induced metal partitioning during the evaporative precipitation of efflorescent sulfate salts from acid mine drainage”**; Chemical Geology; 2019; DOI: 10.1016/j.chemgeo.2019.119339.
- Bayat, M., Marín-García, M., Ghasemi, J.B., Tauler, R.; **“Application of the area correlation constraint in the MCR-ALS quantitative analysis of complex mixture samples”**; Analytica Chimica Acta; 2020; DOI: 10.1016/j.aca.2020.03.057.
- Bedia, C., Badia, M., Muixí, L., Levade, T., Tauler, R., Sierra, A.; **“GM2-GM3 gangliosides ratio is dependent on GRP94 through down-regulation of GM2-AP cofactor in brain metastasis cells”**; Scientific Reports; 2019; DOI: 10.1038/s41598-019-50761-5.
- Bedia, C., Sierra, À., Tauler, R.; **“Application of chemometric methods to the analysis of multimodal chemical images of biological tissues”**; Analytical and Bioanalytical Chemistry; 2020; DOI: 10.1007/s00216-020-02595-8.
- Bedoya-Velásquez, A.E., Titos, G., Antonio Bravo-Aranda, J., Haeffelin, M., Favez, O., Petit, J.-E., Andrés Casquero-Vera, J., José Olmo-Reyes, F., Montilla-Rosero, E., Hoyos, C.D., Alados-Arboledas, L., Luis Guerrero-Rascado, J.; **“Long-term aerosol optical hygroscopicity study at the ACTRIS SARTA observatory: Synergy between ceilometer and in situ measurements”**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-7883-2019.
- Bedrossiantz, J., Martínez-Jerónimo, F., Bellot, M., Raldua, D., Gómez-Canela, C., Barata, C.; **“A high-throughput assay for screening environmental pollutants and drugs impairing predator avoidance in Daphnia magna”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.140045.
- Behrouj-Peely, A., Mohammadi, Z., Scheiber, L., Vázquez-Suñé, E.; **“An integrated approach to estimate the mixing ratios in a karst system under different hydrogeological conditions”**; Journal of Hydrology: Regional Studies; 2020; DOI: 10.1016/j.ejrh.2020.100693.
- Bekö, G., Carslaw, N., Fauser, P., Kauneliene, V., Nehr, S., Phillips, G., Saraga, D., Schoemaeker, C., Wierzbicka, A., Querol, X.; **“The past, present, and future of indoor air chemistry”**; Indoor Air; 2020; DOI: 10.1111/ina.12634.

- Belis, C.A., Pernigotti, D., Pirovano, G., Favez, O., Jaffrezou, J.L., Kuenen, J., Denier van Der Gon, H., Reizer, M., Riffault, V., Alleman, L.Y., Almeida, M., Amato, F., Angyal, A., Argyropoulos, G., Bande, S., Beslic, I., Besombes, J.-L., Bove, M.C., Brotto, P., Calori, G., Cesari, D., Colombi, C., Contini, D., De Gennaro, G., Di Gilio, A., Diapouli, E., El Haddad, I., Elbern, H., Eleftheriadis, K., Ferreira, J., Vivanco, M.G., Gilardoni, S., Golly, B., Hellebust, S., Hopke, P.K., Izadmanesh, Y., Jorquera, H., Krajsek, K., Kranenburg, R., Lazzeri, P., Lenartz, F., Lucarelli, F., Maciejewska, K., Manders, A., Manousakas, M., Masiol, M., Mircea, M., Mooibroek, D., Nava, S., Oliveira, D., Paglione, M., Pandolfi, M., Perrone, M., Petralia, E., Pietrodangelo, A., Pillon, S., Pokorna, P., Prati, P., Salameh, D., Samara, C., Samek, L., Saraga, D., Sauvage, S., Schaap, M., Scotto, F., Sega, K., Siour, G., Tauler, R., Valli, G., Vecchi, R., Venturini, E., Vestenius, M., Waked, A., Yubero, E.; **“Evaluation of receptor and chemical transport models for PM10 source apportionment”**; Atmospheric Environment: X; 2020; DOI: 10.1016/j.aeaoa.2019.100053.
- Benaiges-Fernandez, R., Offeddu, F.G., Margalef-Marti, R., Palau, J., Urmeneta, J., Carrey, R., Otero, N., Cama, J.; **“Geochemical and isotopic study of abiotic nitrite reduction coupled to biologically produced Fe(II) oxidation in marine environments”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.127554.
- Benaiges-Fernandez, R., Palau, J., Offeddu, F.G., Cama, J., Urmeneta, J., Soler, J.M., Dold, B.; **“Dissimilatory bioreduction of iron(III) oxides by Shewanella loihica under marine sediment conditions”**; Marine Environmental Research; 2019; DOI: 10.1016/j.marenvres.2019.104782.
- Benavides, J., Snyder, M., Guevara, M., Soret, A., Pérez García-Pando, C., Amato, F., Querol, X., Jorba, O.; **“CALI-OPE-Urban v1.0: Coupling R-LINE with a mesoscale air quality modelling system for urban air quality forecasts over Barcelona city (Spain)”**; Geoscientific Model Development; 2019; DOI: 10.5194/gmd-12-2811-2019.
- Bessa, M.J., Brandão, F., Viana, M., Gomes, J.F., Monfort, E., Cassee, F.R., Fraga, S., Teixeira, J.P.; **“Nanoparticle exposure and hazard in the ceramic industry: an overview of potential sources, toxicity and health effects”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109297.
- Bilal, M., Ashraf, S.S., Barceló, D., Iqbal, H.M.N.; **“Biocatalytic degradation/redefining “removal” fate of pharmaceutically active compounds and antibiotics in the aquatic environment”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.07.224.
- Bilal, M., Barceló, D., Iqbal, H.M.N.; **“Nanostructured materials for harnessing the power of horseradish peroxidase for tailored environmental applications”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.142360.
- Bilal, M., Barceló, D., Iqbal, H.M.N.; **“Persistence, ecological risks, and oxidoreductases-assisted biocatalytic removal of triclosan from the aquatic environment”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.139194.
- Bilal, M., Iqbal, H.M.N., Barceló, D.; **“Mitigation of bisphenol A using an array of laccase-based robust bio-catalytic cues – A review”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.06.403.
- Bilal, M., Iqbal, H.M.N., Barceló, D.; **“Persistence of pesticides-based contaminants in the environment and their effective degradation using laccase-assisted biocatalytic systems”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.133896.
- Blanco, M., Rizzi, J., Fernandes, D., Colin, N., Maceda-Veiga, A., Porte, C.; **“Assessing the impact of waste water effluents on native fish species from a semi-arid region, NE Spain”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.11.115.

- Blázquez-Pallí, N., Shouakar-Stash, O., Palau, J., Trueba-Santiso, A., Varias, J., Bosch, M., Soler, A., Vicent, T., Marco-Urrea, E., Rosell, M.; **“Use of dual element isotope analysis and microcosm studies to determine the origin and potential anaerobic biodegradation of dichloromethane in two multi-contaminated aquifers”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.134066.
- Bolívar-Subirats, G., Cortina-Puig, M., Lacorte, S.; **“Multi-residue method for the determination of high production volume plastic additives in river waters”**; Environmental Science and Pollution Research; 2020; DOI: 10.1007/s11356-020-10118-2.
- Bonada, N., Cañedo-Argüelles, M., Gallart, F., von Schiller, D., Fortuño, P., Latron, J., Llorens, P., Múrria, C., Soria, M., Vinyoles, D., Cid, N.; **“Conservation and management of isolated pools in temporary rivers”**; Water (Switzerland); 2020; DOI: 10.3390/w12102870.
- Bongiovanni, G.A., Pérez, R.D., Mardirosian, M., Pérez, C.A., Marguí, E., Queralt, I.; **“Comprehensive analysis of renal arsenic accumulation using images based on X-ray fluorescence at the tissue, cellular, and subcellular levels”**; Applied Radiation and Isotopes; 2019; DOI: 10.1016/j.apradiso.2019.05.018.
- Bosch-Orea, C., Sanchís, J., Barceló, D., Farré, M.; **“Ultra-trace determination of domoic acid in the Ebro Delta estuary by SPE-HILIC-HRMS”**; Analytical Methods; 2020; DOI: 10.1039/c9ay02617g.
- Brack, W., Ait-Aissa, S., Altenburger, R., Cousins, I., Dulio, V., Escher, B., Focks, A., Ginebreda, A., Hering, D., Hilscherová, K., Hollender, J., Hollert, H., Kortenkamp, A., de Alda, M.L., Posthuma, L., Schymanski, E., Segner, H., Slobodnik, J.; **“Let us empower the WFD to prevent risks of chemical pollution in European rivers and lakes”**; Environmental Sciences Europe; 2019; DOI: 10.1186/s12302-019-0228-7.
- Brack, W., Ait-Aissa, S., Backhaus, T., Birk, S., Barceló, D., Burgess, R., Cousins, I., Dulio, V., Escher, B.I., Focks, A., van Gils, J., Ginebreda, A., Hering, D., Hewitt, L.M., Hilscherová, K., Hollender, J., Hollert, H., Köck, M., Kortenkamp, A., de Alda, M.L., Müller, C., Posthuma, L., Schüürmann, G., Schymanski, E., Segner, H., Sleenwaert, F., Slobodnik, J., Teodorovic, I., Umbuzeiro, G., Voulvoulis, N., van Wezel, A., Altenburger, R.; **“Strengthen the European collaborative environmental research to meet European policy goals for achieving a sustainable, non-toxic environment”**; Environmental Sciences Europe; 2019; DOI: 10.1186/s12302-019-0232-y.
- Brack, W., Hollender, J., de Alda, M.L., Müller, C., Schulze, T., Schymanski, E., Slobodnik, J., Krauss, M.; **“High-resolution mass spectrometry to complement monitoring and track emerging chemicals and pollution trends in European water resources”**; Environmental Sciences Europe; 2019; DOI: 10.1186/s12302-019-0230-0.
- Bravo Covarrubias, A., Torres, E., Ayora, C., Ramos Arroyo, Y.R.; **“Arsenic mobility in the sediments of a dam that receives runoffs from epithermal mines [Movilidad de arsénico en los sedimentos de una presa que recibe escurrimientos de minas epitermales]”**; Revista Internacional de Contaminación Ambiental; 2020; DOI: 10.20937/RICA.53318.
- Bravo, N., Grimalt, J.O., Bocca, B., Pino, A., Bin, M., Brumatti, L.V., Rosolen, V., Barbone, F., Ronfani, L., Alimonti, A., Calamandrei, G.; **“Urinary metabolites of organophosphate and pyrethroid pesticides in children from an Italian cohort (PHIME, Trieste)”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2019.05.039.
- Bravo, N., Grimalt, J.O., Chashchin, M., Chashchin, V.P., Odland, J.-Ø.; **“Drivers of maternal accumulation of organohalogen pollutants in Arctic areas (Chukotka, Russia) and 4,4'-DDT effects on the newborns”**; Environment International; 2019; DOI: 10.1016/j.envint.2019.01.049.

- Bravo, N., Grimalt, J.O., Mazej, D., Tratnik, J.S., Sarigiannis, D.A., Horvat, M.; **“Mother/child organophosphate and pyrethroid distributions”**; Environment International; 2020; DOI: 10.1016/j.envint.2019.105264.
- Bravo, N., Peralta, S., Grimalt, J.O., Martínez, M.Á., Rovira, J., Schuhmacher, M.; **“Organophosphate metabolite concentrations in maternal urine during pregnancy”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2019.109003.
- Brean, J., Beddows, D.C.S., Shi, Z., Temime-Roussel, B., Marchand, N., Querol, X., Alastuey, A., Minguillon, M.C., Harrison, R.M.; **“Molecular insights into new particle formation in Barcelona, Spain”**; Atmospheric Chemistry and Physics; 2020; DOI: 10.5194/acp-20-10029-2020.
- Brines, M., Dall’Osto, M., Amato, F., Minguillón, M.C., Karanasiou, A., Grimalt, J.O., Alastuey, A., Querol, X., van Drooge, B.L.; **“Source apportionment of urban PM1 in Barcelona during SAPUSS using organic and inorganic components”**; Environmental Science and Pollution Research; 2019; DOI: 10.1007/s11356-019-06199-3; <http://doi.org/10.1007/s11356-019-06199-3>.
- Cabeza, Y., Hidalgo, J.J., Carrera, J.; **“Competition Is the Underlying Mechanism Controlling Viscous Fingering and Wormhole Growth”**; Geophysical Research Letters; 2020; DOI: 10.1029/2019GL084795.
- Calzadilla, W., Espinoza, L.C., Diaz-Cruz, S., Sunyer, A., Aranda, M., Peña-Farfal, C., Salazar, R.; **“Simultaneous degradation of 30 pharmaceuticals in municipal wastewater by anodic oxidation”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.128753
- Campos, B., Rivetti, C., Tauler, R., Piña, B., Barata, C.; **“Tryptophan hydroxylase (TRH) loss of function mutations in Daphnia deregulated growth, energetic, serotonergic and arachidonic acid metabolic signalling pathways”**; Scientific Reports; 2019; DOI: 10.1038/s41598-019-39987-5.
- Cánovas, C.R., Macías, F., Olías, M., Basallote, M.D., Pérez-López, R., Ayora, C., Nieto, J.M.; **“Release of technology critical metals during sulfide oxidation processes: The case of the Poderosa sulfide mine (south-west Spain)”**; Environmental Chemistry; 2020; DOI: 10.1071/EN19118.
- Cappelli, C., Cama, J., Van Driessche, A.E.S., Huertas, F.J.; **“Biotite reactivity in nitric and oxalic acid at low temperature and acid pH from surface and bulk dissolution measurements”**; Chemical Geology; 2020; DOI: 10.1016/j.chemgeo.2020.119806.
- Caraballo, M.A., Wanty, R.B., Verplanck, P.L., Navarro-Valdivia, L., Ayora, C., Hochella, M.F., Jr; **“Aluminum mobility in mildly acidic mine drainage: Interactions between hydrobasaluminite, silica and trace metals from the nano to the meso-scale”**; Chemical Geology; 2019; DOI: 10.1016/j.chemgeo.2019.04.013.
- Carbajal, A., Tallo-Parra, O., Monclús, L., Vinyoles, D., Solé, M., Lacorte, S., Lopez-Bejar, M.; **“Variation in scale cortisol concentrations of a wild freshwater fish: Habitat quality or seasonal influences?”**; General and Comparative Endocrinology; 2019; DOI: 10.1016/j.ygcen.2019.01.015.
- Carles, L., Gardon, H., Joseph, L., Sanchís, J., Farré, M., Artigas, J.; **“Meta-analysis of glyphosate contamination in surface waters and dissipation by biofilms”**; Environment International; 2019; DOI: 10.1016/j.envint.2018.12.064.
- Carnerero, C., Pérez, N., Petäjä, T., Laurila, T.M., Ahonen, L.R., Kontkanen, J., Ahn, K.-H., Alastuey, A., Querol, X.; **“Relating high ozone, ultrafine particles, and new particle formation episodes using cluster analysis”**; Atmospheric Environment; 2019; DOI: 10.1016/j.aeaoa.2019.100051.
- Carrascal, M., Abian, J., Ginebreda, A., Barceló, D.; **“Discovery of large molecules as new biomarkers in wastewater using environmental proteomics and suitable polymer probes”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.141145.

- Carrera, G., Vegué, L., Ventura, F., Hernández-Valencia, A., Devesa, R., Boleda, M.R.; **“Dioxanes and dioxolanes in source waters: Occurrence, odor thresholds and behavior through upgraded conventional and advanced processes in a drinking water treatment plant”**; Water Research; 2019; DOI: 10.1016/j.watres.2019.03.026.
- Casal, P., Casas, G., Vila-Costa, M., Cabrerizo, A., Pizarro, M., Jiménez, B., Dachs, J.; **“Snow amplification of persistent organic pollutants at coastal Antarctica”**; Environmental Science and Technology; 2019; DOI: 10.1021/acs.est.9b03006.
- Casas, G., Martínez-Varela, A., Roscales, J.L., Vila-Costa, M., Dachs, J., Jiménez, B.; **“Enrichment of perfluoroalkyl substances in the sea-surface microlayer and sea-spray aerosols in the Southern Ocean”**; Environmental Pollution; 2020; DOI: 10.1016/j.envpol.2020.115512.
- Casellas, E., Latron, J., Cayuela, C., Bech, J., Udina, M., Sola, Y., Lee, K.-O., Llorens, P.; **“Moisture origin and characteristics of the isotopic signature of rainfall in a Mediterranean mountain catchment (Vallcebre, eastern Pyrenees)”**; Journal of Hydrology; 2019; DOI: 10.1016/j.jhydrol.2019.05.060.
- Cayuela, C., Latron, J., Geris, J., Llorens, P.; **“Spatio-temporal variability of the isotopic input signal in a partly forested catchment: Implications for hydrograph separation”**; Hydrological Processes; 2019; DOI: 10.1002/hyp.13309.
- Cayuela, C., Levia, D.F., Latron, J., Llorens, P.; **“Particulate Matter Fluxes in a Mediterranean Mountain Forest: Inter-specific Differences Between Throughfall and Stemflow in Oak and Pine Stands”**; Journal of Geophysical Research: Atmospheres; 2019; DOI: 10.1029/2019JD030276.
- Ceballos, E., Margalef-Martí, R., Carrey, R., Frei, R., Otero, N., Soler, A., Ayora, C.; **“Characterisation of the natural attenuation of chromium contamination in the presence of nitrate using isotopic methods. A case study from the Matanza-Riachuelo River basin, Argentina”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.134331.
- Čelić, M., Gros, M., Farré, M., Barceló, D., Petrović, M.; **“Pharmaceuticals as chemical markers of wastewater contamination in the vulnerable area of the Ebro Delta (Spain)”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.10.290.
- Cerqueira, F., Christou, A., Fatta-Kassinos, D., Vila-Costa, M., Bayona, J.M., Piña, B.; **“Effects of prescription antibiotics on soil- and root-associated microbiomes and resistomes in an agricultural context”**; Journal of Hazardous Materials; 2020; DOI: 10.1016/j.jhazmat.2020.123208.
- Cerqueira, F., Matamoros, V., Bayona, J., Elsinga, G., Hornstra, L.M., Piña, B.; **“Distribution of antibiotic resistance genes in soils and crops. A field study in legume plants (Vicia faba L.) grown under different watering regimes”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2018.12.007.
- Cerqueira, F., Matamoros, V., Bayona, J., Piña, B.; **“Antibiotic resistance genes distribution in microbiomes from the soil-plant-fruit continuum in commercial Lycopersicon esculentum fields under different agricultural practices”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.10.268.
- Cerqueira, F., Matamoros, V., Bayona, J.M., Berendonk, T.U., Elsinga, G., Hornstra, L.M., Piña, B.; **“Antibiotic resistance gene distribution in agricultural fields and crops. A soil-to-food analysis”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2019.108608.
- Cerro, J.C., Cerdà, V., Caballero, S., Bujosa, C., Alastuey, A., Querol, X., Pey, J.; **“Chemistry of dry and wet atmospheric deposition over the Balearic Islands, NW Mediterranean: Source apportionment and African dust areas”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.141187. Cerro, J.C., Cerdà, V., Querol, X., Alastuey, A., Bujosa, C., Pey, J.; **“Variability of air pollutants, and PM composition and sources at a regional background site in the Balearic Islands: Review of western Mediterranean phenomenology from a 3-year study”**;



Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.137177.

- Cerro-Gálvez, E., Casal, P., Lundin, D., Piña, B., Pinhassi, J., Dachs, J., Vila-Costa, M.; **“Microbial responses to anthropogenic dissolved organic carbon in the Arctic and Antarctic coastal seawaters”**; Environmental Microbiology; 2019; DOI: 10.1111/1462-2920.14580.
- Cerro-Gálvez, E., Roscales, J.L., Jiménez, B., Sala, M.M., Dachs, J., Vila-Costa, M.; **“Microbial responses to perfluoroalkyl substances and perfluorooctanesulfonate (PFOS) desulfurization in the Antarctic marine environment”**; Water Research; 2020; DOI: 10.1016/j.watres.2019.115434.
- Cerro-Gálvez, E., Sala, M.M., Marrasé, C., Gasol, J.M., Dachs, J., Vila-Costa, M.; **“Modulation of microbial growth and enzymatic activities in the marine environment due to exposure to organic contaminants of emerging concern and hydrocarbons”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.04.361.
- Chauvigne, A., Aliaga, D., Sellegri, K., Montoux, N., Krejci, R., Mocnik, G., Moreno, I., Müller, T., Pandolfi, M., Velarde, F., Weinhold, K., Ginot, P., Wiedensohler, A., Andrade, M., Laj, P.; **“Biomass burning and urban emission impacts in the Andes Cordillera region based on in situ measurements from the Chacaltaya observatory, Bolivia (5240a.s.l.)”**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-14805-2019.
- Choubin, B., Abdolshahnejad, M., Moradi, E., Querol, X., Mosavi, A., Shamshirband, S., Ghamisi, P.; **“Spatial hazard assessment of the PM10 using machine learning models in Barcelona, Spain”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.134474.
- Christou, A., Papadavid, G., Dalias, P., Fotopoulos, V., Michael, C., Bayona, J.M., Piña, B., Fatta-Kassinou, D.; **“Ranking of crop plants according to their potential to uptake and accumulate contaminants of emerging concern”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2018.12.048.
- Chu, J., Gallos, I., Tobias, A., Robinson, L., Kirkman-Brown, J., Dhillion-Smith, R., Harb, H., Eapen, A., Rajkhowa, M., Coomarasamy, A.; **“Vitamin D and assisted reproductive treatment outcome: A prospective cohort study”**; Reproductive Health; 2019; DOI: 10.1186/s12978-019-0769-7.
- Collaud Coen, M., Andrews, E., Lastuey, A., Petkov Arsov, T., Backman, J., Brem, B.T., Bukowiecki, N., Couret, C., Eleftheriadis, K., Flentje, H., Fiebig, M., Gysel-Beer, M., Hand, J.L., Hoffer, A., Hooda, R., Hueglin, C., Joubert, W., Keywood, M., Eun Kim, J., Kim, S.-W., Labuschagne, C., Lin, N.-H., Lin, Y., Lund Myhre, C., Luoma, K., Lyamani, H., Marinoni, A., Mayol-Bracero, O.L., Mihalopoulos, N., Pandolfi, M., Prats, N., Prenni, A.J., Putaud, J.-P., Ries, L., Reisen, F., Sellegri, K., Sharma, S., Sheridan, P., Patrick Sherman, J., Sun, J., Titos, G., Torres, E., Tuch, T., Weller, R., Wiedensohler, A., Zieger, P., Laj, P.; **“Multidecadal trend analysis of in situ aerosol radiative properties around the world”**; Atmospheric Chemistry and Physics; 2020; DOI: 10.5194/acp-20-8867-2020.
- Colombo, F., Bargalló, R., Spalletti, L.A., Enrique, P., Queralt, I.; **“Pumice clasts in cross stratified basalt-dominated sandstones and conglomerates. Characteristics and depositional significance: Huarenchenque Fm (Neuquén, Argentina)”**; Journal of Iberian Geology; 2019; DOI: 10.1007/s41513-018-0097-8.
- Comas-Bru, L., Rehfeld, K., Roesch, C., Amirnezhad-Mozhdehi, S., Harrison, S.P., Atsawawaranunt, K., Ahmad, S.M., Brahim, Y.A., Baker, A., Bosomworth, M., Breitenbach, S.F.M., Burstyn, Y., Columbu, A., Deininger, M., Demény, A., Dixon, B., Fohlmeister, J., Hatvani, I.G., Hu, J., Kaushal, N., Kern, Z., Labuhn, I., Lechleitner, F.A., Lorrey, A., Martrat, B., Novello, V.F., Oster, J., Pérez-Mejías, C., Scholz, D., Scroxton, N., Sinha, N., Ward, B.M., Warken, S., Zhang, H., Apaéstegui, J., Baldini, L.M., Band, S., Blaauw, M., Boch, R., Borsato, A., Budsky, A., Rosell, M.G.B., Chawchai, S., Constantin, S., Denniston, R., Dragusin, V., Drysdale, R., Dumitru, O., Frappier,

- A., Gandhi, N., Gautam, P., Hanying, L., Isola, I., Jiang, X., Jingyao, Z., Johnson, K., Vanessa Johnston, Kathayat, G., Klose, J., Krause, C., Lachniet, M., Laskar, A., Lauritzen, S.-E., Lončar, N., Moseley, G., Narayana, A.C., Onac, B.P., Racovitš, E., Pawlak, J., Ramsey, C.B., Rivera-Collazo, I., Rossi, C., Rowe, P.J., Stríkis, N.M., Tan, L., Verheyden, S., Vonhof, H., Weber, M., Wendt, K., Wilcox, P., Winter, A., Wu, J., Wynn, P., Yadava, M.G., SISAL Working Group members; **“SISALv2: A comprehensive speleothem isotope database with multiple age-depth models”**; Earth System Science Data; 2020; DOI: 10.5194/essd-12-2579-2020.
- Comolli, A., Hakoun, V., Dentz, M.; **“Mechanisms, Upscaling, and Prediction of Anomalous Dispersion in Heterogeneous Porous Media”**; Water Resources Research; 2019; DOI: 10.1029/2019WR024919.
  - Córdoba, P., Diego, R.; **“Oxy-Coal Combustion Fly Ashes: Leachability of Inorganic Trace Contaminants”**; Energy and Fuels; 2019; DOI: 10.1021/acs.energyfuels.8b04164.
  - Córdoba, P., Lieberman, N.R., Izquierdo, M., Moreno, N., Querol, X.; **“Understanding the impact of FGD technologies on the emissions of key pollutants in a Co-Firing power plant”**; Journal of the Energy Institute; 2020; DOI: 10.1016/j.joei.2019.06.012.
  - Corsolini, S., Metzdorff, A., Baroni, D., Roscales, J.L., Jiménez, B., Cerro-Gálvez, E., Dachs, J., Galbán-Malagón, C., Audy, O., Kohoutek, J., Přibylková, P., Poblete-Morales, M., Avendaño-Herrera, R., Bergami, E., Pozo, K.; **“Legacy and novel flame retardants from indoor dust in Antarctica: Sources and human exposure”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.110344.
  - Criollo, R., Velasco, V., Nardi, A., Manuel de Vries, L., Riera, C., Scheiber, L., Jurado, A., Brouyère, S., Pujades, E., Rossetto, R., Vázquez-Suñé, E.; **“AkvaGIS: An open source tool for water quantity and quality management”**; Computers and Geosciences; 2019; DOI: 10.1016/j.cageo.2018.10.012.
  - Cristale, J., Aragão Belé, T.G., Lacorte, S., de Marchi, M.R.R.; **“Occurrence of flame retardants in landfills: A case study in Brazil”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2018.10.010.
  - Curto, A., Donaire-Gonzalez, D., Manaca, M.N., González, R., Saco, C., Rivas, I., Gascon, M., Wellenius, G.A., Querol, X., Sunyer, J., Macete, E., Menéndez, C., Tonne, C.; **“Predictors of personal exposure to black carbon among women in southern semi-rural Mozambique”**; Environment International; 2019; DOI: 10.1016/j.envint.2019.104962.
  - D’Amico, M., Martins, R.C., Álvarez-Martínez, J.M., Porto, M., Barrientos, R., Moreira, F.; **“Bird collisions with power lines: Prioritizing species and areas by estimating potential population-level impacts”**; Diversity and Distributions; 2019; DOI: 10.1111/ddi.12903.
  - Dadashi, M., Pages Farre, D., Hernandez, I., Tauler, R.; **“Chemometrics modelling of temporal changes of ozone half hourly concentrations in different monitoring stations”**; Chemometrics and Intelligent Laboratory Systems; 2020; DOI: 10.1016/j.chemolab.2020.104015.
  - Dale, K., Yadetie, F., Müller, M.B., Pampanin, D.M., Gilabert, A., Zhang, X., Tairova, Z., Haarr, A., Lille-Langøy, R., Lyche, J.L., Porte, C., Karlsen, O.A., Goksøyr, A.; **“Proteomics and lipidomics analyses reveal modulation of lipid metabolism by perfluoroalkyl substances in liver of Atlantic cod (Gadus morhua)”**; Aquatic Toxicology; 2020; DOI: 10.1016/j.aquatox.2020.105590.
  - Dallarés, S., Dourado, P., Sanahuja, I., Solovyev, M., Gisbert, E., Montemurro, N., Torreblanca, A., Blázquez, M., Solé, M.; **“Multibiomarker approach to fipronil exposure in the fish Dicentrarchus labrax under two temperature regimes”**; Aquatic Toxicology; 2020; DOI: 10.1016/j.aquatox.2019.105378.

- Dallarés, S., Montemurro, N., Pérez, S., Rodríguez-Sanchez, N., Solé, M.; **“Preliminary results on the uptake and biochemical response to water-exposure of Tamiflu® (oseltamivir phosphate) in two marine bivalves”**; Journal of Toxicology and Environmental Health; 2019; DOI: 10.1080/15287394.2018.1562393.
- Danovaro, R., Fanelli, E., Canals, M., Ciuffardi, T., Fabri, M.-C., Taviani, M., Argyrou, M., Azzurro, E., Bianchelli, S., Cantafaro, A., Carugati, L., Corinaldesi, C., de Haan, W.P., Dell’Anno, A., Evans, J., Fogliani, F., Galil, B., Gianni, M., Goren, M., Greco, S., Grimalt, J., Güell-Bujons, Q., Jadaud, A., Knittweis, L., Lopez, J.L., Sanchez-Vidal, A., Schembri, P.J., Snelgrove, P., Vaz, S., Angeletti, L., Barsanti, M., Borg, J.A., Bosso, M., Brind’Amour, A., Castellan, G., Conte, F., Delbono, I., Galgani, F., Morgana, G., Prato, S., Schirone, A., Soldevila, E., the IDEM Consortium; **“Towards a marine strategy for the deep Mediterranean Sea: Analysis of current ecological status”**; Marine Policy; 2020; DOI: 10.1016/j.marpol.2019.103781.
- de Abajo, F.J., Rodríguez-Martín, S., Lerma, V., Mejía-Abril, G., Aguilar, M., García-Luque, A., Laredo, L., Laosa, O., Centeno-Soto, G.A., Ángeles Gálvez, M., Puerro, M., González-Rojano, E., Pedraza, L., de Pablo, I., Abad-Santos, F., Rodríguez-Mañas, L., Gil, M., Tobías, A., Rodríguez-Miguel, A., Rodríguez-Puyol, D., Barreira-Hernandez, D., Zubiaur, P., Santos-Molina, E., Pintos-Sánchez, E., Navares-Gómez, M., Aparicio, R.M., García-Rosado, V., Gutiérrez-Ortega, C., Pérez, C., Ascaso, A., Elvira, C.; **“Use of renin-angiotensin-aldosterone system inhibitors and risk of COVID-19 requiring admission to hospital: a case-population study”**; The Lancet; 2020; DOI: 10.1016/S0140-6736(20)31030-8.
- de Jesus, A.L., Rahman, M.M., Mazaheri, M., Thompson, H., Knibbs, L.D., Jeong, C., Evans, G., Nei, W., Ding, A., Qiao, L., Li, L., Portin, H., Niemi, J.V., Timonen, H., Luoma, K., Petäjä, T., Kulmala, M., Kowalski, M., Peters, A., Cyrus, J., Ferrero, L., Manigrasso, M., Avino, P., Buonano, G., Reche, C., Querol, X., Beddows, D., Harrison, R.M., Sowlat, M.H., Sioutas, C., Morawska, L.; **“Ultrafine particles and PM2.5 in the air of cities around the world: Are they representative of each other?”**; Environment International; 2019; DOI: 10.1016/j.envint.2019.05.021.
- de Juan, A., Mas, S., Maeder, M., Tauler, R.; **“A perspective on modeling evolution”**; Journal of Chemometrics; 2020; DOI: 10.1002/cem.3205.
- de la Sota, C., Viana, M., Kane, M., Youm, I., Masera, O., Lumbreras, J.; 2019; **“Quantification of carbonaceous aerosol emissions from cookstoves in Senegal”**; Aerosol and Air Quality Research; DOI: 10.4209/aaqr.2017.11.0540; <http://doi.org/10.4209/aaqr.2017.11.0540>.
- De Luca, M., Ioele, G., Grande, F., Platikanov, S., Tauler, R., Ragno, G.; **“Photostability study of multicomponent drug formulations via MCR-ALS: The case of the hydrochlorothiazide-amiloride mixture”**; Journal of Pharmaceutical and Biomedical Analysis; 2020; DOI: 10.1016/j.jpba.2020.113332.
- De Vriendt, K., Pool, M., Dentz, M.; **“Heterogeneity-Induced Mixing and Reaction Hot Spots Facilitate Karst Propagation in Coastal Aquifers”**; Geophysical Research Letters; 2020; DOI: 10.1029/2020GL087529.
- del Campo, A.D., González-Sanchis, M., Molina, A.J., García-Prats, A., Ceacero, C.J., Bautista, I.; **“Effectiveness of water-oriented thinning in two semiarid forests: The redistribution of increased net rainfall into soil water, drainage and runoff”**; Forest Ecology and Management; 2019; DOI: 10.1016/j.foreco.2019.02.020.
- Delkhahi, B., Nassery, H.R., Vilarrasa, V., Alijani, F., Ayora, C.; **“Impacts of natural CO2 leakage on groundwater chemistry of aquifers from the Hamadan Province, Iran”**; International Journal of Greenhouse Gas Control; 2020; DOI: 10.1016/j.ijggc.2020.103001.

- Dentz, M., Comolli, A., Hakoun, V., Hidalgo, J.J.; **“Transport Upscaling in Highly Heterogeneous Aquifers and the Prediction of Tracer Dispersion at the MADE Site”**; Geophysical Research Letters; 2020; DOI: 10.1029/2020GL088292.
- Díaz-Cruz, M.S., Molins-Delgado, D., Serra-Roig, M.P., Kalogianni, E., Skoulikidis, N.T., Barceló, D.; **“Personal care products reconnaissance in EVROTAS river (Greece): Water-sediment partition and bioaccumulation in fish”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.10.008.
- Domènech, C., Galí, S., Soler, J.M., Ancco, M.P., Meléndez, W., Rondón, J., Villanova-de-Benavent, C., Proenza, J.A.; **“The Loma de Hierro Ni-laterite deposit (Venezuela): Mineralogical and chemical composition [El depósito de lateritas Ni de Loma de Hierro (Venezuela): Composición química y mineralógica]”**; Boletín de la Sociedad Geológica Mexicana; 2020; DOI: 10.18268/BSGM2020v72n3a050620.
- Edge, C.B., Baker, L.F., Lanctôt, C.M., Melvin, S.D., Gahl, M.K., Kurban, M., Navarro-Martín, L., Kidd, K.A., Trudeau, V.L., Thompson, D.G., Mudge, J.F., Houlahan, J.E.; **“Compensatory indirect effects of an herbicide on wetland communities”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.137254.
- Eid, E.M., Arshad, M., Shaltout, K.H., El-Sheikh, M.A., Alfahhan, A.H., Picó, Y., Barcelo, D.; **“Effect of the conversion of mangroves into shrimp farms on carbon stock in the sediment along the southern Red Sea coast, Saudi Arabia”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2019.108536.
- Eid, E.M., Galal, T.M., Shaltout, K.H., El-Sheikh, M.A., Asaeda, T., Alatar, A.A., Alfahhan, A.H., Alharthi, A., Alshehri, A.M.A., Picó, Y., Barcelo, D.; **“Biomonitoring potential of the native aquatic plant *Typha domingensis* by predicting trace metals accumulation in the Egyptian Lake Burullus”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.136603.
- Ekpe, O.D., Choo, G., Barceló, D., Oh, J.-E.; **“Introduction of emerging halogenated flame retardants in the environment”**; Comprehensive Analytical Chemistry; 2020; DOI: 10.1016/bs.coac.2019.11.002.
- Elias, G., Díez, S., Fontàs, C.; **“System for mercury preconcentration in natural waters based on a polymer inclusion membrane incorporating an ionic liquid”**; Journal of Hazardous Materials; 2019; DOI: 10.1016/j.jhazmat.2019.03.017.
- Elias, G., Díez, S., Zhang, H., Fontàs, C.; **“Development of a new binding phase for the diffusive gradients in thin films technique based on an ionic liquid for mercury determination”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2019.125671.
- Eljarrat, E., Aznar-Aleman, Ò., Sala, B., Frías, Ó., Blanco, G.; **“Decreasing but still high levels of halogenated flame retardants in wetland birds in central Spain”**; Chemosphere; 2019; DOI: 10.1016/j.chemosphere.2019.04.051.
- Escudero, M., Segers, A., Kranenburg, R., Querol, X., Alastuey, A., Borge, R., De La Paz, D., Gangoiti, G., Schaap, M.; **“Analysis of summer O3 in the Madrid air basin with the LOTOS-EUROS chemical transport model”**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-14211-2019.
- Fabrizio, M., Di Febbraro, M., D’Amico, M., Frate, L., Roscioni, F., Loy, A.; **“Habitat suitability vs landscape connectivity determining roadkill risk at a regional scale: a case study on European badger (*Meles meles*)”**; European Journal of Wildlife Research; 2019; DOI: 10.1007/s10344-018-1241-7.
- Faria, M., Bedrossiantz, J., Prats, E., Rovira Garcia, X., Gómez-Canela, C., Piña, B., Raldúa, D.; **“Deciphering the mode of action of pollutants impairing the fish larvae escape response with the vibrational startle response assay”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.03.469.

- Faria, M., Prats, E., Gómez-Canela, C., Hsu, C.-Y., Arick, M.A., Il., Bedrossiantz, J., Orozco, M., Garcia-Reyero, N., Ziv, T., Ben-Lulu, S., Admon, A., Gómez-Oliván, L.M., Raldúa, D.; **“Therapeutic potential of N-acetylcysteine in acrylamide acute neurotoxicity in adult zebrafish”**; Scientific Reports; 2019; DOI: 10.1038/s41598-019-53154-w.
- Faria, M., Prats, E., Gómez-Canela, C., Hsu, C.-Y., Arick, M.A., Il., Bedrossiantz, J., Orozco, M., Garcia-Reyero, N., Ziv, T., Ben-Lulu, S., Admon, A., Gómez-Oliván, L.M., Raldúa, D.; **“Publisher Correction: Therapeutic potential of N-acetylcysteine in acrylamide acute neurotoxicity in adult zebrafish”**; Scientific Reports; 2020; DOI: 10.1038/s41598-020-58946-z.
- Faria, M., Prats, E., Novoa-Luna, K.A., Bedrossiantz, J., Gómez-Canela, C., Gómez-Oliván, L.M., Raldúa, D.; **“Development of a vibrational startle response assay for screening environmental pollutants and drugs impairing predator avoidance”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.08.421.
- Faria, M., Valls, A., Prats, E., Bedrossiantz, J., Orozco, M., Porta, J.M., Gómez-Oliván, L.M., Raldúa, D.; **“Further characterization of the zebrafish model of acrylamide acute neurotoxicity: gait abnormalities and oxidative stress”**; Scientific Reports; 2019; DOI: 10.1038/s41598-019-43647-z.
- Faria, M., Wu, X., Luja-Mondragón, M., Prats, E., Gómez-Oliván, L.M., Piña, B., Raldúa, D.; **“Screening anti-predator behaviour in fish larvae exposed to environmental pollutants”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.136759.
- Farré, M., Picó, Y., Barceló, D.; **“Direct analysis in real-time high-resolution mass spectrometry as a valuable tool for polyphenols profiling in olive oil”**; Analytical Methods; 2019; DOI: 10.1039/c8ay01865k.
- Farré, M.; **“Remote and in situ devices for the assessment of marine contaminants of emerging concern and plastic debris detection”**; Current Opinion in Environmental Science and Health; 2020; DOI: 10.1016/j.coesh.2020.10.002.
- Faust, M., Backhaus, T., Altenburger, R., Dulio, V., van Gils, J., Ginebreda, A., Kortenkamp, A., Munthe, J., Posthuma, L., Slobodnik, J., Tollefsen, K.E., van Wezel, A., Brack, W.; **“Prioritisation of water pollutants: the EU Project SOLUTIONS proposes a methodological framework for the integration of mixture risk assessments into prioritisation procedures under the European Water Framework Directive”**; Environmental Sciences Europe; 2019; DOI: 10.1186/s12302-019-0239-4.
- Fei, Y., Huang, S., Zhang, H., Tong, Y., Wen, D., Xia, X., Wang, H., Luo, Y., Barceló, D.; **“Response of soil enzyme activities and bacterial communities to the accumulation of microplastics in an acid cropped soil”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.135634.
- Felten, J., Hall, H., Jaumot, J., Tauler, R., de Juan, A., Gorzsás, A.; **“Addendum: Vibrational spectroscopic image analysis of biological material using multivariate curve resolution–alternating least squares (MCR-ALS)”**; Nature Protocols; 2019; DOI: 10.1038/s41596-019-0196-9.
- Fernandez Visentini, A., Linde, N., Borgne, T.L., Dentz, M.; **“Inferring geostatistical properties of hydraulic conductivity fields from saline tracer tests and equivalent electrical conductivity time-series”**; Advances in Water Resources; 2020; DOI: 10.1016/j.advwatres.2020.103758.
- Fernández-Iriarte, A., Amato, F., Moreno, N., Pacitto, A., Reche, C., Marco, E., Grimalt, J.O., Querol, X., Moreno, T.; **“Chemistry and sources of PM<sub>2.5</sub> and volatile organic compounds breathed inside urban commuting and tourist buses”**; Atmospheric Environment; 2020; DOI: 10.1016/j.atmosenv.2019.117234.
- Fernández-Rubio, J., Rodríguez-Gil, J.L., Postigo, C., Mastroianni, N., López de Alda, M., Barceló, D., Valcárcel, Y.; **“Psychoactive pharmaceuticals and illicit drugs in coastal**

- waters of North-Western Spain: Environmental exposure and risk assessment**"; Chemosphere; 2019; DOI: 10.1016/j.chemosphere.2019.02.041.
- Ferrando, L., Matamoros, V.; **"Attenuation of nitrates, antibiotics and pesticides from groundwater using immobilised microalgae-based systems"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.134740.
  - Ferrer-Cid, P., Barcelo-Ordinas, J.M., Garcia-Vidal, J., Ripoll, A., Viana, M.; **"A Comparative Study of Calibration Methods for Low-Cost Ozone Sensors in IoT Platforms"**; IEEE Internet of Things Journal; 2019; DOI: 10.1109/JIOT.2019.2929594.
  - Ferrer-Cid, P., Barcelo-Ordinas, J.M., Garcia-Vidal, J., Ripoll, A., Viana, M.; **"Multisensor Data Fusion Calibration in IoT Air Pollution Platforms"**; IEEE Internet of Things Journal; 2020; DOI: 10.1109/JIOT.2020.2965283.
  - Figuero, E., Herrera, D., Tobías, A., Serrano, J., Roldán, S., Escribano, M., Martín, C.; **"Efficacy of adjunctive anti-plaque chemical agents in managing gingivitis: A systematic review and network meta-analyses"**; Journal of Clinical Periodontology; 2019; DOI: 10.1111/jcpe.13127.
  - Filatova, D., Núñez, O., Farré, M.; **"Ultra-trace analysis of cyanotoxins by liquid chromatography coupled to high-resolution mass spectrometry"**; Toxins; 2020; DOI: 10.3390/toxins12040247.
  - Filatova, D., Picardo, M., Núñez, O., Farré, M.; **"Analysis, levels and seasonal variation of cyanotoxins in freshwater ecosystems"**; Trends in Environmental Analytical Chemistry; 2020; DOI: 10.1016/j.teac.2020.e00091.
  - Flores, C., Caixach, J.; **"High Levels of Anabaenopeptins Detected in a Cyanobacteria Bloom from N.E. Spanish Sausueda-El Pasteral Reservoirs System by LC-HRMS"**; Toxins; 2020; DOI: 10.3390/toxins12090541.
  - Folch, A., del Val, L., Luquot, L., Martínez-Pérez, L., Bellmunt, F., Le Lay, H., Rodellas, V., Ferrer, N., Palacios, A., Fernández, S., Marazuela, M.A., Diego-Feliu, M., Pool, M., Goyetche, T., Ledo, J., Pezard, P., Bour, O., Queralt, P., Marcuello, A., Garcia-Orellana, J., Saaltink, M.W., Vázquez-Suñé, E., Carrera, J.; **"Combining fiber optic DTS, cross-hole ERT and time-lapse induction logging to characterize and monitor a coastal aquifer"**; Journal of Hydrology; 2020; DOI: 10.1016/j.jhydrol.2020.125050.
  - Font, O., Moreno, T., Querol, X., Martins, V., Sánchez Rodas, D., de Miguel, E., Capdevila, M.; **"Origin and speciation of major and trace PM elements in the barcelona subway system"**; Transportation Research Part D: Transport and Environment; 2019; DOI: 10.1016/j.trd.2019.03.007.
  - Font-Ribera, L., Marco, E., Grimalt, J.O., Pastor, S., Marcos, R., Abramsson-Zetterberg, L., Pedersen, M., Grummt, T., Junek, R., Barreiro, E., Heederik, D., Spithoven, J., Critelli, R., Naccarati, A., Schmalz, C., Zwiener, C., Liu, J., Zhang, X., Mitch, W., Gracia-Lavedan, E., Arjona, L., de Bont, J., Tarès, L., Vineis, P., Kogevinas, M., Villanueva, C.M.; **"Exposure to disinfection by-products in swimming pools and biomarkers of genotoxicity and respiratory damage – The PISCINA2 Study"**; Environment International; 2019; DOI: 10.1016/j.envint.2019.104988.
  - Forello, A.C., Amato, F., Bernardoni, V., Calzolari, G., Canepari, S., Costabile, F., Di Liberto, L., Gualtieri, M., Lucarelli, F., Nava, S., Perrino, C., Petralia, E., Valentini, S., Valli, G., Vecchi, R.; **"Gaining knowledge on source contribution to aerosol optical absorption properties and organics by receptor modeling"**; Atmospheric Environment; 2020; DOI: 10.1016/j.atmosenv.2020.117873.
  - Fortesa, J., García-Comendador, J., Calsamiglia, A., López-Tarazón, J.A., Latron, J., Alorda, B., Estrany, J.; **"Comparison of stage/discharge rating curves derived from different recording systems: Consequences for streamflow data and water management in a Mediterranean island"**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.02.158.

- Fortesa, J., Latron, J., García-Comendador, J., Company, J., Estrany, J.; **“Runoff and soil moisture as driving factors in suspended sediment transport of a small mid-mountain Mediterranean catchment”**; *Geomorphology*; 2020; DOI: 10.1016/j.geomorph.2020.107349.
- Fortesa, J., Latron, J., García-Comendador, J., Tomàs-Burguera, M., Company, J., Calsamiglia, A., Estrany, J.; **“Multiple temporal scales assessment in the hydrological response of small mediterranean-climate catchments”**; *Water (Switzerland)*; 2020; DOI: 10.3390/w12010299.
- Freney, E., Zhang, Y., Croteau, P., Amodeo, T., Williams, L., Truong, F., Petit, J.-E., Sciare, J., Sarda-Esteve, R., Bonnaire, N., Arumae, T., Aurela, M., Bougiatioti, A., Mihalopoulos, N., Coz, E., Artinano, B., Crenn, V., Elste, T., Heikkinen, L., Poulain, L., Wiedensohler, A., Herrmann, H., Priestman, M., Alastuey, A., Stavroulas, I., Tobler, A., Vasilescu, J., Zanca, N., Canagaratna, M., Carbone, C., Flentje, H., Green, D., Maasikmets, M., Marmureanu, L., Minguillon, M.C., Prevot, A.S.H., Gros, V., Jayne, J., Favez, O.; **“The second ACTRIS inter-comparison (2016) for Aerosol Chemical Speciation Monitors (ACSM): Calibration protocols and instrument performance evaluations”**; *Aerosol Science and Technology*; 2019; DOI: 10.1080/02786826.2019.1608901.
- Fuertes, I., Campos, B., Rivetti, C., Pinã, B., Barata, C.; **“Effects of Single and Combined Low Concentrations of Neuroactive Drugs on Daphnia magna Reproduction and Transcriptomic Responses”**; *Environmental Science and Technology*; 2019; DOI: 10.1021/acs.est.9b03228.
- Fuertes, I., Jordão, R., Piña, B., Barata, C.; **“Time-dependent transcriptomic responses of Daphnia magna exposed to metabolic disruptors that enhanced storage lipid accumulation”**; *Environmental Pollution*; 2019; DOI: 10.1016/j.envpol.2019.02.102.
- Fuertes, I., Piña, B., Barata, C.; **“Changes in lipid profiles in Daphnia magna individuals exposed to low environmental levels of neuroactive pharmaceuticals”**; *Science of the Total Environment*; 2020; DOI: 10.1016/j.scitotenv.2020.139029.
- Gadelha, J.R., Rocha, A.C., Camacho, C., Eljarrat, E., Peris, A., Aminot, Y., Readman, J.W., Boti, V., Nannou, C., Kapsi, M., Albanis, T., Rocha, F., Machado, A., Bordalo, A., Valente, L.M.P., Nunes, M.L., Marques, A., Almeida, C.M.R.; **“Persistent and emerging pollutants assessment on aquaculture oysters (Crassostrea gigas) from NW Portuguese coast (Ria De Aveiro)”**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2019.02.280.
- Gallardo-Altamirano, M.J., Maza-Márquez, P., Montemurro, N., Rodelas, B., Osorio, F., Pozo, C.; **“Linking microbial diversity and population dynamics to the removal efficiency of pharmaceutically active compounds (PhACs) in an anaerobic/anoxic/aerobic (A2O) system”**; *Chemosphere*; 2019; DOI: 10.1016/j.chemosphere.2019.06.017.
- Gallart, F., Valiente, M., Llorens, P., Cayuela, C., Sprenger, M., Latron, J.; **“Investigating young water fractions in a small Mediterranean mountain catchment: Both precipitation forcing and sampling frequency matter”**; *Hydrological Processes*; 2020; DOI: 10.1002/hyp.13806.
- Gallart, F., Von Freyberg, J., Valiente, M., Kirchner, J.W., Llorens, P., Latron, J.; **“Technical note: An improved discharge sensitivity metric for young water fractions”**; *Hydrology and Earth System Sciences*; 2020; DOI: 10.5194/hess-24-1101-2020.
- Gallia, M.C., Bachmeier, E., Ferrari, A., Queralt, I., Mazzeo, M.A., Bongiovanni, G.A.; **“Pehuén (Araucaria araucana) seed residues are a valuable source of natural antioxidants with nutraceutical, chemoprotective and metal corrosion-inhibiting properties”**; *Bioorganic Chemistry*; 2020; DOI: 10.1016/j.bioorg.2020.104175.
- Garcia-Alamino, J.M., Tobías, A.; **“Incidence of SARS-CoV-2 infection and its impact on the first week of reopening schools in Catalonia [Incidencia de infección por SARS-**

- CoV-2 en la comunidad y su impacto en la primera semana de reapertura de colegios en Cataluña]**"; Gaceta Sanitaria; 2020; DOI: 10.1016/j.gaceta.2020.09.007.
- García-Florentino, C., Maguregui, M., Ciantelli, C., Sardella, A., Bonazza, A., Queralt, I., Carrero, J.A., Natali, C., Morillas, H., Madariaga, J.M., Arana, G.; **"Deciphering past and present atmospheric metal pollution of urban environments: The role of black crusts formed on historical constructions"**; Journal of Cleaner Production; 2020; DOI: 10.1016/j.jclepro.2019.118594.
  - García-Galán, M.J., Arashiro, L., Santos, L.H.M.L.M., Insa, S., Rodríguez-Mozaz, S., Barceló, D., Ferrer, I., Garfí, M.; **"Fate of priority pharmaceuticals and their main metabolites and transformation products in microalgae-based wastewater treatment systems"**; Journal of Hazardous Materials; 2020; DOI: 10.1016/j.jhazmat.2019.121771.
  - García-Galán, M.J., Monllor-Alcaraz, L.S., Postigo, C., Uggetti, E., López de Alda, M., Díez-Montero, R., García, J.; **"Microalgae-based bioremediation of water contaminated by pesticides in peri-urban agricultural áreas"**; Environmental Pollution; 2020; DOI: 10.1016/j.envpol.2020.114579.
  - Garcia-Garin, O., Sala, B., Aguilar, A., Vighi, M., Víkingsson, G.A., Chosson, V., Eljarrat, E., Borrell, A.; **"Organophosphate contaminants in North Atlantic fin whales"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.137768.
  - Garcia-Garin, O., Vighi, M., Sala, B., Aguilar, A., Tsangaris, C., Digka, N., Kaberi, H., Eljarrat, E., Borrell, A.; **"Assessment of organophosphate flame retardants in Mediterranean Boops boops and their relationship to anthropization levels and microplastic ingestion"**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.126569.
  - García-Gil, A., Abesser, C., Gasco Cavero, S., Marazuela, M.Á., Mateo Lázaro, J., Vázquez-Suñé, E., Hughes, A.G., Mejías Moreno, M.; **"Defining the exploitation patterns of groundwater heat pump systems"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.136425.
  - García-Gil, A., Moreno, M.M., Schneider, E.G., Marazuela, M.A., Abesser, C., Lázaro, J.M., Navarro, J.A.S.; **"Nested shallow geothermal systems"**; Sustainability (Switzerland); 2020; DOI: 10.3390/su12125152.
  - García-Gil, A., Muela Maya, S., Garrido Schneider, E., Mejías Moreno, M., Vázquez-Suñé, E., Marazuela, M., Mateo Lázaro, J., Sánchez-Navarro, J.; **"Sustainability indicator for the prevention of potential thermal interferences between groundwater heat pump systems in urban aquifers"**; Renewable Energy; 2019; DOI: 10.1016/j.renene.2018.11.002.
  - García-Gil, A., Vázquez-Suñé, E., Ayora, C., Tore, C., Henríquez, Á., Yáñez, J.; **"Impacts of the transient skin effect during brine extraction operations in a crystalline halite aquifer"**; Journal of Hydrology; 2019; DOI: 10.1016/j.jhydrol.2019.123912.
  - García-Lledó, A., Rodríguez-Martín, S., Tobías, A., Alonso-Martín, J., Ansedo-Cascudo, J.C., de Abajo, F.J.; **"Heat waves, ambient temperature, and risk of myocardial infarction: an ecological study in the Community of Madrid [Olas de calor, temperatura ambiente y riesgo de infarto de miocardio: un estudio ecológico en la Comunidad de Madrid]"**; Revista Espanola de Cardiologia; 2020; DOI: 10.1016/j.recesp.2019.05.009.
  - García-Villarino, M., Riaño-Galán, I., Rodríguez-Dehli, A.C., Freire, C., Vizcaíno, E., Grimalt, J.O., Tardón, A., Fernández-Somoano, A.; **"Association between pre/perinatal exposure to POPs and children's anogenital distance at age 4 years: A study from the INMA-Asturias cohort"**; International Journal of Hygiene and Environmental Health; 2020; DOI: 10.1016/j.ijheh.2020.113563.
  - Garí, M., Grimalt, J.O., Vizcaino, E., Tardón, A., Fernández-Somoano, A.; **"Mother-child transfer rates of organohalogen**



- compounds up to four years of age**"; Environment International; 2019; DOI: 10.1016/j.envint.2019.105241.
- Gilabert, A., Geraudie, P., Jaumot, J., Porte, C.; **"Partial characterization of the lipidome of the cold-water scallop, *Chlamys islandica*"**; Environmental Science and Pollution Research; 2020; DOI: 10.1007/s11356-019-06751-1.
  - Giménez-Gómez, P., Baldi, A., Ayora, C., Fernández-Sánchez, C.; **"Automated Determination of As(III) in Waters with an Electrochemical Sensor Integrated into a Modular Microfluidic System"**; ACS Sensors; 2019; DOI: 10.1021/acssensors.9b01286.
  - Ginebreda, A., Sabater-Liesa, L., Barceló, D.; **"Quantification of ecological complexity and resilience from multivariate biological metrics datasets using singular value decomposition entropy"**; MethodsX; 2019; DOI: 10.1016/j.mex.2019.07.020.
  - Giulivo, M., Stella, E., Capri, E., Esnaola, A., López de Alda, M., Diaz-Cruz, S., Mandaric, L., Muñoz, I., Bellin, A.; **"Assessing the effects of hydrological and chemical stressors on macroinvertebrate community in an Alpine river: The Adige River as a case study"**; River Research and Applications; 2019; DOI: 10.1002/rra.3367.
  - Golshan, A., Evans, C., Geary, P., Morrow, A., Maeder, M., Tauler, R.; **"Patterns of cyanobacterial abundance in a major drinking water reservoir: what 3 years of comprehensive monitoring data reveals?"**; Environmental Monitoring and Assessment; 2020; DOI: 10.1007/s10661-020-8090-z.
  - Gómez-Canela, C., Pueyo, V., Barata, C., Lacorte, S., Marcé, R.M.; **"Development of predicted environmental concentrations to prioritize the occurrence of pharmaceuticals in rivers from Catalonia"**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.02.078.
  - Gómez-Canela, C., Rovira García, X., Martínez-Jerónimo, F., Marcé, R.M., Barata, C.; **"Analysis of neurotransmitters in *Daphnia magna* affected by neuroactive pharmaceuticals using liquid chromatography-high resolution mass spectrometry"**; Environmental Pollution; 2019; DOI: 10.1016/j.envpol.2019.113029.
  - Gómez-Canela, C., Sala-Comorera, T., Pueyo, V., Barata, C., Lacorte, S.; **"Analysis of 44 pharmaceuticals consumed by elderly using liquid chromatography coupled to tandem mass spectrometry"**; Journal of Pharmaceutical and Biomedical Analysis; 2019; DOI: 10.1016/j.jpba.2019.02.016.
  - Gómez-Canela, C., Santos, M.S.F., Franquet-Griell, H., Alves, A., Ventura, F., Lacorte, S.; **"Predicted environmental concentrations: A useful tool to evaluate the presence of cytostatics in surface waters"**; Fate and Effects of Anticancer Drugs in the Environment; 2020; DOI: 10.1007/978-3-030-21048-9\_2.
  - González, R.M., Cánovas, C.R., Olías, M., Macías, F.; **"Rare earth elements in a historical mining district (south-west Spain): Hydrogeochemical behaviour and seasonal variability"**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.126742.
  - González-Gaya, B., Casal, P., Jurado, E., Dachs, J., Jiménez, B.; **"Vertical transport and sinks of perfluoroalkyl substances in the global open ocean"**; Environmental Science: Processes and Impacts; 2019; DOI: 10.1039/c9em00266a.
  - González-Gaya, B., Martínez-Varela, A., Vila-Costa, M., Casal, P., Cerro-Gálvez, E., Berrojalbiz, N., Lundin, D., Vidal, M., Mompeán, C., Bode, A., Jiménez, B., Dachs, J.; **"Biodegradation as an important sink of aromatic hydrocarbons in the oceans"**; Nature Geoscience; 2019; DOI: 10.1038/s41561-018-0285-3.
  - González-Lanchas, A., Flores, J.-A., Sierro, F.J., Bárcena, M.Á., Rigual-Hernández, A.S., Oliveira, D., Azibeiro, L.A., Marino, M., Maiorano, P., Cortina, A., Cacho, I., Grimalt, J.O.; **"A new perspective of the Alboran Upwelling System reconstruction during the Marine Isotope Stage 11: A high-res-**

- olution coccolithophore record**"; Quaternary Science Reviews; 2020; DOI: 10.1016/j.quascirev.2020.106520.
- González-Mariño, I., Baz-Lomba, J.A., Alygizakis, N.A., Andrés-Costa, M.J., Bade, R., Bannwarth, A., Barron, L.P., Been, F., Benaglia, L., Berset, J.-D., Bijlsma, L., Bodík, I., Brenner, A., Brock, A.L., Burgard, D.A., Castrignanò, E., Celma, A., Christophoridis, C.E., Covaci, A., Delémont, O., Devoogt, P., Devault, D.A., Dias, M.J., Emke, E., Esseiva, P., Fatta-Kassinos, D., Fedorova, G., Fytianos, K., Gerber, C., Grabic, R., Gracia-Lor, E., Grüner, S., Gunnar, T., Hapeshi, E., Heath, E., Helm, B., Hernández, F., Kankaanpaa, A., Karolak, S., Kasprzyk-Hordern, B., Krizman-Matasic, I., Lai, F.Y., Lechowicz, W., Lopes, A., de Alda, M.L., López-García, E., Löve, A.S.C., Mastroianni, N., McEneff, G.L., Montes, R., Munro, K., Nefau, T., Oberacher, H., O'Brien, J.W., Oertel, R., Olafsdottir, K., Picó, Y., Plósz, B.G., Polesel, F., Postigo, C., Quintana, J.B., Ramin, P., Reid, M.J., Rice, J., Rodil, R., Salgueiro-González, N., Schubert, S., Senta, I., Simões, S.M., Sremacki, M.M., Styszko, K., Terzic, S., Thomaidis, N.S., Thomas, K.V., Tucharke, B.J., Udrisard, R., van Nuijs, A.L.N., Yargeau, V., Zuccato, E., Castiglioni, S., Ort, C.; **"Spatio-temporal assessment of illicit drug use at large scale: evidence from 7 years of international wastewater monitoring"**; Addiction; 2020; DOI: 10.1111/add.14767.
  - Gorrochategui, E., Jaumot, J., Tauler, R.; **"ROIMCR: A powerful analysis strategy for LC-MS metabolomic datasets"**; BMC Bioinformatics; 2019; DOI: 10.1186/s12859-019-2848-8.
  - Gouze, P., Puyguiraud, A., Roubinet, D., Dentz, M.; **"Characterization and upscaling of hydrodynamic transport in heterogeneous dual porosity media"**; Advances in Water Resources; 2020; DOI: 10.1016/j.advwatres.2020.103781.
  - Griñán, I., Rodríguez, P., Cruz, Z.N., Nouri, H., Borsato, E., Molina, A.J., Moriana, A., Centeno, A., Martín-Palomo, M.J., Pérez-López, D., Torrecillas, A., Galindo, A.; **"Leaf water relations in Diospyros kaki during a mild water deficit exposure"**; Agricultural Water Management; 2019; DOI: 10.1016/j.agwat.2019.03.008.
  - Guillen, J.C., Žonja, B., López de Alda, M.; **"Chlorination by-products of anticancer drugs"**; Fate and Effects of Anticancer Drugs in the Environment; 2020; DOI: 10.1007/978-3-030-21048-9\_5.
  - Guo, R., Zhang, X., He, A.-Q., Zhang, F., Li, Q.-B., Zhang, Z.-Y., Tauler, R., Yu, Z.-Q., Morita, S., Xu, Y.-Z., Noda, I., Ozaki, Y., Wu, J.-G.; **"A novel systematic absence of cross peaks-based 2D-COS approach for bilinear data"**; Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy; 2019; DOI: 10.1016/j.saa.2019.05.008.
  - Guswa, A.J., Tetzlaff, D., Selker, J.S., Carlyle-Moses, D.E., Boyer, E.W., Bruen, M., Cayuela, C., Creed, I.F., van de Giesen, N., Grasso, D., Hannah, D.M., Hudson, J.E., Hudson, S.A., Iida, S., Jackson, R.B., Katul, G.G., Kumagai, T., Llorens, P., Lopes Ribeiro, F., Michalzik, B., Nanko, K., Oster, C., Pataki, D.E., Peters, C.A., Rinaldo, A., Sanchez Carretero, D., Trifunovic, B., Zalewski, M., Haagsma, M., Levia, D.F.; **"Advancing ecohydrology in the 21st century: A convergence of opportunities"**; Ecohydrology; 2020; DOI: 10.1002/eco.2208.
  - Gutiérrez-Mosquera, H., Marrugo-Negrete, J., Díez, S., Morales-Mira, G., Montoya-Jaramillo, L.J., Jonathan, M.P.; **"Distribution of chemical forms of mercury in sediments from abandoned ponds created during former gold mining operations in Colombia"**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.127319.
  - Gylling, B., Lanyon, B., Soler, J., Nilsson, K., Löfgren, M., Trincherro, P., Selroos, J.-O., Poteri, A., Koskinen, L.; **"Increasing the realism in solute transport modeling"**; International High-Level Radioactive Waste Management; 2019; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85067098528&partnerID=40&md5=e-5915fa0bb745801b18fbee7e4b467c>.
  - Hadei, M., Shahsavani, A., Krzyzanowski, M., Querol, X., Stafoggia, M., Nazari, S.S.H., Jafari, A.J., Yarahmadi, M., Kermani, M., Khosravi, A.; **"Burden of mortality attributed to PM2.5 exposure in cities of Iran; contribution of short-**

- term pollution peaks**"; Atmospheric Environment; 2020; DOI: 10.1016/j.atmosenv.2020.117365.
- Hakoun, V., Comolli, A., Dentz, M.; **"Upscaling and Prediction of Lagrangian Velocity Dynamics in Heterogeneous Porous Media"**; Water Resources Research; 2019; DOI: 10.1029/2018WR023810.
  - He, D., Cheng, Y., Zeng, Y., Luo, H., Luo, K., Li, J., Pan, X., Barceló, D., Crittenden, J.C.; **"Synergistic activation of peroxymonosulfate and persulfate by ferrous ion and molybdenum disulfide for pollutant degradation: Theoretical and experimental studies"**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2019.124979.
  - Hermassi, M., Valderrama, C., Font, O., Moreno, N., Querol, X., Batis, N.H., Cortina, J.L.; **"Phosphate recovery from aqueous solution by K-zeolite synthesized from fly ash for subsequent valorisation as slow release fertilizer"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.139002.
  - Hernández, A., Martin-Puertas, C., Moffa-Sánchez, P., Moreno-Chamarro, E., Ortega, P., Blockley, S., Cobb, K.M., Comas-Bru, L., Giralt, S., Goosse, H., Luterbacher, J., Martrat, B., Muscheler, R., Parnell, A., Pla-Rabes, S., Sjolte, J., Scaife, A.A., Swingedouw, D., Wise, E., Xu, G.; **"Modes of climate variability: Synthesis and review of proxy-based reconstructions through the Holocene"**; Earth-Science Reviews; 2020; DOI: 10.1016/j.earscirev.2020.103286.
  - Hidalgo, J.J., Neuweiler, I., Dentz, M.; **"Transport under advective trapping"**; Journal of Fluid Mechanics; 2020; DOI: 10.1017/jfm.2020.782.
  - Holtzman, R., Dentz, M., Planet, R., Ortín, J.; **"The origin of hysteresis and memory of two-phase flow in disordered media"**; Communications Physics; 2020; DOI: 10.1038/s42005-020-00492-1.
  - Hu, K., Peris, A., Torán, J., Eljarrat, E., Sarrà, M., Blánquez, P., Caminal, G.; **"Exploring the degradation capability of Trametes versicolor on selected hydrophobic pesticides through setting sights simultaneously on culture broth and biological matrix"**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.126293.
  - Hu, K., Torán, J., López-García, E., Barbieri, M.V., Postigo, C., de Alda, M.L., Caminal, G., Sarrà, M., Blánquez, P.; **"Fungal bioremediation of diuron-contaminated waters: Evaluation of its degradation and the effect of amendable factors on its removal in a trickle-bed reactor under non-sterile conditions"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.140628.
  - Hurtado-Díaz, M., Cruz, J.C., Texcalac-Sangrador, J.L., Félix-Arellano, E.E., Gutiérrez-Ávila, I., Briseño-Pérez, A.A., Saavedra-Lara, N., Tobías, A., Riojas-Rodríguez, H.; **"Short-term effects of ambient temperature on non-external and cardiovascular mortality among older adults of metropolitan areas of Mexico"**; International Journal of Biometeorology; 2019; DOI: 10.1007/s00484-019-01778-y.
  - Hussein, T., Li, X., Al-Dulaimi, Q., Daour, S., Atashi, N., Viana, M., Alastuey, A., Sogacheva, L., Arar, S., Al-Hunaiti, A., Petäjä, T.; **"Particulate matter concentrations in a middle eastern city – an insight to sand and dust storm episodes"**; Aerosol and Air Quality Research; 2020; DOI: 10.4209/aaqr.2020.05.0195.
  - Hyman, J.D., Dentz, M., Hagberg, A., Kang, P.K.; **"Emergence of Stable Laws for First Passage Times in Three-Dimensional Random Fracture Networks"**; Physical Review Letters; 2019; DOI: 10.1103/PhysRevLett.123.248501.
  - Hyman, J.D., Dentz, M., Hagberg, A., Kang, P.K.; **"Linking Structural and Transport Properties in Three-Dimensional Fracture Networks"**; Journal of Geophysical Research: Solid Earth; 2019; DOI: 10.1029/2018JB016553.

- Icardi, M., Dentz, M.; **“Probability density function (PDF) models for particle transport in porous media”**; GEM - International Journal on Geomathematics; 2020; DOI: 10.1007/s13137-020-00153-z.
- Ismail, N.I.B., Kato, Y., Matsuura, T., Gómez-Canela, C., Barata, C., Watanabe, H.; **“Reduction of histamine and enhanced spinning behavior of *Daphnia magna* caused by scarlet mutant”**; Genesis; 2020; DOI: 10.1002/dvg.23403.
- Izquierdo, M., Bailey, E.H., Crout, N.M.J., Sanders, H.K., Young, S.D., Shaw, G.G.; **“Kinetics of <sup>99</sup>Tc speciation in aerobic soils”**; Journal of Hazardous Materials; 2020; DOI: 10.1016/j.jhazmat.2019.121762.
- Izquierdo, M., Young, S.D., Bailey, E.H., Crout, N.M.J., Lofts, S., Chenery, S.R., Shaw, G.; **“Kinetics of uranium(VI) lability and solubility in aerobic soils”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.127246.
- Jaén-Gil, A., Buttiglieri, G., Benito, A., Gonzalez-Olmos, R., Barceló, D., Rodríguez-Mozaz, S.; **“Metoprolol and metoprolol acid degradation in UV/H<sub>2</sub>O<sub>2</sub> treated wastewaters: An integrated screening approach for the identification of hazardous transformation products”**; Journal of Hazardous Materials; 2019; DOI: 10.1016/j.jhazmat.2019.120851.
- Jaén-Gil, A., Castellet-Rovira, F., Llorca, M., Villagrasa, M., Sarrà, M., Rodríguez-Mozaz, S., Barceló, D.; **“Fungal treatment of metoprolol and its recalcitrant metabolite metoprolol acid in hospital wastewater: Biotransformation, sorption and ecotoxicological impact”**; Water Research; 2019; DOI: 10.1016/j.watres.2018.12.054.
- Jaén-Gil, A., Farré, M.-J., Sánchez-Melsió, A., Serra-Compte, A., Barceló, D., Rodríguez-Mozaz, S.; **“Effect-Based Identification of Hazardous Antibiotic Transformation Products after Water Chlorination”**; Environmental Science and Technology; 2020; DOI: 10.1021/acs.est.0c00944.
- Jaén-Gil, A., Ferrando-Climent, L., Ferrer, I., Thurman, E.M., Rodríguez-Mozaz, S., Barceló, D., Escudero-Oñate, C.; **“Sustainable microalgae-based technology for biotransformation of benzalkonium chloride in oil and gas produced water: A laboratory-scale study”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.141526.
- Jafari, J.M., Abdollahi, H., Tauler, R.; **“Bilinear and trilinear modelling of three-way data obtained in two factor designed metabolomics studies”**; Chemometrics and Intelligent Laboratory Systems; 2020; DOI: 10.1016/j.chemolab.2019.103917.
- Jafari, J.M., De Juan, A., Tauler, R.; **“Chemometrics and statistics | factor analysis multivariate curve resolution”**; Encyclopedia of Analytical Science; 2019; DOI: 10.1016/B978-0-12-409547-2.14043-0.
- Jaiswal, N.K., Ramteke, S., Patel, K.S., Saathoff, H., Nava, S., Lucarelli, F., Yubero, E., Viana, M.; **“Winter Particulate Pollution over Raipur, India”**; Journal of Hazardous, Toxic, and Radioactive Waste; 2019; DOI: 10.1061/(ASCE)HZ.2153-5515.0000444.
- Jayeoba, A., Mathias, S.A., Nielsen, S., Vilarrasa, V., Bjørnarå, T.I.; **“Closed-form equation for subsidence due to fluid production from a cylindrical confined aquifer”**; Journal of Hydrology; 2019; DOI: 10.1016/j.jhydrol.2019.03.041.
- Jiang, J., Aksoyoglu, S., Ciarelli, G., Oikonomakis, E., El-Haddad, I., Canonaco, F., O’Dowd, C., Ovadnevaite, J., Minguillón, M.C., Baltensperger, U., Cruz, M.; **“Effects of two different biogenic emission models on modelled ozone and aerosol concentrations in Europe”**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-3747-2019.
- Jiang, J., Aksoyoglu, S., El-Haddad, I., Ciarelli, G., Denier Van Der Gon, H.A.C., Canonaco, F., Gilardoni, S., Paglione, M., Minguillón, M.C., Favez, O., Zhang, Y., Marchand, N., Hao, L., Virtanen, A., Florou, K., O’Dowd, C., Ovadnevaite, J., Balten-

- sperger, U., Prévôt, A.S.H.; **“Sources of organic aerosols in Europe: A modeling study using CAMx with modified volatility basis set scheme”**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-15247-2019.
- Junqué, E., Garcia, S., Martínez, M.Á., Rovira, J., Schuhmacher, M., Grimalt, J.O.; **“Changes of organochlorine compound concentrations in maternal serum during pregnancy and comparison to serum cord blood composition”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2019.108994.
  - Junqué, E., Grimalt, J.O., Fernández-Somoano, A., Tardón, A.; **“Urinary cobalt and ferritin in four-years-old children”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109147.
  - Jurado, A., Bofill-Mas, S., Vázquez-Suñé, E., Pujades, E., Girones, R., Rusiñol, M.; **“Occurrence of pathogens in the river–groundwater interface in a losing river stretch (Besòs River Delta, Spain)”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.134028.
  - Jurado, A., Margareto, A., Pujades, E., Vázquez-Suñé, E., Díaz-Cruz, M.S.; **“Fate and risk assessment of sulfonamides and metabolites in urban groundwater”**; Environmental Pollution; 2020; DOI: 10.1016/j.envpol.2020.115480.
  - Jurado, A., Walther, M., Díaz-Cruz, M.S.; **“Occurrence, fate and environmental risk assessment of the organic microcontaminants included in the Watch Lists set by EU Decisions 2015/495 and 2018/840 in the groundwater of Spain”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.01.270.
  - Kang, P.K., Hyman, J.D., Han, W.S., Dentz, M.; **“Anomalous Transport in Three-Dimensional Discrete Fracture Networks: Interplay Between Aperture Heterogeneity and Injection Modes”**; Water Resources Research; 2020; DOI: 10.1029/2020WR027378.
  - Kang, P.K., Lei, Q., Dentz, M., Juanes, R.; **“Stress-Induced Anomalous Transport in Natural Fracture Networks”**; Water Resources Research; 2019; DOI: 10.1029/2019WR024944; <http://doi.org/10.1029/2019WR024944>.
  - Karanasiou, A., Panteliadis, P., Perez, N., Minguillón, M.C., Pandolfi, M., Titos, G., Viana, M., Moreno, T., Querol, X., Alastuey, A.; **“Evaluation of the Semi-Continuous OCEC analyzer performance with the EUSAAR2 protocol”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.141266.
  - Karayigit, A.I., Atalay, M., Oskay, R.G., Córdoba, P., Querol, X., Bulut, Y.; **“Variations in elemental and mineralogical compositions of Late Oligocene, Early and Middle Miocene coal seams in the Kale-Tavas Molasse sub-basin, SW Turkey”**; International Journal of Coal Geology; 2020; DOI: 10.1016/j.coal.2019.103366.
  - Karayigit, A.I., Bircan, C., Oskay, R.G., Türkmen, İ., Querol, X.; **“The geology, mineralogy, petrography, and geochemistry of the Miocene Dursunbey coal within fluvio-lacustrine deposits, Balıkesir (Western Turkey)”**; International Journal of Coal Geology; 2020; DOI: 10.1016/j.coal.2020.103548.
  - Karlsson, C.M.G., Cerro-Gálvez, E., Lundin, D., Karlsson, C., Vila-Costa, M., Pinhassi, J.; **“Direct effects of organic pollutants on the growth and gene expression of the Baltic Sea model bacterium Rheinheimera sp. BAL341”**; Microbial Biotechnology; 2019; DOI: 10.1111/1751-7915.13441; <http://doi.org/10.1111/1751-7915.13441>.
  - Khider, D., Emile-Geay, J., McKay, N.P., Gil, Y., Garijo, D., Ratnakar, V., Alonso-Garcia, M., Bertrand, S., Bothe, O., Brewer, P., Bunn, A., Chevalier, M., Comas-Bru, L., Csank, A., Dassié, E., DeLong, K., Felis, T., Francus, P., Frappier, A., Gray, W., Goring, S., Jonkers, L., Kahle, M., Kaufman, D., Kehrwald, N.M., Martrat, B., McGregor, H., Richey, J., Schmittner, A., Scroxton, N., Sutherland, E., Thirumalai, K., Allen, K., Arnaud, F., Axford, Y., Barrows, T., Bazin, L., Pilaar Birch, S.E., Bradley, E., Bregy, J., Capron, E., Cartapanis, O., Chiang, H.-W., Cobb,

- K.M., Debret, M., Dommain, R., Du, J., Dyez, K., Emerick, S., Erb, M.P., Falster, G., Finsinger, W., Fortier, D., Gauthier, N., George, S., Grimm, E., Hertzberg, J., Hibbert, F., Hillman, A., Hobbs, W., Huber, M., Hughes, A.L.C., Jaccard, S., Ruan, J., Kienast, M., Konecky, B., Le Roux, G., Lyubchich, V., Novello, V.F., Olaka, L., Partin, J.W., Pearce, C., Phipps, S.J., Pignol, C., Piotrowska, N., Poli, M.-S., Prokopenko, A., Schwanck, F., Stepanek, C., Swann, G.E.A., Telford, R., Thomas, E., Thomas, Z., Truebe, S., von Gunten, L., Waite, A., Weitzel, N., Wilhelm, B., Williams, J., Williams, J.J., Winstrup, M., Zhao, N., Zhou, Y.; **“PaCTS 1.0: A Crowdsourced Reporting Standard for Paleoclimate Data”**; *Paleoceanography and Paleoclimatology*; 2019; DOI: 10.1029/2019PA003632.
- Khosravi, T., Hadei, M., Hopke, P.K., Namvar, Z., Shahsavani, A., Nazari, S.S.H., Querol, X., Rahmatinia, M., Alipour, M.R., Yarahmadi, M., Kermani, M.; **“Association of short-term exposure to air pollution with mortality in a middle eastern tourist city”**; *Air Quality, Atmosphere and Health*; 2020; DOI: 10.1007/s11869-020-00875-x.
  - Kim, Y., Kim, H., Gasparrini, A., Armstrong, B., Honda, Y., Chung, Y., Ng, C.F.S., Tobias, A., Íñiguez, C., Lavigne, E., Sera, F., Vicedo-Cabrera, A.M., Ragettli, M.S., Scovronick, N., Acquafredda, F., Chen, B.-Y., Guo, Y.-L.L., Seposo, X., Dang, T.N., Coelho, M.S.Z.S., Saldiva, P.H.N., Kosheleva, A., Zanobetti, A., Schwartz, J., Bell, M.L., Hashizume, M.; **“Suicide and ambient temperature: A multi-country multi-city study”**; *Environmental Health Perspectives*; 2019; DOI: 10.1289/EHP4898.
  - Knighton, J., Kuppel, S., Smith, A., Soulsby, C., Sprenger, M., Tetzlaff, D.; **“Using isotopes to incorporate tree water storage and mixing dynamics into a distributed ecohydrologic modelling framework”**; *Ecohydrology*; 2020; DOI: 10.1002/eco.2201.
  - Köck-Schulmeyer, M., Postigo, C., Farré, M., Barceló, D., López de Alda, M.; **“Medium to highly polar pesticides in seawater: Analysis and fate in coastal areas of Catalonia (NE Spain)”**; *Chemosphere*; 2019; DOI: 10.1016/j.chemosphere.2018.10.049.
  - Koivisto, A.J., Kling, K.I., Hänninen, O., Jayjock, M., Löndahl, J., Wierzbicka, A., Fonseca, A.S., Uhrbrand, K., Boor, B.E., Jiménez, A.S., Hämeri, K., Maso, M.D., Arnold, S.F., Jensen, K.A., Viana, M., Morawska, L., Hussein, T.; **“Source specific exposure and risk assessment for indoor aerosols”**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2019.02.398.
  - Konecky, B.L., McKay, N.P., Churakova, O.V., Comas-Bru, L., Dassié, E.P., DeLong, K.L., Falster, G.M., Fischer, M.J., Jones, M.D., Jonkers, L., Kaufman, D.S., Leduc, G., Managave, S.R., Martrat, B., Opel, T., Orsi, A.J., Partin, J.W., Sayani, H.R., Thomas, E.K., Thompson, D.M., Tyler, J.J., Abram, N.J., Atwood, A.R., Cartapanis, O., Conroy, J.L., Curran, M.A., Dee, S.G., Deininger, M., Divine, D.V., Kern, Z., Porter, T.J., Stevenson, S.L., von Gunten, L., Braun, K., Carré, M., Incarbona, A., Kaushal, N., Kläbe, R.M., Kolus, H.R., Mortyn, P.G., Moy, A.D., Roop, H.A., Sicre, M.-A., Yoshimura, K., Iso2k Project Members; **“The Iso2k database: A global compilation of paleo- $\delta^{18}O$  and  $\delta^{2}H$  records to aid understanding of Common Era climate”**; *Earth System Science Data*; 2020; DOI: 10.5194/essd-12-2261-2020.
  - Laj, P., Bigi, A., Rose, C., Andrews, E., Lund Myhre, C., Collaud Coen, M., Lin, Y., Wiedensohler, A., Schulz, M., A. Ogren, J., Fiebig, M., Gliš, J., Mortier, A., Pandolfi, M., Petäja, T., Kim, S.-W., Aas, W., Putaud, J.-P., Mayol-Bracero, O., Keywood, M., Labrador, L., Aalto, P., Ahlberg, E., Alados Arboledas, L., Alastuey, A., Andrade, M., Artinano, B., Ausmeel, S., Arsov, T., Asmi, E., Backman, J., Baltensperger, U., Bastian, S., Bath, O., Paul Beukes, J., T. Brem, B., Bukowiecki, N., Conil, S., Couret, C., Day, D., Dayantolis, W., Degorska, A., Eleftheriadis, K., Fetfatzis, P., Favez, O., Flentje, H., I. Gini, M., Gregorič, A., Gysel-Beer, M., Gannet Hallar, A., Hand, J., Hoffer, A., Hueglin, C., K. Hooda, R., Hyvärinen, A., Kalapov, I., Kalivitis, N., Kasper-Giebl, A., Eun Kim, J., Kouvarakis, G., Kranjc, I., Krejci, R., Kulmala, M., Labuschagne, C., Lee, H.-J., Lihavainen, H., Lin, N.-H., Löschau, G., Luoma, K., Marinoni, A., Martins Dos Santos, S., Meinhardt, F., Merkel, M., Metzger, J.-M., Mihalopoulos, N., Anh Nguyen, N., Ondracek, J., Pérez, N., Rita Perrone, M., Pichon, J.-M., Picard, D., Pichon, J.-

- M., Pont, V., Prats, N., Prenni, A., Reisen, F., Romano, S., Sellegri, K., Sharma, S., Schauer, G., Sheridan, P., Patrick Sherman, J., Schütze, M., Schwerin, A., Sohmer, R., Sorribas, M., Steinbacher, M., Sun, J., Titos, G., Toczko, B., Tuch, T., Tulet, P., Tunved, P., Vakkari, V., Velarde, F., Velasquez, P., Villani, P., Vratolis, S., Wang, S.-H., Weinhold, K., Weller, R., Yela, M., Yus-Diez, J., Zdimal, V., Zieger, P., Zikova, N.; **“A global analysis of climate-relevant aerosol properties retrieved from the network of Global Atmosphere Watch (GAW) near-surface observatories”**; Atmospheric Measurement Techniques; 2020; DOI: 10.5194/amt-13-4353-2020.
- Lázaro, W.L., Díez, S., Bravo, A.G., da Silva, C.J., Ignacio, Á.R.A., Guimaraes, J.R.D.; **“Cyanobacteria as regulators of methylmercury production in periphyton”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.02.233.
  - Lee, J.Y., Kim, H., Gasparrini, A., Armstrong, B., Bell, M.L., Sera, F., Lavigne, E., Abrutzky, R., Tong, S., Coelho, M.D.S.Z.S., Saldiva, P.H.N., Correa, P.M., Ortega, N.V., Kan, H., Garcia, S.O., Kyselý, J., Urban, A., Orru, H., Indermitte, E., Jaakkola, J.J.K., Rytí, N.R.I., Pascal, M., Goodman, P.G., Zeka, A., Michelozzi, P., Scortichini, M., Hashizume, M., Honda, Y., Hurtado, M., Cruz, J., Seposo, X., Nunes, B., Teixeira, J.P., Tobias, A., Íñiguez, C., Forsberg, B., Åström, C., Vicedo-Cabrera, A.M., Ragettli, M.S., Guo, Y.-L.L., Chen, B.-Y., Zanobetti, A., Schwartz, J., Dang, T.N., Do Van, D., Mayvaneh, F., Overcenco, A., Li, S., Guo, Y.; **“Predicted temperature-increase-induced global health burden and its regional variability”**; Environment International; 2019; DOI: 10.1016/j.envint.2019.105027.
  - Lee, W., Kim, Y., Sera, F., Gasparrini, A., Park, R., Michelle Choi, H., Prifti, K., Bell, M.L., Abrutzky, R., Guo, Y., Tong, S., de Sousa Zanotti Stagliorio Coelho, M., Nascimento Saldiva, P.H., Lavigne, E., Orru, H., Indermitte, E., Jaakkola, J.J.K., Rytí, N.R.I., Pascal, M., Goodman, P., Zeka, A., Hashizume, M., Honda, Y., Hurtado Diaz, M., César Cruz, J., Overcenco, A., Nunes, B., Madureira, J., Scovronick, N., Acquotta, F., Tobias, A., Vicedo-Cabrera, A.M., Ragettli, M.S., Guo, Y.-L.L., Chen, B.-Y., Li, S., Armstrong, B., Zanobetti, A., Schwartz, J., Kim, H.; **“Projections of excess mortality related to diurnal temperature range under climate change scenarios: a multi-country modelling study”**; The Lancet Planetary Health; 2020; DOI: 10.1016/S2542-5196(20)30222-9.
  - Leonardo, S., Gaiani, G., Tsumuraya, T., Hiram, M., Turquet, J., Sagristà, N., Rambla-Alegre, M., Flores, C., Caixach, J., Diogène, J., O’Sullivan, C.K., Alcaraz, C., Campàs, M.; **“Addressing the analytical challenges for the detection of ciguatoxins using an electrochemical biosensor”**; Analytical Chemistry; 2020; DOI: 10.1021/acs.analchem.9b04499.
  - Leonardo, S., Kiparissis, S., Rambla-Alegre, M., Almarza, S., Roque, A., Andree, K.B., Christidis, A., Flores, C., Caixach, J., Campbell, K., Elliott, C.T., Aligizaki, K., Diogène, J., Campàs, M.; **“Detection of tetrodotoxins in juvenile pufferfish *Lagocephalus sceleratus* (Gmelin, 1789) from the North Aegean Sea (Greece) by an electrochemical magnetic bead-based immunosensing tool”**; Food Chemistry; 2019; DOI: 10.1016/j.foodchem.2019.03.148.
  - Lester, D.R., Bandopadhyay, A., Dentz, M., Le Borgne, T.; **“Hydrodynamic Dispersion and Lamb Surfaces in Darcy Flow”**; Transport in Porous Media; 2019; DOI: 10.1007/s11242-019-01346-3.
  - Levia, D.F., Creed, I.F., Hannah, D.M., Nanko, K., Boyer, E.W., Carlyle-Moses, D.E., van de Giesen, N., Grasso, D., Guswa, A.J., Hudson, J.E., Hudson, S.A., Iida, S., Jackson, R.B., Katul, G.G., Kumagai, T., Llorens, P., Ribeiro, F.L., Pataki, D.E., Peters, C.A., Carretero, D.S., Selker, J.S., Tetzlaff, D., Zalewski, M., Bruen, M.; **“Homogenization of the terrestrial water cycle”**; Nature Geoscience; 2020; DOI: 10.1038/s41561-020-0641-y.
  - Li, B., Zhuang, X., Querol, X., Li, J., Moreno, N., Córdoba, P., Shangguan, Y., Zhou, J., Ma, X., Liu, S.; **“Geological controls on enrichment of Mn, Nb (Ta), Zr (Hf), and REY within the Early Permian coals of the Jimunai Depression, Xinjiang Province, NW China”**; International Journal of Coal Geology; 2019; DOI: 10.1016/j.coal.2019.103298.

- Li, B., Zhuang, X., Querol, X., Moreno, N., Córdoba, P., Li, J., Zhou, J., Ma, X., Liu, S., Shangguan, Y.; **“The mode of occurrence and origin of minerals in the Early Permian high-rank coals of the Jimunai depression, Xinjiang Uygur Autonomous Region, NW China”**; International Journal of Coal Geology; 2019; DOI: 10.1016/j.coal.2019.03.002.
- Li, B., Zhuang, X., Querol, X., Moreno, N., Córdoba, P., Shangguan, Y., Yang, L., Li, J., Zhang, F.; **“Geological controls on the distribution of REY-Zr (Hf)-Nb (Ta) enrichment horizons in late Permian coals from the Qiandongbei Coalfield, Guizhou Province, SW China”**; International Journal of Coal Geology; 2020; DOI: 10.1016/j.coal.2020.103604.
- Li, B., Zhuang, X., Querol, X., Moreno, N., Yang, L., Shangguan, Y., Li, J.; **“Mineralogy and geochemistry of late Permian coals within the tongzi coalfield in Guizhou Province, Southwest China”**; Minerals; 2020; DOI: 10.3390/min10010044.
- Li, J., Wu, P., Yang, G., Pan, L., Zhuang, X., Querol, X., Moreno, N., Li, B., Shangguan, Y.; **“Enrichment of Li-Ga-Zr-Hf and Se-Mo-Cr-V-As-Pb assemblages in the no. 11 superhigh organic sulfur coal from the sangshuping coal mine, Weibei Coalfield, Shaanxi, North China”**; Energies; 2020; DOI: 10.3390/en13246660.
- Li, J., Zhuang, X., Leiva, C., Arenas, C., Cornejo, A., Querol, X., Moreno, N., Font, O., Pereira, C.F.; **“Utilization of boiler slag from pulverized-coal-combustion power plants in China for manufacturing acoustic materials”**; Energies; 2020; DOI: 10.3390/en13215705.
- Li, J., Zhuang, X., Querol, X., Moreno, N., Yang, G., Pan, L., Li, B., Shangguan, Y., Pan, Z., Liu, B.; **“Enrichment of Nb-Ta-Zr-W-Li in the late carboniferous coals from the Weibei Coalfield, Shaanxi, North China”**; Energies; 2020; DOI: 10.3390/en13184818.
- Licciardello, F., Barbagallo, S., Gallart, F.; **“Hydrological and erosional response of a small catchment in Sicily”**; Journal of Hydrology and Hydromechanics; 2019; DOI: 10.2478/johh-2019-0003.
- Lieberman, N.R., Izquierdo, M., Muñoz-Quirós, C., Cohen, H., Chenery, S.R.; **“Geochemical signature of superhigh organic sulphur Raša coals and the mobility of toxic trace elements from combustion products and polluted soils near the Plo-min coal-fired power station in Croatia”**; Applied Geochemistry; 2020; DOI: 10.1016/j.apgeochem.2019.104472.
- Lieberman, R.N., Izquierdo, M., Córdoba, P., Moreno Palmerola, N., Querol, X., Sánchez de la Campa, A.M., Font, O., Cohen, H., Knop, Y., Torres-Sánchez, R., Sánchez-Rodas, D., Muñoz-Quiros, C., de la Rosa, J.D.; **“The geochemical evolution of brines from phosphogypsum deposits in Huelva (SW Spain) and its environmental implications”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.134444.
- Lieberman, R.N., Knop, Y., Palmerola, N.M., Muñoz, C., Cohen, H., Izquierdo, M., Lorenzo, J.A., Taboas, B., Font, O., Querol, X.; **“Production of environmentally friendly sand-like products from granitoid waste sludge and coal fly ash for civil engineering”**; Journal of Cleaner Production; 2019; DOI: 10.1016/j.jclepro.2019.117880.
- Lin, F., Giannetta, M., Jugle, M., Couper, S., Dunleavy, B., Miyagi, L.; **“Texture development and stress-strain partitioning in periclase + halite aggregates”**; Minerals; 2019; DOI: 10.3390/min9110679.
- Liu, C., Chen, R., Sera, F., Vicedo-Cabrera, A.M., Guo, Y., Tong, S., Coelho, M.S.Z.S., Saldiva, P.H.N., Lavigne, E., Matus, P., Ortega, N.V., Garcia, S.O., Pascal, M., Stafoggia, M., Scortichini, M., Hashizume, M., Honda, Y., Hurtado-Díaz, M., Cruz, J., Nunes, B., Teixeira, J.P., Kim, H., Tobias, A., Íñiguez, C., Forsberg, B., Åström, C., Ragettli, M.S., Guo, Y.-L., Chen, B.-Y., Bell, M.L., Wright, C.Y., Scovronick, N., Garland, R.M., Miloje-



- vic, A., Kysely, J., Urban, A., Orru, H., Indermitte, E., Jaakkola, J.J.K., Ryti, N.R.I., Katsouyanni, K., Analitis, A., Zanobetti, A., Schwartz, J., Chen, J., Wu, T., Cohen, A., Gasparrini, A., Kan, H.; **"Ambient particulate air pollution and daily mortality in 652 cities"**; *New England Journal of Medicine*; 2019; DOI: 10.1056/NEJMoa1817364.
- Llorca, M., Ábalos, M., Vega-Herrera, A., Adrados, M.A., Abad, E., Farré, M.; **"Adsorption and desorption behaviour of polychlorinated biphenyls onto microplastics' surfaces in water/sediment systems"**; *Toxics*; 2020; DOI: 10.3390/TOXICS8030059.
  - Llorca, M., Álvarez-Muñoz, D., Ábalos, M., Rodríguez-Mozaz, S., Santos, L.H.M.L.M., León, V.M., Campillo, J.A., Martínez-Gómez, C., Abad, E., Farré, M.; **"Microplastics in Mediterranean coastal area: toxicity and impact for the environment and human health"**; *Trends in Environmental Analytical Chemistry*; 2020; DOI: 10.1016/j.teac.2020.e00090.
  - Llorca, M., Castellet-Rovira, F., Farré, M.-J., Jaén-Gil, A., Martínez-Alonso, M., Rodríguez-Mozaz, S., Sarrà, M., Barceló, D.; **"Fungal biodegradation of the N-nitrosodimethylamine precursors venlafaxine and O-desmethylvenlafaxine in wáter"**; *Environmental Pollution*; 2019; DOI: 10.1016/j.envpol.2018.12.008.
  - Llorens, E., Ginebreda, A., Farré, M., Insa, S., González-Trujillo, J.D., Munné, A., Solà, C., Flò, M., Villagrasa, M., Barceló, D., Sabater, S.; **"Occurrence of regulated pollutants in populated Mediterranean basins: Ecotoxicological risk and effects on biological quality"**; *Science of the Total Environment*; 2020; DOI: 10.1016/j.scitotenv.2020.141224.
  - López-Doval, J.C., Freixa, A., Santos, L.H.M.L.M., Sanchís, J., Rodríguez-Mozaz, S., Farré, M., Barceló, D., Sabater, S.; **"Exposure to single and binary mixtures of fullerenes and triclosan: Reproductive and behavioral effects in the freshwater snail *Radix balthica*"**; *Environmental Research*; 2019; DOI: 10.1016/j.envres.2019.108565.
  - López-Doval, J.C., Serra-Compte, A., Rodríguez-Mozaz, S., Barceló, D., Sabater, S.; **"Diet quality and NSAIDs promote changes in formation of prostaglandins by an aquatic invertebrate"**; *Chemosphere*; 2020; DOI: 10.1016/j.chemosphere.2020.126892.
  - López-García, E., Pérez-López, C., Postigo, C., Andreu, V., Bijlsma, L., González-Mariño, I., Hernández, F., Marcé, R.M., Montes, R., Picó, Y., Pocurull, E., Rico, A., Rodil, R., Rosende, M., Valcárcel, Y., Zuloaga, O., Quintana, J.B., López de Alda, M.; **"Assessing alcohol consumption through wastewater-based epidemiology: Spain as a case study"**; *Drug and Alcohol Dependence*; 2020; DOI: 10.1016/j.drugalcdep.2020.108241.
  - López-García, E., Postigo, C., Barceló, D., López de Alda, M.; **"The value of wastewater-based epidemiology in the estimation of alcohol consumption"**; *Current Opinion in Environmental Science and Health*; 2019; DOI: 10.1016/j.coesh.2019.03.003.
  - López-García, E., Postigo, C., López de Alda, M.; **"Psychoactive substances in mussels: Analysis and occurrence assessment"**; *Marine Pollution Bulletin*; 2019; DOI: 10.1016/j.marpolbul.2019.07.042.
  - López-Pacheco, I.Y., Carrillo-Nieves, D., Salinas-Salazar, C., Silva-Núñez, A., Arévalo-Gallegos, A., Barceló, D., Afewerki, S., Iqbal, H.M.N., Parra-Saldívar, R.; **"Combination of nejayote and swine wastewater as a medium for *Arthrospira maxima* and *Chlorella vulgaris* production and wastewater treatment"**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2019.04.278.
  - López-Pacheco, I.Y., Salinas-Salazar, C., Silva-Núñez, A., Rodas-Zuluaga, L.I., Donoso-Quezada, J., Ayala-Mar, S., Barceló, D., Iqbal, H.M.N., Parra-Saldívar, R.; **"Removal and biotransformation of 4-nonylphenol by *Arthrospira maxima* and *Chlorella vulgaris* consortium"**; *Environmental Research*; 2019; DOI: 10.1016/j.envres.2019.108848.

- López-Pacheco, I.Y., Silva-Núñez, A., Salinas-Salazar, C., Arévalo-Gallegos, A., Lizarazo-Holguin, L.A., Barceló, D., Iqbal, H.M.N., Parra-Saldívar, R.; **“Anthropogenic contaminants of high concern: Existence in water resources and their adverse effects”**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2019.07.052.
- Lozano, A., Ayora, C., Fernández-Martínez, A.; **“Sorption of rare earth elements onto basaluminite: The role of sulfate and pH”**; *Geochimica et Cosmochimica Acta*; 2019; DOI: 10.1016/j.gca.2019.05.016.
- Lozano, A., Ayora, C., Fernández-Martínez, A.; **“Sorption of rare earth elements on schwertmannite and their mobility in acid mine drainage treatments”**; *Applied Geochemistry*; 2020; DOI: 10.1016/j.apgeochem.2019.104499.
- Lozano, A., Ayora, C., Macías, F., León, R., Gimeno, M.J., Auqué, L.; **“Geochemical behavior of rare earth elements in acid drainages: Modeling achievements and limitations”**; *Journal of Geochemical Exploration*; 2020; DOI: 10.1016/j.gexplo.2020.106577.
- Lozano, A., Fernández-Martínez, A., Ayora, C., Di Tommaso, D., Poulain, A., Rovezzi, M., Marini, C.; **“Solid and Aqueous Speciation of Yttrium in Passive Remediation Systems of Acid Mine Drainage”**; *Environmental Science and Technology*; 2019; DOI: 10.1021/acs.est.9b01795.
- Madrid, F., Ballesteros, R., Lacorte, S., Villaverde, J., Morillo, E.; **“Extraction of PAHS from an aged creosote-polluted soil by cyclodextrins and rhamnolipids. Side effects on removal and availability of potentially toxic elements”**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2018.10.316.
- Manasfi, R., Chiron, S., Montemurro, N., Perez, S., Brienza, M.; **“Biodegradation of fluoroquinolone antibiotics and the climbazole fungicide by Trichoderma species”**; *Environmental Science and Pollution Research*; 2020; DOI: 10.1007/s11356-020-08442-8.
- Mani-Varnosfaderani, A., Park, E.S., Tauler, R.; **“Interval estimation in multivariate curve resolution by exploiting the principles of error propagation in linear least squares”**; *Chemometrics and Intelligent Laboratory Systems*; 2020; DOI: 10.1016/j.chemolab.2020.104166.
- Marazuela, M.A., Ayora, C., Vázquez-Suñé, E., Olivella, S., García-Gil, A.; **“Hydrogeological constraints for the genesis of the extreme lithium enrichment in the Salar de Atacama (NE Chile): A thermohaline flow modelling approach”**; *Science of the Total Environment*; 2020; DOI: 10.1016/j.scitotenv.2020.139959.
- Marazuela, M.A., Vázquez-Suñé, E., Ayora, C., García-Gil, A., Palma, T.; **“The effect of brine pumping on the natural hydrodynamics of the Salar de Atacama: The damping capacity of salt flats”**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2018.11.196.
- Marazuela, M.A., Vázquez-Suñé, E., Ayora, C., García-Gil, A., Palma, T.; **“Hydrodynamics of salt flat basins: The Salar de Atacama example”**; *Science of the Total Environment*; 2019; DOI: 10.1016/j.scitotenv.2018.09.190.
- Marazuela, M.A., Vázquez-Suñé, E., Ayora, C., García-Gil, A.; **“Towards more sustainable brine extraction in salt flats: Learning from the Salar de Atacama”**; *Science of the Total Environment*; 2020; DOI: 10.1016/j.scitotenv.2020.138108.
- Marcell Szasz, A., Malm, J., Rezeli, M., Sugihara, Y., Betancourt, L.H., Rivas, D., Györfy, B., Marko-Varga, G.; **“Challenging the heterogeneity of disease presentation in malignant melanoma—impact on patient treatment”**; *Cell Biology and Toxicology*; 2019; DOI: 10.1007/s10565-018-9446-9.
- Margenat, A., Matamoros, V., Díez, S., Cañameras, N., Comas, J., Bayona, J.M.; **“Occurrence and human health implications of chemical contaminants in vegetables grown in peri-urban agriculture”**; *Environment International*; 2019; DOI: 10.1016/j.envint.2018.12.013.

- Margenat, A., You, R., Cañameras, N., Carazo, N., Díez, S., Bayona, J.M., Matamoros, V.; **“Occurrence and human health risk assessment of antibiotics and trace elements in *Lactuca sativa* amended with different organic fertilizers”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109946.
- Marguí, E., Dalipi, R., Borgese, L., Depero, L.E., Queralt, I.; **“Possibilities and drawbacks of total reflection X-ray fluorescence spectrometry as a fast, simple and cost-effective technique for multielement analyses of cosmetics”**; Analytica Chimica Acta; 2019; DOI: 10.1016/j.aca.2019.05.005.
- Marguí, E., Dumić, J., Queralt, I., Baković, L., Jablan, J.; **“Simple and reliable determination of Zn and some additional elements in seminal plasma samples by using total reflection X-ray fluorescence spectroscopy”**; Analytical Methods; 2020; DOI: 10.1039/d0ay01185a.
- Marguí, E., Jablan, J., Gerić, M., Inić, S., Domijan, A.-M., Janušić, R., Šarčević, B., Queralt, I., Garaj-Vrhovac, V.; **“Critical evaluation of the use of total reflection X-ray fluorescence spectrometry for the analysis of whole blood samples: application to patients with thyroid gland diseases”**; Analytical and Bioanalytical Chemistry; 2019; DOI: 10.1007/s00216-019-01618-3.
- Marguí, E., Resano, M., Queralt, I.; **“A sustainable and simple energy dispersive X-ray fluorescence method for sulfur determination at trace levels in biodiesel samples via formation of biodiesel spots on a suitable solid support”**; Spectrochimica Acta - Part B Atomic Spectroscopy; 2019; DOI: 10.1016/j.sab.2019.04.003.
- Marí-Dell’Olmo, M., Tobías, A., Gómez-Gutiérrez, A., Rodríguez-Sanz, M., García de Olalla, P., Camprubí, E., Gasparini, A., Borrell, C.; **“Social inequalities in the association between temperature and mortality in a South European context”**; International Journal of Public Health; 2019; DOI: 10.1007/s00038-018-1094-6.
- Marín De Mas, I., Torrents, L., Bedia, C., Nielsen, L.K., Cascante, M., Tauler, R.; **“Stoichiometric gene-to-reaction associations enhance model-driven analysis performance: Metabolic response to chronic exposure to Aldrin in prostate cancer”**; BMC Genomics; 2019; DOI: 10.1186/s12864-019-5979-4.
- Marín-García, M., Tauler, R.; **“Chemometrics characterization of The Llobregat river dissolved organic matter”**; Chemometrics and Intelligent Laboratory Systems; 2020; DOI: 10.1016/j.chemolab.2020.104018.
- Marqueño, A., Blanco, M., Maceda-Veiga, A., Porte, C.; **“Skeletal Muscle Lipidomics as a New Tool to Determine Altered Lipid Homeostasis in Fish Exposed to Urban and Industrial Wastewaters”**; Environmental Science and Technology; 2019; DOI: 10.1021/acs.est.9b02064.
- Marqueño, A., Pérez-Albaladejo, E., Flores, C., Moyano, E., Porte, C.; **“Toxic effects of bisphenol A diglycidyl ether and derivatives in human placental cells”**; Environmental Pollution; 2019; DOI: 10.1016/j.envpol.2018.10.045.
- Marqueño, A., Pérez-Albaladejo, E., Porte, C.; **“Drospirenone induces the accumulation of triacylglycerides in the fish hepatoma cell line, PLHC-1”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.07.347.
- Marrugo-Negrete, J., Durango-Hernández, J., Calao-Ramos, C., Urango-Cárdenas, I., Díez, S.; **“Mercury levels and genotoxic effect in caimans from tropical ecosystems impacted by gold mining”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.01.340.
- Marrugo-Negrete, J., Durango-Hernández, J., Díaz-Fernández, L., Urango-Cárdenas, I., Araméndiz-Tatis, H., Vergara-Flórez, V., Bravo, A.G., Díez, S.; **“Transfer and bioaccumulation of mercury from soil in cowpea in gold mining sites”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.126142.

- Marrugo-Negrete, J., Pinedo-Hernández, J., Combatt, E.M., Bravo, A.G., Díez, S.; **“Flood-induced metal contamination in the topsoil of floodplain agricultural soils: A case-study in Colombia”**; Land Degradation and Development; 2019; DOI: 10.1002/ldr.3398.
- Marrugo-Negrete, J., Pinedo-Hernández, J., Marrugo-Madrid, S., Navarro-Frómeta, E., Díez, S.; **“Sea Cucumber as Bioindicator of Trace Metal Pollution in Coastal Sediments”**; Biological Trace Element Research; 2020; DOI: 10.1007/s12011-020-02308-3.
- Marrugo-Negrete, J., Vargas-Licona, S., Ruiz-Guzmán, J.A., Marrugo-Madrid, S., Bravo, A.G., Díez, S.; **“Human health risk of methylmercury from fish consumption at the largest floodplain in Colombia”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2019.109050.
- Martínez, R., Codina, A.E., Barata, C., Tauler, R., Piña, B., Navarro-Martín, L.; **“Transcriptomic effects of tributyltin (TBT) in zebrafish eleutheroembryos. A functional benchmark dose analysis”**; Journal of Hazardous Materials; 2020; DOI: 10.1016/j.jhazmat.2020.122881.
- Martínez, R., Herrero-Nogareda, L., Van Antro, M., Campos, M.P., Casado, M., Barata, C., Piña, B., Navarro-Martín, L.; **“Morphometric signatures of exposure to endocrine disrupting chemicals in zebrafish eleutheroembryos”**; Aquatic Toxicology; 2019; DOI: 10.1016/j.aquattox.2019.105232.
- Martínez, R., Navarro-Martín, L., Luccarelli, C., Codina, A.E., Raldúa, D., Barata, C., Tauler, R., Piña, B.; **“Unravelling the mechanisms of PFOS toxicity by combining morphological and transcriptomic analyses in zebrafish embryos”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.04.200.
- Martínez, R., Navarro-Martín, L., van Antro, M., Fuertes, I., Casado, M., Barata, C., Piña, B.; **“Changes in lipid profiles induced by bisphenol A (BPA) in zebrafish eleutheroembryos during the yolk sac absorption stage”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2019.125704.
- Martínez, R., Tu, W., Eng, T., Allaire-Leung, M., Piña, B., Navarro-Martín, L., Mennigen, J.A.; **“Acute and long-term metabolic consequences of early developmental Bisphenol A exposure in zebrafish (Danio rerio)”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.127080.
- Martínez, R., Vera-Chang, M.N., Haddad, M., Zon, J., Navarro-Martín, L., Trudeau, V.L., Mennigen, J.A.; **“Developmental fluoxetine exposure in zebrafish reduces offspring basal cortisol concentration via life stage-dependent maternal transmission”**; PLoS ONE; 2019; DOI: 10.1371/journal.pone.0212577.
- Martínez-López, S., Lucas-Abellán, C., Serrano-Martínez, A., Mercader-Ros, M.T., Cuartero, N., Navarro, P., Pérez, S., Gabaldón, J.A., Gómez-López, V.M.; **“Pulsed light for a cleaner dyeing industry: Azo dye degradation by an advanced oxidation process driven by pulsed light”**; Journal of Cleaner Production; 2019; DOI: 10.1016/j.jclepro.2019.01.230.
- Martínez-Morcillo, S., Rodríguez-Gil, J.L., Fernández-Rubio, J., Rodríguez-Mozaz, S., Míguez-Santayán, M.P., Valdes, M.E., Barceló, D., Valcárcel, Y.; **“Presence of pharmaceutical compounds, levels of biochemical biomarkers in seafood tissues and risk assessment for human health: Results from a case study in North-Western Spain”**; International Journal of Hygiene and Environmental Health; 2020; DOI: 10.1016/j.ijheh.2019.10.011.
- Martínez-Varela, A., Casas, G., Piña, B., Dachs, J., Vila-Costa, M.; **“Large Enrichment of Anthropogenic Organic Matter Degrading Bacteria in the Sea-Surface Microlayer at Coastal Livingston Island (Antarctica)”**; Frontiers in Microbiology; 2020; DOI: 10.3389/fmicb.2020.571983.
- Martins, V., Faria, T., Diapouli, E., Manousakas, M.I., Eleftheriadis, K., Viana, M., Almeida, S.M.; **“Relationship between indoor and outdoor size-fractionated particulate matter**

**in urban microenvironments: Levels, chemical composition and sources**"; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109203.

- Martyniuk, C.J., Martínez, R., Kostyniuk, D.J., Mennigen, J.A., Zubcevic, J.; **"Genetic ablation of bone marrow beta-adrenergic receptors in mice modulates mirna-transcriptome networks of neuroinflammation in the paraventricular nucleus"**; Physiological Genomics; 2020; DOI: 10.1152/physiolgenomics.00001.2020.
- Massagué, J., Carnerero, C., Escudero, M., Baldasano, J.M., Alastuey, A., Querol, X.; **"2005-2017 ozone trends and potential benefits of local measures as deduced from air quality measurements in the north of the Barcelona metropolitan area"**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-7445-2019.
- Massoudieh, A., Dentz, M.; **"Upscaling non-linear reactive transport in correlated velocity fields"**; Advances in Water Resources; 2020; DOI: 10.1016/j.advwatres.2020.103680.
- Matamoros, V., Caiola, N., Rosales, V., Hernández, O., Ibáñez, C.; **"The role of rice fields and constructed wetlands as a source and a sink of pesticides and contaminants of emerging concern: Full-scale evaluation"**; Ecological Engineering; 2020; DOI: 10.1016/j.ecoleng.2020.105971.
- Mathias, S.A., Dentz, M., Liu, Q.; **"Gas Diffusion in Coal Powders is a Multi-rate Process"**; Transport in Porous Media; 2020; DOI: 10.1007/s11242-019-01376-x.
- Mayol-Cabré, M., Prats, E., Raldúa, D., Gómez-Canela, C.; **"Characterization of monoaminergic neurochemicals in the different brain regions of adult zebrafish"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.141205.
- Mekni, S., Barhoumi, B., Aznar-Aleman, Ò., Touil, S., Driss, M.R., Barceló, D., Eljarrat, E.; **"Occurrence of halogenated flame retardants in sediments and sea urchins (Paracentrotus lividus) from a North African Mediterranean coastal lagoon (Bizerte, Tunisia)"**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.11.139.
- Mekni, S., Barhoumi, B., Touil, S., Driss, M.R., Eljarrat, E.; **"Occurrence of Halogenated and Organophosphate Flame Retardants in Sediments and Eels (Anguilla anguilla) From Bizerte Lagoon, Tunisia"**; Frontiers in Environmental Science; 2020; DOI: 10.3389/fenvs.2020.00067.
- Menéndez-Pedriz, A., Jaumot, J.; **"Interaction of environmental pollutants with microplastics: A critical review of sorption factors, bioaccumulation and ecotoxicological effects"**; Toxics; 2020; DOI: 10.3390/TOXICS8020040.
- Mercedes-Martín, R., Ayora, C., Tritlla, J., Sánchez-Román, M.; **"The hydrochemical evolution of alkaline volcanic lakes: a model to understand the South Atlantic Pre-salt mineral assemblages"**; Earth-Science Reviews; 2019; DOI: 10.1016/j.earscirev.2019.102938. Miele, F., De Anna, P., Dentz, M.; **"Stochastic model for filtration by porous materials"**; Physical Review Fluids; 2019; DOI: 10.1103/PhysRevFluids.4.094101.
- Min, K.-B., Rutqvist, J., Vilarrasa, V.; **"Observations of Coupled Processes in Fractured Geological Media at Various Space and Time"**; Rock Mechanics and Rock Engineering; 2020; DOI: 10.1007/s00603-020-02263-4.
- Mir-Tutusaus, J.A., Parladé, E., Villagrana, M., Barceló, D., Rodríguez-Mozaz, S., Martínez-Alonso, M., Gaju, N., Sarrà, M., Caminal, G.; **"Long-term continuous treatment of non-sterile real hospital wastewater by Trametes versicolor"**; Journal of Biological Engineering; 2019; DOI: 10.1186/s13036-019-0179-y.
- Mitjà, O., Corbacho-Monné, M., Ubals, M., Tebe, C., Peñafiel, J., Tobías, A., Ballana, E., Alemany, A., Riera-Martí, N., Pérez, C.A., Suñer, C., Laporte, P., Admella, P., Mitjà, J., Clua, M., Bertran, L., Sarquella, M., Gavilán, S., Ara, J., Argimon, J.M., Casabona, J., Cuatrecasas, G., Cañadas, P., Elizalde-Torrent, A., Fabregat, R., Farré, M., Forcada, A., Flores-Mateo, G.,

- Muntada, E., Nadal, N., Narejos, S., Gil-Ortega, A.N., Prat, N., Puig, J., Quifionesarm, C., Reyes-Ureña, J., Ramírez-Viaplana, F., Ruiz, L., Riveira-Muñoz, E., Sierra, A., Velasco, C., Vivanco Hidalgo, R.M., Sentís, A., Beiras, C.G., Clotet, B., Vall-Mayans, M.; 2020; **"BCN PEP-CoV-2 RESEARCH GROUP. Hydroxychloroquine for early treatment of adults with mild Covid-19: A randomized-controlled trial"** Clinical Infectious Diseases; <https://doi.org/10.1093/cid/ciaa1009>.
- Mitjà, O., Arenas, À., Rodó, X., Tobias, A., Brew, J., Benlloch, J.M.; **"Experts' request to the Spanish Government: move Spain towards complete lockdown"**; The Lancet; 2020; DOI: 10.1016/S0140-6736(20)30753-4.
  - Molina, A.J., Aranda, X., Llorens, P., Galindo, A., Biel, C.; **"Sap flow of a wild cherry tree plantation growing under Mediterranean conditions: Assessing the role of environmental conditions on canopy conductance and the effect of branch pruning on water productivity"**; Agricultural Water Management; 2019; DOI: 10.1016/j.agwat.2019.03.019.
  - Molina, A.J., Llorens, P., Garcia-Estringana, P., Moreno de las Heras, M., Cayuela, C., Gallart, F., Latron, J.; **"Contributions of throughfall, forest and soil characteristics to near-surface soil water-content variability at the plot scale in a mountainous Mediterranean area"**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.08.020.
  - Montemurro, N., Orfanoti, A., Manasfi, R., Thomaidis, N.S., Pérez, S.; **"Comparison of high resolution mrm and sequential window acquisition of all theoretical fragment-ion acquisition modes for the quantitation of 48 wastewater-borne pollutants in lettuce"**; Journal of Chromatography A; 2020; DOI: 10.1016/j.chroma.2020.461566.
  - Montemurro, N., Postigo, C., Chirón, S., Barcelò, D., Pérez, S.; **"Analysis and fate of 14 relevant wastewater-derived organic pollutants in long-term exposed soil"**; Analytical and Bioanalytical Chemistry; 2019; DOI: 10.1007/s00216-019-01715-3.
  - Montes, R., Rodil, R., Rico, A., Cela, R., González-Mariño, I., Hernández, F., Bijlsma, L., Celma, A., Picó, Y., Andreu, V., de Alda, M.L., López-García, E., Postigo, C., Pocurull, E., Marcé, R.M., Rosende, M., Olivares, M., Valcárcel, Y., Quintana, J.B.; **"First nation-wide estimation of tobacco consumption in Spain using wastewater-based epidemiology"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.140384.
  - Montory, M., Habit, E., Fernandez, P., Grimalt, J.O., Kolok, A.S., Barra, R.O., Ferrer, J.; **"Biotransport of persistent organic pollutants in the southern Hemisphere by invasive Chinook salmon (*Oncorhynchus tshawytscha*) in the rivers of northern Chilean Patagonia, a UNESCO biosphere reserve"**; Environment International; 2020; DOI: 10.1016/j.envint.2020.105803.
  - Morawska, L., Tang, J.W., Bahnfleth, W., Bluysen, P.M., Boerstra, A., Buonanno, G., Cao, J., Dancer, S., Floto, A., Franchimon, F., Haworth, C., Hogeling, J., Isaxon, C., Jimenez, J.L., Kurnitski, J., Li, Y., Loomans, M., Marks, G., Marr, L.C., Mazzeo, L., Melikov, A.K., Miller, S., Milton, D.K., Nazaroff, W., Nielsen, P.V., Noakes, C., Peccia, J., Querol, X., Sekhar, C., Seppänen, O., Tanabe, S.-I., Tellier, R., Tham, K.W., Wargocki, P., Wierzbicka, A., Yao, M.; **"How can airborne transmission of COVID-19 indoors be minimised?"**; Environment International; 2020; DOI: 10.1016/j.envint.2020.105832.
  - Moreno González, R., Cánovas, C.R., Olías, M., Macías, F.; **"Seasonal variability of extremely metal rich acid mine drainages from the Tharsis mines (SW Spain)"**; Environmental Pollution; 2020; DOI: 10.1016/j.envpol.2019.113829.
  - Moreno, T., Amato, F.; **"Commuting by subway? What you need to know about air quality"**; Field Actions Science Report; 2020; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090585931&partnerID=40&md5=15a5d8e2ab209b1c947c5c43dfff307b>.

- Moreno, T., Pacitto, A., Fernández, A., Amato, F., Marco, E., Grimalt, J., Buonanno, G., Querol, X.; **“Vehicle interior air quality conditions when travelling by taxi”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2019.02.042.
- Moreno, T., Reche, C., Ahn, K.-H., Eun, H.-R., Kim, W.Y., Kim, H.-S., Fernández-Iriarte, A., Amato, F., Querol, X.; **“Using miniaturised scanning mobility particle sizers to observe size distribution patterns of quasi-ultrafine aerosols inhaled during city commuting”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109978.
- Moreno, T., Trechera, P., Querol, X., Lah, R., Johnson, D., Wrana, A., Williamson, B.; **“Trace element fractionation between PM10 and PM2.5 in coal mine dust: Implications for occupational respiratory health”**; International Journal of Coal Geology; 2019; DOI: 10.1016/j.coal.2019.01.006.
- Moreno, T., Trechera, P., Querol, X., Lah, R., Johnson, D., Wrana, A., Williamson, B.; **“Corrigendum to Trace element fractionation between PM10 and PM2.5 in coal mine dust: Implications for occupational respiratory health”**; International Journal of Coal Geology; 2020; DOI: 10.1016/j.coal.2020.103392.
- Moreno-de-las-Heras, M., Lindenberger, F., Latron, J., Lana-Renault, N., Llorens, P., Arnáez, J., Romero-Díaz, A., Gallart, F.; **“Hydro-geomorphological consequences of the abandonment of agricultural terraces in the Mediterranean region: Key controlling factors and landscape stability patterns”**; Geomorphology; 2019; DOI: 10.1016/j.geomorph.2019.02.014.
- Moreno-De-Las-Heras, M., Merino-Martín, L., Saco, P.M., Espigares, T., Gallart, F., Nicolau, J.M.; **“Structural and functional control of surface-patch to hillslope runoff and sediment connectivity in Mediterranean dry reclaimed slope systems”**; Hydrology and Earth System Sciences; 2020; DOI: 10.5194/hess-24-2855-2020.
- Moretti, S., Salmatonidis, A., Querol, X., Tassone, A., Andreoli, V., Bencardino, M., Pirrone, N., Sprovieri, F., Naccarato, A.; **“Contribution of volcanic and fumarolic emission to the aerosol in marine atmosphere in the central mediterranean sea: Results from med-oceanor 2017 cruise campaign”**; Atmosphere; 2020; DOI: 10.3390/atmos11020149.
- Mrad, A., Katul, G.G., Levia, D.F., Guswa, A.J., Boyer, E.W., Bruen, M., Carlyle-Moses, D.E., Coyte, R., Creed, I.F., van de Giesen, N., Grasso, D., Hannah, D.M., Hudson, J.E., Humphrey, V., Iida, S., Jackson, R.B., Kumagai, T., Llorens, P., Michalzik, B., Nanko, K., Peters, C.A., Selker, J.S., Tetzlaff, D., Zalewski, M., Scanlon, B.R.; 2020; **“Peak grain forecasts for the US High Plains amid withering waters”**; PNAS. 117, 26145 LP – 26150; DOI: 10.1073/pnas.2008383117; <https://doi.org/10.1073/pnas.2008383117>.
- Muschietti, A., Serrano, N., Ariño, C., Díaz-Cruz, M.S., Díaz-Cruz, J.M.; **“Screen-printed electrodes for the voltammetric sensing of benzotriazoles in water”**; Sensors (Switzerland); 2020; DOI: 10.3390/s20071839.
- Navarro-Martín, L., Martyniuk, C.J., Mennigen, J.A.; **“Comparative epigenetics in animal physiology: An emerging frontier”**; Comparative Biochemistry and Physiology - Part D: Genomics and Proteomics; 2020; DOI: 10.1016/j.cbd.2020.100745.
- Navarro-Reig, M., Tauler, R., Iriondo-Frias, G., Jaumot, J.; **“Untargeted lipidomic evaluation of hydric and heat stresses on rice growth”**; Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences; 2019; DOI: 10.1016/j.jchromb.2018.11.018.
- Neymeyr, K., Golshan, A., Engel, K., Tauler, R., Sawall, M.; **“Does the signal contribution function attain its extrema on the boundary of the area of feasible solutions?”**; Chemometrics and Intelligent Laboratory Systems; 2020; DOI: 10.1016/j.chemolab.2019.103887.

- Noffz, T., Dentz, M., Kordilla, J.; **“Analogue fracture experiments and analytical modeling of unsaturated percolation dynamics in fracture cascades”**; Vadose Zone Journal; 2019; DOI: 10.2136/vzj2018.08.0155.
- Oliveira, D., Desprat, S., Yin, Q., Rodrigues, T., Naughton, F., Trigo, R.M., Su, Q., Grimalt, J.O., Alonso-Garcia, M., Voelker, A.H.L., Abrantes, F., Sánchez Goñi, M.F.; **“Combination of insolation and ice-sheet forcing drive enhanced humidity in northern subtropical regions during MIS 13”**; Quaternary Science Reviews; 2020; DOI: 10.1016/j.quascirev.2020.106573.
- Oliveira, M.L.S., Izquierdo, M., Querol, X., Lieberman, R.N., Saikia, B.K., Silva, L.F.O.; **“Nanoparticles from construction wastes: A problem to health and the environment”**; Journal of Cleaner Production; 2019; DOI: 10.1016/j.jclepro.2019.02.096.
- Olmos, V., Marro, M., Loza-Alvarez, P., Raldúa, D., Prats, E., Piña, B., Tauler, R., de Juan, A.; **“Assessment of tissue-specific multifactor effects in environmental –omics studies of heterogeneous biological samples: Combining hyperspectral image information and chemometrics”**; Talanta; 2019; DOI: 10.1016/j.talanta.2018.10.029.
- Olsen, Y., Nøjgaard, J.K., Olesen, H.R., Brandt, J., Sigsgaard, T., Pryor, S.C., Ancelet, T., Viana, M.D.M., Querol, X., Hertel, O.; **“Emissions and source allocation of carbonaceous air pollutants from wood stoves in developed countries: A review”**; Atmospheric Pollution Research; 2020; DOI: 10.1016/j.apr.2019.10.007.
- Orive, G., Lertxundi, U., Barceló, D.; **“Do we really need to invoke heroic measures for early SARS-CoV-2 outbreak detection?”**; European Journal of Epidemiology; 2020; DOI: 10.1007/s10654-020-00654-z.
- Orive, G., Lertxundi, U., Barcelo, D.; **“Early SARS-CoV-2 outbreak detection by sewage-based epidemiology”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.139298.
- Ortiz-Santaliestra, M.E., Tauler-Ametller, H., Lacorte, S., Hernández-Matías, A., Real, J., Mateo, R.; **“Accumulation of pollutants in nestlings of an endangered avian scavenger related to territory urbanization and physiological biomarkers”**; Environmental Pollution; 2019; DOI: 10.1016/j.envpol.2019.06.101.
- Ouyang, W., Zhang, Y., Wang, L., Barceló, D., Wang, Y., Lin, C.; **“Seasonal relevance of agricultural diffuse pollutant with microplastic in the bay”**; Journal of Hazardous Materials; 2020; DOI: 10.1016/j.jhazmat.2020.122602.
- Pacitto, A., Amato, F., Moreno, T., Pandolfi, M., Fonseca, A., Mazaheri, M., Stabile, L., Buonanno, G., Querol, X.; **“Effect of ventilation strategies and air purifiers on the children’s exposure to airborne particles and gaseous pollutants in school gyms”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.135673.
- Pacitto, A., Amato, F., Salmatonidis, A., Moreno, T., Alastuey, A., Reche, C., Buonanno, G., Benito, C., Querol, X.; **“Effectiveness of commercial face masks to reduce personal PM exposure”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.09.109.
- Palacios, A., José Ledo, J., Linde, N., Luquot, L., Bellmunt, F., Folch, A., Marcuello, A., Queralt, P., A. Pezard, P., Martínez, L., Del Val, L., Bosch, D., Carrera, J.; **“Time-lapse cross-hole electrical resistivity tomography (CHERT) for monitoring seawater intrusion dynamics in a Mediterranean aquifer”**; Hydrology and Earth System Sciences; 2020; DOI: 10.5194/hess-24-2121-2020.
- Palanques, A., Guillén, J., Puig, P., Grimalt, J.O.; **“Effects of flushing flows on the transport of mercury-polluted particulate matter from the Flix Reservoir to the Ebro Estuary”**; Journal of Environmental Management; 2020; DOI: 10.1016/j.jenvman.2019.110028.
- Palma, P., Fialho, S., Lima, A., Novais, M.H., Costa, M.J., Montemurro, N., Pérez, S., de Alda, M.L.; **“Pharmaceuticals**



- in a Mediterranean Basin: The influence of temporal and hydrological patterns in environmental risk assessment”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.136205.
- Pandolfi, M., Mooibroek, D., Hopke, P., Van Pinxteren, D., Querol, X., Herrmann, H., Alastuey, A., Favez, O., Hüglin, C., Perdrix, E., Riffault, V., Sauvage, S., Van Der Swaluw, E., Tarasova, O., Colette, A.; **“Long-range and local air pollution: What can we learn from chemical speciation of particulate matter at paired sites?”**; Atmospheric Chemistry and Physics; 2020; DOI: 10.5194/acp-20-409-2020.
  - Parisio, F., Vilarrasa, V., Wang, W., Kolditz, O., Nagel, T.; **“The risks of long-term re-injection in supercritical geothermal systems”**; Nature Communications; 2019; DOI: 10.1038/s41467-019-12146-0.
  - Parisio, F., Vilarrasa, V.; **“Sinking CO<sub>2</sub> in Supercritical Reservoirs”**; Geophysical Research Letters; 2020; DOI: 10.1029/2020GL090456.
  - Pastor, A., Hernández-del Amo, E., Giménez-Grau, P., Fillol, M., Pereda, O., Flores, L., Sanpera-Calbet, I., Bravo, A.G., Martín, E.J., Poblador, S., Arroita, M., Rasines-Ladero, R., Ruiz, C., del Campo, R., Abril, M., Reyes, M., Casas-Ruiz, J.P., Fernández, D., de Castro-Català, N., Tornero, I., Palacin-Lizarbe, C., Arce, M.I., Mora-Gómez, J., Gómez-Gener, L., Monroy, S., Freixa, A., Lupon, A., María González-Ferreras, A., Estévez, E., Rodríguez-Lozano, P., Solagaistua, L., Rodríguez-Castillo, T., Aristi, I., Martínez, A., Catalán, N.; **“Early-Career Coordinated Distributed Experiments: Empowerment Through Collaboration”**; Frontiers in Education; 2020; DOI: 10.3389/educ.2020.00013.
  - Patrício Silva, A.L., Prata, J.C., Walker, T.R., Campos, D., Duarte, A.C., Soares, A.M.V.M., Barcelò, D., Rocha-Santos, T.; **“Rethinking and optimising plastic waste management under COVID-19 pandemic: Policy solutions based on re-design and reduction of single-use plastics and personal protective equipment”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.140565.
  - Pay, M.T., Gangoiti, G., Guevara, M., Napelenok, S., Querol, X., Jorba, O., García-Pando, C.P.; **“Ozone source apportionment during peak summer events over southwestern Europe”**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-5467-2019.
  - Paz, A.D.L., Salinas, N., Matamoros, V.; **“Unravelling the role of vegetation in the attenuation of contaminants of emerging concern from wetland systems: Preliminary results from column studies”**; Water Research; 2019; DOI: 10.1016/j.watres.2019.115031.
  - Peña-Angulo, D., Nadal-Romero, E., González-Hidalgo, J.C., Albaladejo, J., Andreu, V., Bagarello, V., Barhi, H., Batalla, R.J., Bernal, S., Bienes, R., Campo, J., Campo-Bescós, M.A., Canatario-Duarte, A., Cantón, Y., Casali, J., Castillo, V., Cerdà, A., Cheggour, A., Cid, P., Cortesi, N., Desir, G., Díaz-Pereira, E., Espigares, T., Estrany, J., Fernández-Raga, M., Ferreira, C.S.S., Ferro, V., Gallart, F., Giménez, R., Gimeno, E., Gómez, J.A., Gómez-Gutiérrez, A., Gómez-Macpherson, H., González-Pelayo, O., Hueso-González, P., Kairis, O., Karatzas, G.P., Klotz, S., Kosmas, C., Lana-Renault, N., Lasanta, T., Latron, J., Lázaro, R., Le Bissonnais, Y., Le Bouteiller, C., Licciardello, F., López-Tarazón, J.A., Lucía, A., Marín, C., Marqués, M.J., Martínez-Fernández, J., Martínez-Mena, M., Martínez-Murillo, J.F., Mateos, L., Mathys, N., Merino-Martín, L., Moreno-de las Heras, M., Moustakas, N., Nicolau, J.M., Novara, A., Pampalona, V., Raclot, D., Rodríguez-Blanco, M.L., Rodrigo-Comino, J., Romero-Díaz, A., Roose, E., Rubio, J.L., Ruiz-Sinoga, J.D., Schnabel, S., Senciales-González, J.M., Simonneaux, V., Solé-Benet, A., Taguas, E.V., Taboada-Castro, M.M., Taboada-Castro, M.T., Todisco, F., Úbeda, X., Varouchakis, E.A., Vericat, D., Wittenberg, L., Zabaleta, A., Zorn, M.; **“Spatial variability of the relationships of runoff and sediment yield with weather types throughout the Mediterranean basin”**; Journal of Hydrology; 2019; DOI: 10.1016/j.jhydrol.2019.01.059.
  - Peña-Angulo, D., Nadal-Romero, E., González-Hidalgo, J.C., Albaladejo, J., Andreu, V., Barhi, H., Bernal, S., Biddoccu, M., Bienes, R., Campo, J., Campo-Bescós, M.A., Canatario-Du-

- arte, A., Cantón, Y., Casali, J., Castillo, V., Cavallo, E., Cerdà, A., Cid, P., Cortesi, N., Desir, G., Díaz-Pereira, E., Espigares, T., Estrany, J., Farguell, J., Fernández-Raga, M., Ferreira, C.S., Ferro, V., Gallart, F., Giménez, R., Gimeno, E., Gómez, J.A., Gómez-Gutiérrez, A., Gómez-Macpherson, H., González-Pelayo, O., Kairis, O., Karatzas, G.P., Keesstra, S., Klotz, S., Kosmas, C., Lana-Renault, N., Lasanta, T., Latron, J., Lázaro, R., Bissonais, Y.L., Bouteiller, C.L., Licciardello, F., López-Tarazón, J.A., Lucía, A., Marín-Moreno, V.M., Marín, C., Marqués, M.J., Martínez-Fernández, J., Martínez-Mena, M., Mateos, L., Mathys, N., Merino-Martín, L., Moreno-de las Heras, M., Moustakas, N., Nicolau, J.M., Pampalone, V., Raclot, D., Rodríguez-Blanco, M.L., Rodrigo-Comino, J., Romero-Díaz, A., Ruiz-Sinoga, J.D., Rubio, J.L., Schnabel, S., Senciales-González, J.M., Solé-Benet, A., Taguas, E.V., Taboada-Castro, M.T., Taboada-Castro, M.M., Todisco, F., Úbeda, X., Varouchakis, E.A., Wittenberg, L., Zabaleta, A., Zorn, M.; **“Relationship of weather types on the seasonal and spatial variability of rainfall, runoff, and sediment yield in the western Mediterranean basin”**; *Atmosphere*; 2020; DOI: 10.3390/atmos11060609.
- Peña-Herrera, J.M., Montemurro, N., Barceló, D., Pérez, S.; **“Analysis of pharmaceuticals in fish using ultrasound extraction and dispersive SPE clean-up on Que Z-Sep/C18 followed by LC-QToF-MS detection”**; *MethodsX*; 2020; DOI: 10.1016/j.mex.2020.101010.
  - Peña-Herrera, J.M., Montemurro, N., Barceló, D., Pérez, S.; **“Combining quantitative and qualitative approaches using Sequential Window Acquisition of All Theoretical Fragment-Ion methodology for the detection of pharmaceuticals and related compounds in river fish extracted using a sample miniaturized method”**; *Journal of Chromatography A*; 2020; DOI: 10.1016/j.chroma.2020.461009.
  - Peña-Herrera, J.M., Montemurro, N., Barceló, D., Pérez, S.; **“Development and validation of an analytical method for determination of pharmaceuticals in fish muscle based on QuEChERS extraction and SWATH acquisition using LC-QTOF-MS/MS system”**; *Talanta*; 2019; DOI: 10.1016/j.talanta.2019.01.119.
  - Pepe, N., Pirovano, G., Balzarini, A., Toppetti, A., Riva, G.M., Amato, F., Lonati, G.; **“Enhanced CAMx source apportionment analysis at an urban receptor in Milan based on source categories and emission regions”**; *Atmospheric Environment*; 2019; DOI: 10.1016/j.aeoa.2019.100020.
  - Perdikaki, M., Manjarrez, R.C., Pouliaris, C., Rossetto, R., Kallioras, A.; **“Free and open-source GIS-integrated hydrogeological analysis tool: an application for coastal aquifer systems”**; *Environmental Earth Sciences*; 2020; DOI: 10.1007/s12665-020-09092-2.
  - Pereira, M.G., Lawlor, A., Bertolero, A., Díez, S., Shore, R.F., Lacorte, S.; **“Temporal and Spatial Distribution of Mercury in Gulls Eggs from the Iberian Peninsula”**; *Archives of Environmental Contamination and Toxicology*; 2019; DOI: 10.1007/s00244-018-0584-0.
  - Pereira, P., Barceló, D., Panagos, P.; **“Soil and water threats in a changing environment”**; *Environmental Research*; 2020; DOI: 10.1016/j.envres.2020.109501.
  - Pérez Pastor, R., Salvador, P., García Alonso, S., Alastuey, A., García dos Santos, S., Querol, X., Artíñano, B.; **“Characterization of organic aerosol at a rural site influenced by olive waste biomass burning”**; *Chemosphere*; 2020; DOI: 10.1016/j.chemosphere.2020.125896.
  - Perez, L.J., Hidalgo, J.J., Dentz, M.; **“Reactive Random Walk Particle Tracking and Its Equivalence With the Advection-Diffusion-Reaction Equation”**; *Water Resources Research*; 2019; DOI: 10.1029/2018WR023560.
  - Perez, L.J., Hidalgo, J.J., Dentz, M.; **“Upscaling of Mixing-Limited Bimolecular Chemical Reactions in Pore-Scale Flow”**; *Water Resources Research*; 2019; DOI: 10.1029/2018WR022730.
  - Perez, L.J., Hidalgo, J.J., Puyguiraud, A., Jiménez-Martínez, J., Dentz, M.; **“Assessment and Prediction of Pore-Scale Reactive Mixing From Experimental Conservative**

- Transport Data**"; Water Resources Research; 2020; DOI: 10.1029/2019WR026452.
- Pérez, Y., Casado, M., Raldúa, D., Prats, E., Piña, B., Tauler, R., Alfonso, I., Puig-Castellví, F.; **"MCR-ALS analysis of 1H NMR spectra by segments to study the zebrafish exposure to acrylamide"**; Analytical and Bioanalytical Chemistry; 2020; DOI: 10.1007/s00216-020-02789-0.
  - Pérez-Albaladejo, E., Lacorte, S., Porte, C.; **"Differential Toxicity of Alkylphenols in JEG-3 Human Placental Cells: Alteration of P450 Aromatase and Cell Lipid Composition"**; Toxicological Sciences; 2019; DOI: 10.1093/toxsci/kfy243.
  - Pérez-Albaladejo, E., Solé, M., Porte, C.; **"Plastics and plastic additives as inducers of oxidative stress"**; Current Opinion in Toxicology; 2020; DOI: 10.1016/j.cotox.2020.07.002.
  - Pérez-Cova, M., Tauler, R., Jaumot, J.; **"Chemometrics in comprehensive two-dimensional liquid chromatography: A study of the data structure and its multilinear behavior"**; Chemometrics and Intelligent Laboratory Systems; 2020; DOI: 10.1016/j.chemolab.2020.104009.
  - Pérez-Coyotl, I., Galar-Martínez, M., García-Medina, S., Gómez-Oliván, L.M., Gasca- Pérez, E., Martínez-Galero, E., Islas-Flores, H., Pérez-Pastén, B.R., Barceló, D., López de Alda, M., Pérez-Solsona, S., Serra-Roig, M.P., Montemurro, N., Peña-Herrera, J.M., Sánchez-Aceves, L.M.; **"Polluted water from an urban reservoir (Madín dam, México) induces toxicity and oxidative stress in Cyprinus carpio embryos"**; Environmental Pollution; 2019; DOI: 10.1016/j.envpol.2019.04.095.
  - Pérez-Crespo, L., Prats-Urbe, A., Tobias, A., Duran-Tauleira, E., Coronado, R., Hervás, A., Guxens, M.; **"Temporal and Geographical Variability of Prevalence and Incidence of Autism Spectrum Disorder Diagnoses in Children in Catalonia, Spain"**; Autism Research; 2019; DOI: 10.1002/aur.2172.
  - Perez-Guaita, D., Quintas, G., Farhane, Z., Tauler, R., Byrne, H.J.; **"Data mining Raman microspectroscopic responses of cells to drugs in vitro using multivariate curve resolution-alternating least squares"**; Talanta; 2020; DOI: 10.1016/j.talanta.2019.120386.
  - Pérez-Martínez, S., Giro-Paloma, J., Maldonado-Alameda, A., Formosa, J., Queralt, I., Chimenos, J.M.; **"Characterisation and partition of valuable metals from WEEE in weathered municipal solid waste incineration bottom ash, with a view to recovering"**; Journal of Cleaner Production; 2019; DOI: 10.1016/j.jclepro.2019.01.313.
  - Pessanha, S., Marguí, E., Carvalho, M.L., Queralt, I.; **"A simple and sustainable portable triaxial energy dispersive X-ray fluorescence method for in situ multielemental analysis of mining water samples"**; Spectrochimica Acta - Part B Atomic Spectroscopy; 2020; DOI: 10.1016/j.sab.2019.105762.
  - Pessanha, S., Queralt, I., Carvalho, M.L., Sampaio, J.M.; **"Determination of gold leaf thickness using X-ray fluorescence spectrometry: Accuracy comparison using analytical methodology and Monte Carlo simulations"**; Applied Radiation and Isotopes; 2019; DOI: 10.1016/j.apradiso.2019.06.014.
  - Pey, J., Larrasoaña, J.C., Pérez, N., Cerro, J.C., Castillo, S., Tobar, M.L., de Vergara, A., Vázquez, I., Reyes, J., Mata, M.P., Mochales, T., Orellana, J.M., Causapé, J.; **"Phenomenology and geographical gradients of atmospheric deposition in southwestern Europe: Results from a multi-site monitoring network"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.140745.
  - Pey, J., Revuelto, J., Moreno, N., Alonso-González, E., Bartolomé, M., Reyes, J., Gascoin, S., López-Moreno, J.I.; **"Snow impurities in the central Pyrenees: From their geochemical and mineralogical composition towards their impacts on snow Albedo"**; Atmosphere; 2020; DOI: 10.3390/atmos11090937.

- Picardo, M., Filatova, D., Nuñez, O., Farré, M.; **“Recent advances in the detection of natural toxins in freshwater environments”**; TrAC - Trends in Analytical Chemistry; 2019; DOI: 10.1016/j.trac.2018.12.017.
- Picardo, M., Nuñez, O., Farré, M.; **“Suspect and Target Screening of Natural Toxins in the Ter River Catchment Area in NE Spain and Prioritisation by Their Toxicity”**; Toxins; 2020; DOI: 10.3390/toxins12120752.
- Picardo, M., Sanchís, J., Nuñez, O., Farré, M.; **“Suspect screening of natural toxins in surface and drinking water by high performance liquid chromatography and high-resolution mass spectrometry”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.127888.
- Pico, Y., Alfarhan, A., Barcelo, D.; **“Nano- and microplastic analysis: Focus on their occurrence in freshwater ecosystems and remediation technologies”**; TrAC - Trends in Analytical Chemistry; 2019; DOI: 10.1016/j.trac.2018.08.022.
- Pico, Y., Alfarhan, A.H., Barcelo, D.; **“How recent innovations in gas chromatography-mass spectrometry have improved pesticide residue determination: An alternative technique to be in your radar”**; TrAC - Trends in Analytical Chemistry; 2020; DOI: 10.1016/j.trac.2019.115720.
- Picó, Y., Alvarez-Ruiz, R., Alfarhan, A.H., El-Sheikh, M.A., Alobaid, S.M., Barceló, D.; **“Uptake and accumulation of emerging contaminants in soil and plant treated with wastewater under real-world environmental conditions in the Al Hayer area (Saudi Arabia)”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.10.224.
- Picó, Y., Alvarez-Ruiz, R., Alfarhan, A.H., El-Sheikh, M.A., Alshahrani, H.O., Barceló, D.; **“Pharmaceuticals, pesticides, personal care products and microplastics contamination assessment of Al-Hassa irrigation network (Saudi Arabia) and its shallow lakes”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.135021.
- Picó, Y., Barceló, D.; **“Analysis and prevention of microplastics pollution in water: Current perspectives and future directions”**; ACS Omega; 2019; DOI: 10.1021/acsomega.9b00222.
- Picó, Y., Barceló, D.; **“Pyrolysis gas chromatography-mass spectrometry in environmental analysis: Focus on organic matter and microplastics”**; TrAC - Trends in Analytical Chemistry; 2020; DOI: 10.1016/j.trac.2020.115964.
- Pico, Y., Belenguer, V., Corcellas, C., Diaz-Cruz, M.S., Eljarrat, E., Farré, M., Gago-Ferrero, P., Huerta, B., Navarro-Ortega, A., Petrovic, M., Rodríguez-Mozaz, S., Sabater, L., Santín, G., Barcelo, D.; **“Contaminants of emerging concern in freshwater fish from four Spanish Rivers”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.12.366.
- Picó, Y., Farré, M., Barceló, D.; **“Quantitative profiling of perfluoroalkyl substances by ultrahigh-performance liquid chromatography and hybrid quadrupole time-of-flight mass spectrometry”**; Analytical and Bioanalytical Chemistry; 2020; DOI: 10.1007/s00216-015-8459-y.
- Piña, B., Bayona, J.M., Christou, A., Fatta-Kassinos, D., Guillon, E., Lambropoulou, D., Michael, C., Polesel, F., Sayen, S.; **“On the contribution of reclaimed wastewater irrigation to the potential exposure of humans to antibiotics, antibiotic resistant bacteria and antibiotic resistance genes - NEREUS COST Action ES1403 position paper”**; Journal of Environmental Chemical Engineering; 2020; DOI: 10.1016/j.jece.2018.01.011.
- Piña, B., Ziv, T., Faria, M., Ben-Lulu, S., Prats, E., Arick, M.A., II, Gomez-Canela, C., Garcia-Reyero, N., Admon, A., Raldua, D.; **“Multiomic analysis of zebrafish models of acute organophosphorus poisoning with different severity”**; Toxicological Sciences; 2019; DOI: 10.1093/toxsci/kfz133.

- Pinedo-Hernández, J., Marrugo-Negrete, J., Díez, S.; **“Removal of Cypermethrin and Chemical Oxygen Demand from Livestock Wastewater by Electrocoagulation”**; Chemical Engineering and Technology; 2020; DOI: 10.1002/ceat.201800742.
- Pinos, J., Latron, J., Nanko, K., Levia, D.F., Llorens, P.; **“Throughfall isotopic composition in relation to drop size at the intra-event scale in a Mediterranean Scots pine stand”**; Hydrology and Earth System Sciences; 2020; DOI: 10.5194/hess-24-4675-2020.
- Pio, C., Alves, C., Nunes, T., Cerqueira, M., Lucarelli, F., Nava, S., Calzolari, G., Gianelle, V., Colombi, C., Amato, F., Karanasiou, A., Querol, X.; **“Source apportionment of PM<sub>2.5</sub> and PM<sub>10</sub> by Ionic and Mass Balance (IMB) in a traffic-influenced urban atmosphere, in Portugal”**; Atmospheric Environment; 2020; DOI: 10.1016/j.atmosenv.2019.117217.
- Pistocchi, A., Dorati, C., Aloe, A., Ginebreda, A., Marcé, R.; **“River pollution by priority chemical substances under the Water Framework Directive: A provisional pan-European assessment”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.12.354; <http://doi.org/10.1016/j.scitotenv.2018.12.354>.
- Planas, C., Palacios, Ó., Ventura, F., Boleda, M.<sup>a</sup>R., Martín, J., Caixach, J.; **“Simultaneous analysis of 11 haloacetic acids by direct injection-liquid chromatography-electrospray ionization-triple quadrupole tandem mass spectrometry and high resolution mass spectrometry: occurrence and evolution in chlorine-treated water”**; Analytical and Bioanalytical Chemistry; 2019; DOI: 10.1007/s00216-019-01864-5.
- Platikanov, S., Baquero, D., González, S., Martín-Alonso, J., Paraira, M., Cortina, J.L., Tauler, R.; **“Chemometric analysis for river water quality assessment at the intake of drinking water treatment plants”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.02.423.
- Portugal, J.; **“Insights into DNA-drug interactions in the era of omics”**; Biopolymers; 2020; DOI: 10.1002/bip.23385.
- Postigo, C., Emiliano, P., Valero, F.; **“High-throughput and reliable determination of 13 haloacetic acids and dalapon in water and evaluation of control strategies”**; Environmental Science: Water Research and Technology; 2020; DOI: 10.1039/d0ew00296h.
- Postigo, C., Zonja, B.; **“Iodinated disinfection byproducts: Formation and concerns”**; Current Opinion in Environmental Science and Health; 2019; DOI: 10.1016/j.coesh.2018.08.006.
- Puyguiraud, A., Gouze, P., Dentz, M.; **“Is There a Representative Elementary Volume for Anomalous Dispersion?”**; Transport in Porous Media; 2020; DOI: 10.1007/s11242-019-01366-z.
- Puyguiraud, A., Gouze, P., Dentz, M.; **“Stochastic Dynamics of Lagrangian Pore-Scale Velocities in Three-Dimensional Porous Media”**; Water Resources Research; 2019; DOI: 10.1029/2018WR023702.
- Puyguiraud, A., Gouze, P., Dentz, M.; **“Upscaling of Anomalous Pore-Scale Dispersion”**; Transport in Porous Media; 2019; DOI: 10.1007/s11242-019-01273-3.
- Puyguiraud, A., Perez, L.J., Hidalgo, J.J., Dentz, M.; **“Effective dispersion coefficients for the upscaling of pore-scale mixing and reaction”**; Advances in Water Resources; 2020; DOI: 10.1016/j.advwatres.2020.103782.
- Querol, X., Pérez, N., Reche, C., Ealo, M., Ripoll, A., Tur, J., Pandolfi, M., Pey, J., Salvador, P., Moreno, T., Alastuey, A.; **“African dust and air quality over Spain: Is it only dust that matters?”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.05.349.

- Querol, X., Tobías, A., Pérez, N., Karanasiou, A., Amato, F., Stafoggia, M., Pérez García-Pando, C., Ginoux, P., Forastiere, F., Gumy, S., Mudu, P., Alastuey, A.; **“Monitoring the impact of desert dust outbreaks for air quality for health studies”**; Environment International; 2019; DOI: 10.1016/j.envint.2019.05.061.
- Quintana, J., Hernández, A., Ventura, F., Devesa, R., Boleda, M.R.; **“Identification of 3-(trifluoromethyl)phenol as the malodorous compound in a pollution incident in the water supply in Catalonia (N.E. Spain)”**; Environmental Science and Pollution Research; 2019; DOI: 10.1007/s11356-019-04635-y.
- Rai, P., Furger, M., Slowik, J.G., Canonaco, F., Fröhlich, R., Hüglin, C., Minguillón, M.C., Petterson, K., Baltensperger, U., Prévôt, A.S.H.; **“Source apportionment of highly time-resolved elements during a firework episode from a rural freeway site in Switzerland”**; Atmospheric Chemistry and Physics; 2020; DOI: 10.5194/acp-20-1657-2020.
- Raldúa, D., Casado, M., Prats, E., Faria, M., Puig-Castellví, F., Pérez, Y., Alfonso, I., Hsu, C.-Y., Arick II, M.A., Garcia-Reyero, N., Ziv, T., Ben-Lulu, S., Admon, A., Piña, B.; **“Targeting redox metabolism: the perfect storm induced by acrylamide poisoning in the brain”**; Scientific Reports; 2020; DOI: 10.1038/s41598-019-57142-y.
- Ramírez, O., Sánchez de la Campa, A.M., Amato, F., Moreno, T., Silva, L.F., de la Rosa, J.D.; **“Physicochemical characterization and sources of the thoracic fraction of road dust in a Latin American megacity”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.10.214.
- Reche, C., Viana, M., Querol, X., Corcellas, C., Barceló, D., Eljarrat, E.; **“Particle-phase concentrations and sources of legacy and novel flame retardants in outdoor and indoor environments across Spain”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.08.408.
- Reche, C., Viana, M., van Drooge, B.L., Fernández, F.J., Escribano, M., Castaño-Vinyals, G., Nieuwenhuijsen, M., Adami, P.E., Bermon, S.; **“Athletes’ exposure to air pollution during World Athletics Relays: A pilot study”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.137161.
- Renau-Pruñonosa, A., García-Menéndez, O., Ibáñez, M., Vázquez-Suñé, E., Boix, C., Ballesteros, B.B., García, M.H., Morell, I., Hernández, F.; **“Identification of aquifer recharge sources as the origin of emerging contaminants in intensive agricultural areas. La plana de Castellon, Spain”**; Water (Switzerland); 2020; DOI: 10.3390/w12030731.
- Reyes Contreras, C., López, D., Leiva, A.M., Domínguez, C., Bayona, J.M., Vidal, G.; **“Removal of organic micropollutants in wastewater treated by activated sludge and constructed wetlands: A comparative study”**; Water (Switzerland); 2019; DOI: 10.3390/w11122515.
- Reyes-Contreras, C., Neumann, P., Barriga, F., Venegas, M., Domínguez, C., Bayona, J.M., Vidal, G.; **“Organic micropollutants in sewage sludge: influence of thermal and ultrasound hydrolysis processes prior to anaerobic stabilization”**; Environmental Technology (United Kingdom); 2020; DOI: 10.1080/09593330.2018.1534892.
- Ribalta, C., Koivisto, A.J., López-Lilao, A., Estupiñá, S., Minguillón, M.C., Monfort, E., Viana, M.; **“Testing the performance of one and two box models as tools for risk assessment of particle exposure during packing of inorganic fertilizer”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.09.379.
- Ribalta, C., Koivisto, A.J., Salmatoniadis, A., López-Lilao, A., Monfort, E., Viana, M.; **“Modeling of high nanoparticle exposure in an indoor industrial scenario with a one-box model”**; International Journal of Environmental Research and Public Health; 2019; DOI: 10.3390/ijerph16101695.
- Ribalta, C., López-Lilao, A., Estupiñá, S., Fonseca, A.S., Tobías, A., García-Cobos, A., Minguillón, M.C., Monfort, E., Viana, M.; **“Health risk assessment from exposure to particles during packing in working environments”**; Sci-

- ence of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.03.347.
- Ribalta, C., Viana, M., López-Lilao, A., Estupiñá, S., Minguillón, M.C., Mendoza, J., Díaz, J., Dahmann, D., Monfort, E.; **“On the Relationship between Exposure to Particles and Dustiness during Handling of Powders in Industrial Settings”**; Annals of Work Exposures and Health; 2019; DOI: 10.1093/annweh/wxy092.
  - Rigual-Hernández, A.S., Pilskaln, C.H., Cortina, A., Abrantes, F., Armand, L.K.; **“Diatom species fluxes in the seasonally ice-covered Antarctic Zone: New data from offshore Prydz Bay and comparison with other regions from the eastern Antarctic and western Pacific sectors of the Southern Ocean”**; Deep-Sea Research Part II: Topical Studies in Oceanography; 2019; DOI: 10.1016/j.dsr2.2018.06.005.
  - Rigual-Hernández, A.S., Trull, T.W., Flores, J.A., Nodder, S.D., Eriksen, R., Davies, D.M., Hallegraeff, G.M., Sierro, F.J., Patil, S.M., Cortina, A., Ballegeer, A.M., Northcote, L.C., Abrantes, F., Rufino, M.M.; **“Full annual monitoring of Subantarctic *Emiliania huxleyi* populations reveals highly calcified morphotypes in high-CO<sub>2</sub> winter conditions”**; Scientific Reports; 2020; DOI: 10.1038/s41598-020-59375-8.
  - Rinaldi, A.P., Rutqvist, J., Vilarrasa, V.; **“Deep fracture zone reactivation during CO<sub>2</sub> storage at in Salah (Algeria) – A review of recent modeling studies”**; Springer Series in Geomechanics and Geoengineering; 2019; DOI: 10.1007/978-3-319-99670-7\_49.
  - Ripoll, A., Viana, M., Padrosa, M., Querol, X., Minutolo, A., Hou, K.M., Barcelo-Ordinas, J.M., Garcia-Vidal, J.; **“Testing the performance of sensors for ozone pollution monitoring in a citizen science approach”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.09.257.
  - Rivas, I., Beddows, D.C.S., Amato, F., Green, D.C., Järvi, L., Hueglin, C., Reche, C., Timonen, H., Fuller, G.W., Niemi, J.V., Pérez, N., Aurela, M., Hopke, P.K., Alastuey, A., Kulmala, M., Harrison, R.M., Querol, X., Kelly, F.J.; **“Source apportionment of particle number size distribution in urban background and traffic stations in four European cities”**; Environment international; 2020; DOI: 10.1016/j.envint.2019.105345.
  - Rivetti, C., Climent, E., Gómez-Canela, C., Barata, C.; **“Characterization of neurotransmitter profiles in *Daphnia magna* juveniles exposed to environmental concentrations of antidepressants and anxiolytic and antihypertensive drugs using liquid chromatography–tandem mass spectrometry”**; Analytical and Bioanalytical Chemistry; 2019; DOI: 10.1007/s00216-019-01968-y.
  - Rodríguez, S., Calzolari, G., Chiari, M., Nava, S., García, M.I., López-Solano, J., Marrero, C., López-Darias, J., Cuevas, E., Alonso-Pérez, S., Prats, N., Amato, F., Lucarelli, F., Querol, X.; **“Rapid changes of dust geochemistry in the Saharan Air Layer linked to sources and meteorology”**; Atmospheric Environment; 2020; DOI: 10.1016/j.atmosenv.2019.117186.
  - Rodríguez-Chueca, J., Varella della Giustina, S., Rocha, J., Fernandes, T., Pablos, C., Encinas, Á., Barceló, D., Rodríguez-Mozaz, S., Manaia, C.M., Marugán, J.; **“Assessment of full-scale tertiary wastewater treatment by UV-C based-AOPs: Removal or persistence of antibiotics and antibiotic resistance genes?”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.10.223.
  - Rodríguez-Mozaz, S., Vaz-Moreira, I., Varela Della Giustina, S., Llorca, M., Barceló, D., Schubert, S., Berendonk, T.U., Michael-Kordatou, I., Fatta-Kassinos, D., Martinez, J.L., Elpers, C., Henriques, I., Jaeger, T., Schwartz, T., Paulshus, E., O’Sullivan, K., Pärnänen, K.M.M., Virta, M., Do, T.T., Walsh, F., Manaia, C.M.; **“Antibiotic residues in final effluents of European wastewater treatment plants and their impact on the aquatic environment”**; Environment International; 2020; DOI: 10.1016/j.envint.2020.105733.
  - Rojo, M., Álvarez-Muñoz, D., Dománico, A., Foti, R., Rodríguez-Mozaz, S., Barceló, D., Carriquiriborde, P.; **“Human pharmaceuticals in three major fish species from the**

- Uruguay River (South America) with different feeding habits**"; Environmental Pollution; 2019; DOI: 10.1016/j.envpol.2019.05.099.
- Rosell, M., Palau, J., Mortan, S.H., Caminal, G., Soler, A., Shouakar-Stash, O., Marco-Urrea, E.; **"Dual carbon - chlorine isotope fractionation during dichloroelimination of 1,1,2-trichloroethane by an enrichment culture containing Dehalogenimonas sp"**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.08.071.
  - Royé, D., Codesido, R., Tobías, A., Taracido, M.; **"Heat wave intensity and daily mortality in four of the largest cities of Spain"**; Environmental Research; 2020; DOI: 10.1016/j.envres.2019.109027.
  - Royé, D., Íñiguez, C., Tobías, A.; **"Comparison of temperature–mortality associations using observed weather station and reanalysis data in 52 Spanish cities"**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109237.
  - Rügner, H., Schwientek, M., Milačić, R., Zuliani, T., Vidmar, J., Paunović, M., Laschou, S., Kalogianni, E., Skoulikidis, N.T., Diamantini, E., Majone, B., Bellin, A., Chiogna, G., Martinez, E., López de Alda, M., Díaz-Cruz, M.S., Grathwohl, P.; **"Particle bound pollutants in rivers: Results from suspended sediment sampling in Globaqua River Basins"**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.08.027.
  - Rusiñol, M., Martínez-Puchol, S., Forés, E., Itarte, M., Girones, R., Bofill-Mas, S.; **"Concentration methods for the quantification of coronavirus and other potentially pandemic enveloped virus from wastewater"**; Current Opinion in Environmental Science and Health; 2020; DOI: 10.1016/j.coesh.2020.08.002.
  - Sabater-Liesa, L., Montemurro, N., Font, C., Ginebreda, A., González-Trujillo, J.D., Mingorance, N., Pérez, S., Barceló, D.; **"The response patterns of stream biofilms to urban sewage change with exposure time and dilution"**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.04.178.
  - Saco, P.M., Rodríguez, J.F., Moreno-de las Heras, M., Keestra, S., Azadi, S., Sandi, S., Baartman, J., Rodrigo-Comino, J., Rossi, M.J.; **"Using hydrological connectivity to detect transitions and degradation thresholds: Applications to dryland systems"**; Catena; 2020; DOI: 10.1016/j.catena.2019.104354.
  - Saez, M., Tobias, A., Barceló, M.A.; **"Effects of long-term exposure to air pollutants on the spatial spread of COVID-19 in Catalonia, Spain"**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.110177.
  - Saez, M., Tobias, A., Varga, D., Barceló, M.A.; **"Effectiveness of the measures to flatten the epidemic curve of COVID-19. The case of Spain"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.138761.
  - Sala, B., Giménez, J., de Stephanis, R., Barceló, D., Eljarrat, E.; **"First determination of high levels of organophosphorus flame retardants and plasticizers in dolphins from Southern European waters"**; Environmental Research; 2019; DOI: 10.1016/j.envres.2019.02.027.
  - Salazar-Camacho, C., Salas-Moreno, M., Paternina-Urbe, R., Marrugo-Negrete, J., Díez, S.; **"Dataset of concentrations of mercury and methylmercury in fish from a tropical river impacted by gold mining in the Colombian Pacific"**; Data in Brief; 2020; DOI: 10.1016/j.dib.2020.106513.
  - Saldarriaga-Hernandez, S., Hernandez-Vargas, G., Iqbal, H.M.N., Barceló, D., Parra-Saldívar, R.; **"Bioremediation potential of Sargassum sp. biomass to tackle pollution in coastal ecosystems: Circular economy approach"**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.136978.
  - Salmatonidis, A., Ribalta, C., Sanfélix, V., Bezantakos, S., Biskos, G., Vulpoi, A., Simion, S., Monfort, E., Viana, M.;



- “Workplace Exposure to Nanoparticles during Thermal Spraying of Ceramic Coatings”**; Annals of Work Exposures and Health; 2019; DOI: 10.1093/annweh/wxy094.
- Salmatonidis, A., Sanf elix, V., Carpio, P., Pawłowski, L., Viana, M., Monfort, E.; **“Effectiveness of nanoparticle exposure mitigation measures in industrial settings”**; International Journal of Hygiene and Environmental Health; 2019; DOI: 10.1016/j.ijheh.2019.06.009.
  - Salmatonidis, A., Viana, M., Biskos, G., Bezantakos, S.; **“Particle size distributions and hygroscopic restructuring of ultrafine particles emitted during thermal spraying”**; Aerosol Science and Technology; 2020; DOI: 10.1080/02786826.2020.1784837.
  - Salvadó, J.A., Grimalt, J.O., L pez, J.F., Palanques, A., Canals, M.; **“Influence of deep water formation by open-sea convection on the transport of low hydrophobicity organic pollutants in the NW Mediterranean Sea”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.07.458.
  - Salvador, P., Molero, F., Fernandez, A.J., Tob as, A., Pandolfi, M., G mez-Moreno, F.J., Barreiro, M., P rez, N., Marco, I.M., Revuelta, M.A., Querol, X., Art fano, B.; **“Synergistic effect of the occurrence of African dust outbreaks on atmospheric pollutant levels in the Madrid metropolitan area”**; Atmospheric Research; 2019; DOI: 10.1016/j.atmosres.2019.04.025.
  - Salvador, P., Pandolfi, M., Tob as, A., G mez-Moreno, F.J., Molero, F., Barreiro, M., P rez, N., Revuelta, M.A., Marco, I.M., Querol, X., Art fano, B.; **“Impact of mixing layer height variations on air pollutant concentrations and health in a European urban area: Madrid (Spain), a case study”**; Environmental Science and Pollution Research; 2020; DOI: 10.1007/s11356-020-10146-y.
  - Sanchis, A., Bosch-Orea, C., Salvador, J.-P., Marco, M.-P., Farr , M.; **“Development and validation of a multianalyte immunoassay for the quantification of environmental pollutants in seawater samples from the Catalonia coastal area”**; Analytical and Bioanalytical Chemistry; 2019; DOI: 10.1007/s00216-019-01971-3.
  - Sanch s, J., Freixa, A., L pez-Doval, J.C., Santos, L.H.M.L.M., Sabater, S., Barcel , D., Abad, E., Farr , M.; **“Bioconcentration and bioaccumulation of C60 fullerene and C60 epoxide in biofilms and freshwater snails (Radix sp.)”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2019.108715.
  - Sanch s, J., Jim nez-Lamana, J., Abad, E., Szpunar, J., Farr , M.; **“Occurrence of Cerium-, Titanium-, and Silver-Bearing Nanoparticles in the Bes s and Ebro Rivers”**; Environmental Science and Technology; 2020; DOI: 10.1021/acs.est.9b05996.
  - Santos, L.H.M.L.M., Freixa, A., Insa, S., Acuf a, V., Sanch s, J., Farr , M., Sabater, S., Barcel , D., Rodr guez-Mozaz, S.; **“Impact of fullerenes in the bioaccumulation and biotransformation of venlafaxine, diuron and triclosan in river biofilms”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2018.11.036.
  - Santos, L.H.M.L.M., Maulvault, A.L., Ja n-Gil, A., Marques, A., Barcel , D., Rodr guez-Mozaz, S.; **“Insights on the metabolization of the antidepressant venlafaxine by meagre (Argyrosomus regius) using a combined target and suspect screening approach”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.140226.
  - Scheiber, L., Cend n, D.I., Iverach, C.P., Hankin, S.I., V zquez-Su e, E., Kelly, B.F.J.; **“Hydrochemical apportioning of irrigation groundwater sources in an alluvial aquifer”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.140506.
  - Schirinzi, G.F., K ck-Schulmeyer, M., Cabrera, M., Gonz lez-Fern ndez, D., Hanke, G., Farr , M., Barcel , D.; **“Riverine anthropogenic litter load to the Mediterranean Sea near the metropolitan area of Barcelona, Spain”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.136807.

- Schirinzi, G.F., Llorca, M., Seró, R., Moyano, E., Barceló, D., Abad, E., Farré, M.; **“Trace analysis of polystyrene microplastics in natural waters”**; Chemosphere; 2019; DOI: 10.1016/j.chemosphere.2019.07.052.
- Schirinzi, G.F., Pedà, C., Battaglia, P., Laface, F., Galli, M., Baini, M., Consoli, P., Scotti, G., Esposito, V., Faggio, C., Farré, M., Barceló, D., Fossi, M.C., Andaloro, F., Romeo, T.; **“A new digestion approach for the extraction of microplastics from gastrointestinal tracts (GITs) of the common dolphin fish (Coryphaena hippurus) from the western Mediterranean Sea”**; Journal of Hazardous Materials; 2020; DOI: 10.1016/j.jhazmat.2020.122794.
- Sera, F., Armstrong, B., Tobias, A., Vicedo-Cabrera, A.M., Åström, C., Bell, M.L., Chen, B.-Y., De Sousa Zanotti Stagliorio Coelho, M., Correa, P.M., Cruz, J.C., Dang, T.N., Hurtado-Diaz, M., Do Van, D., Forsberg, B., Guo, Y.L., Guo, Y., Hashizume, M., Honda, Y., Iñiguez, C., Jaakkola, J.J.K., Kan, H., Kim, H., Lavigne, E., Michelozzi, P., Ortega, N.V., Osorio, S., Pascal, M., Ragetti, M.S., Rytí, N.R.I., Saldiva, P.H.N., Schwartz, J., Scortichini, M., Seposo, X., Tong, S., Zanobetti, A., Gasparrini, A.; **“How urban characteristics affect vulnerability to heat and cold: A multi-country analysis”**; International Journal of Epidemiology; 2019; DOI: 10.1093/ije/dyz008.
- Sera, F., Hashizume, M., Honda, Y., Lavigne, E., Schwartz, J., Zanobetti, A., Tobias, A., Iñiguez, C., Vicedo-Cabrera, A.M., Blangiardo, M., Armstrong, B., Gasparrini, A.; **“Air conditioning and heat-related mortality: A multi-country longitudinal study”**; Epidemiology; 2020; DOI: 10.1097/EDE.0000000000001241.
- Serra-Compte, A., Álvarez-Muñoz, D., Solé, M., Cáceres, N., Barceló, D., Rodríguez-Mozaz, S.; **“Comprehensive study of sulfamethoxazole effects in marine mussels: Bioconcentration, enzymatic activities and metabolomics”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2019.03.021.
- Serra-Compte, A., Sánchez-Melsió, Á., Álvarez-Muñoz, D., Barceló, D., Balcázar, J.L., Rodríguez-Mozaz, S.; **“Exposure to a Subinhibitory Sulfonamide Concentration Promotes the Spread of Antibiotic Resistance in Marine Blue Mussels (Mytilus edulis)”**; Environmental Science and Technology Letters; 2019; DOI: 10.1021/acs.estlett.9b00112.
- Serrano, N., Castilla, Ò., Ariño, C., Diaz-Cruz, M.S., Díaz-Cruz, J.M.; **“Commercial screen-printed electrodes based on carbon nanomaterials for a fast and cost-effective voltammetric determination of paracetamol, ibuprofen and caffeine in water samples”**; Sensors (Switzerland); 2019; DOI: 10.3390/s19184039.
- Serrano-Juan, A., Criollo, R., Vázquez-Suñè, E., Alcaraz, M., Ayora, C., Velasco, V., Scheiber, L.; **“Customization, extension and reuse of outdated hydrogeological software”**; Geologica Acta; 2020; DOI: 10.1344/GeologicaActa2020.18.9.
- Shahsavani, A., Tobías, A., Querol, X., Stafoggia, M., Abdolshahnejad, M., Mayvaneh, F., Guo, Y., Hadei, M., Saeed Hashemi, S., Khosravi, A., Namvar, Z., Yarahmadi, M., Emam, B.; **“Short-term effects of particulate matter during desert and non-desert dust days on mortality in Iran”**; Environment International; 2020; DOI: 10.1016/j.envint.2019.105299.
- Shangguan, Y., Zhuang, X., Li, J., Li, B., Querol, X., Liu, B., Moreno, N., Yuan, W., Yang, G., Pan, L.; **“Geological controls on mineralogy and geochemistry of the permian and jurassic coals in the Shanbei coalfield, Shaanxi province, North China”**; Minerals; 2020; DOI: 10.3390/min10020138.
- Sheikholeslami, M.N., Gómez-Canela, C., Barron, L.P., Barata, C., Vosough, M., Tauler, R.; **“Untargeted metabolomics changes on Gammarus pulex induced by propranolol, triclosan, and nimesulide pharmaceutical drugs”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2020.127479.
- Sherman, T., Hyman, J., Dentz, M., Bolster, D.; **“Characterizing the Influence of Fracture Density on Network Scale Transport”**; Journal of Geophysical Research: Solid Earth; 2020; DOI: 10.1029/2019JB018547.

- Silva, C.O., Novais, S.C., Alves, L.M.F., Soares, A.M.V.M., Barata, C., Lemos, M.F.L.; **“Linking cholinesterase inhibition with behavioural changes in the sea snail *Gibbula umbilicalis*: Effects of the organophosphate pesticide chlorpyrifos”**; Comparative Biochemistry and Physiology Part - C: Toxicology and Pharmacology; 2019; DOI: 10.1016/j.cbpc.2019.108570.
- Silva, C.O., Novais, S.C., Soares, A.M.V.M., Barata, C., Lemos, M.F.L.; **“Impacts of the Invasive Seaweed *Asparagopsis armata* Exudate on Energetic Metabolism of Rock Pool Invertebrates”**; Toxins; 2020; DOI: 10.3390/toxins13010015.
- Simão, F.C.P., Martínez-Jerónimo, F., Blasco, V., Moreno, F., Porta, J.M., Pestana, J.L.T., Soares, A.M.V.M., Raldúa, D., Barata, C.; **“Using a new high-throughput video-tracking platform to assess behavioural changes in *Daphnia magna* exposed to neuro-active drugs”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.01.187.
- Škrbić, B., Đurišić-Mladenović, N., Živančev, J., Tadić, Đ.; **“Seasonal occurrence and cancer risk assessment of polycyclic aromatic hydrocarbons in street dust from the Novi Sad city, Serbia”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.07.442.
- Smeti, E., von Schiller, D., Karaouzas, I., Laschou, S., Vardakas, L., Sabater, S., Tornés, E., Monllor-Alcaraz, L.S., Guillem-Argiles, N., Martinez, E., Barceló, D., López de Alda, M., Kalogianni, E., Elosegi, A., Skoulikidis, N.; **“Multiple stressor effects on biodiversity and ecosystem functioning in a Mediterranean temporary river”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.08.105.
- Soldevila, N., Dr., Vinyoles, E., Tobias, A., Banegas, J.R., De La Sierra, A., Gorostidi, M., Segura, J., De La Cruz, J.J., Muñoz-Pérez, M.A., Querol, X., Ruilope, L.M.; **“How do ultrafine particles in urban air affect ambulatory blood pressure?”**; Journal of Hypertension; 2020; DOI: 10.1097/HJH.0000000000002343.
- Solé-Bundó, M., Garfí, M., Matamoros, V., Ferrer, I.; **“Co-digestion of microalgae and primary sludge: Effect on biogas production and microcontaminants removal”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.01.011.
- Soler de la Vega, A.C., Molins-Delgado, D., Barceló, D., Díaz-Cruz, M.S.; **“Nanosized titanium dioxide UV filter increases mixture toxicity when combined with parabens”**; Ecotoxicology and Environmental Safety; 2019; DOI: 10.1016/j.ecoenv.2019.109565.
- Soler de la Vega, A.C., Cruz-Acalde, A., Sans, C., Barata, C., Díaz Cruz, S. **“Nano-TiO<sub>2</sub> phototoxicity in fresh and seawater: *Daphnia magna* and *Artemia* sp as proxies”**. WATER, 2020. 13(1) 55. DOI: 10.3390/w13010055
- Soler, J.M., Steefel, C.I., Gimmi, T., Leupin, O.X., Cloet, V.; **“Modeling the Ionic Strength Effect on Diffusion in Clay. the DR-A Experiment at Mont Terri”**; ACS Earth and Space Chemistry; 2019; DOI: 10.1021/acsearthspacechem.8b00192.
- Soler, P., Solé, M., Bañón, R., García-Galea, E., Durfort, M., Matamoros, V., Bayona, J.M., Vinyoles, D.; **“Effects of industrial pollution on the reproductive biology of *Squalius laietanus* (Actinopterygii, Cyprinidae) in a Mediterranean stream (NE Iberian Peninsula)”**; Fish Physiology and Biochemistry; 2020; DOI: 10.1007/s10695-019-00713-7.
- Song, C., Zhang, C., Zhang, S., Lin, H., Kim, Y., Ramakrishnan, M., Du, Y., Zhang, Y., Zheng, H., Barceló, D.; **“Thermochemical liquefaction of agricultural and forestry wastes into biofuels and chemicals from circular economy perspectives”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.141972.
- Song, F., Rodriguez-Dono, A., Olivella, S., Zhong, Z.; **“Analysis and modelling of longitudinal deformation profiles of tunnels excavated in strain-softening time-dependent rock masses”**; Computers and Geotechnics; 2020; DOI: 10.1016/j.compgeo.2020.103643.

- Sörengård, M., Ahrens, L., Alygizakis, N., Jensen, P.E., Gago-Ferrero, P.; **“Non-target and suspect screening strategies for electrodialectic soil remediation evaluation: Assessing changes in the molecular fingerprints and per- And polyfluoroalkyl substances (PFASs)”**; Journal of Environmental Chemical Engineering; 2020; DOI: 10.1016/j.jece.2020.104437.
- Soria, M., Gutiérrez-Cánovas, C., Bonada, N., Acosta, R., Rodríguez-Lozano, P., Fortuño, P., Burgazzi, G., Vinyoles, D., Gallart, F., Latron, J., Llorens, P., Prat, N., Cid, N.; **“Natural disturbances can produce misleading bioassessment results: Identifying metrics to detect anthropogenic impacts in intermittent rivers”**; Journal of Applied Ecology; 2020; DOI: 10.1111/1365-2664.13538.
- Soriano, M.A., Pocoví, A., Gil, H., Perez, A., Luzón, A., Marazuela, M.Á.; **“Some evolutionary patterns of palaeokarst developed in Pleistocene deposits (Ebro Basin, NE Spain): Improving geohazard awareness in present-day karst”**; Geological Journal; 2019; DOI: 10.1002/gj.3181.
- Spilling, K., Camarena-Gómez, M.-T., Lipsewers, T., Martínez-Varela, A., Díaz-Rosas, F., Eronen-Rasimus, E., Silva, N., von Dassow, P., Montecino, V.; **“Impacts of reduced inorganic N:P ratio on three distinct plankton communities in the Humboldt upwelling system”**; Marine Biology; 2019; DOI: 10.1007/s00227-019-3561-x.
- Sprenger, M., Allen, S.T.; **“What Ecohydrologic Separation Is and Where We Can Go With It”**; Water Resources Research; 2020; DOI: 10.1029/2020WR027238.
- Sprenger, M., Llorens, P., Cayuela, C., Gallart, F., Latron, J.; **“Mechanisms of consistently disjunct soil water pools over (pore) space and time”**; Hydrology and Earth System Sciences; 2019; DOI: 10.5194/hess-23-2751-2019.
- Sprenger, M., Stumpp, C., Weiler, M., Aeschbach, W., Allen, S.T., Benettin, P., Dubbert, M., Hartmann, A., Hrachowitz, M., Kirchner, J.W., McDonnell, J.J., Orłowski, N., Penna, D., Pfahl, S., Rinderer, M., Rodriguez, N., Schmidt, M., Werner, C.; **“The Demographics of Water: A Review of Water Ages in the Critical Zone”**; Reviews of Geophysics; 2019; DOI: 10.1029/2018RG000633.
- Sprovieri, M., Eljarrat, E., Bianchi, F.; **“Editorial: Environment and Health”**; Frontiers in Earth Science; 2020; DOI: 10.3389/feart.2020.598611.
- Sula, E., Aliko, V., Barceló, D., Faggio, C.; **“Combined effects of moderate hypoxia, pesticides and PCBs upon crucian carp fish, Carassius carassius, from a freshwater lake- in situ ecophysiological approach”**; Aquatic Toxicology; 2020; DOI: 10.1016/j.aquatox.2020.105644.
- Sunyer, A., González-Navarro, A., Serra-Roig, M.P., Serrano, N., Díaz-Cruz, M.S., Díaz-Cruz, J.M.; **“First application of carbon-based screen-printed electrodes for the voltammetric determination of the organic UV filters oxybenzone and octocrylene”**; Talanta; 2019; DOI: 10.1016/j.talanta.2018.12.092.
- Taati, A., Salehi, M.H., Mohammadi, J., Mohajer, R., Díez, S.; **“Pollution assessment and spatial distribution of trace elements in soils of Arak industrial area, Iran: Implications for human health”**; Environmental research; 2020; DOI: 10.1016/j.envres.2020.109577.
- Tadić, Đ., Gramblicka, M., Mistrik, R., Flores, C., Piña, B., Bayona, J.M.; **“Elucidating biotransformation pathways of ofloxacin in lettuce (Lactuca sativa L)”**; Environmental Pollution; 2020; DOI: 10.1016/j.envpol.2020.114002.
- Tadić, Đ., Matamoros, V., Bayona, J.M.; **“Simultaneous determination of multiclass antibiotics and their metabolites in four types of field-grown vegetables”**; Analytical and Bioanalytical Chemistry; 2019; DOI: 10.1007/s00216-019-01895-y.
- Tartakovsky, D.M., Dentz, M.; **“Diffusion in Porous Media: Phenomena and Mechanisms”**; Transport in Porous Media; 2019; DOI: 10.1007/s11242-019-01262-6.

- Tebé, C., Valls, J., Satorra, P., Tobías, A.; **“COVID19-world: A shiny application to perform comprehensive country-specific data visualization for SARS-CoV-2 epidemic”**; BMC Medical Research Methodology; 2020; DOI: 10.1186/s12874-020-01121-9.
- Titos, G., Ealo, M., Román, R., Cazorla, A., Sola, Y., Dubovik, O., Alastuey, A., Pandolfi, M.; **“Retrieval of aerosol properties from ceilometer and photometer measurements: Long-term evaluation with in situ data and statistical analysis at Montsec (southern Pyrenees)”**; Atmospheric Measurement Techniques; 2019; DOI: 10.5194/amt-12-3255-2019.
- Tobías, A., Carnerero, C., Reche, C., Massagué, J., Via, M., Minguillón, M.C., Alastuey, A., Querol, X.; **“Changes in air quality during the lockdown in Barcelona (Spain) one month into the SARS-CoV-2 epidemic”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.138540.
- Tobias, A., Karanasiou, A., Amato, F., Roqué, M., Querol, X.; **“Health effects of desert dust and sand storms: A systematic review and meta-analysis protocol”**; BMJ Open; 2019; DOI: 10.1136/bmjopen-2019-029876; <http://doi.org/10.1136/bmjopen-2019-029876>.
- Tobías, A., Molina, T.; **“Is temperature reducing the transmission of COVID-19?”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109553.
- Tobías, A., Stafoggia, M.; **“Modeling desert dust exposures in epidemiologic short-term health effects studies”**; Epidemiology; 2020; DOI: 10.1097/EDE.0000000000001255.
- Tobías, A.; **“Evaluation of the lockdowns for the SARS-CoV-2 epidemic in Italy and Spain after one month follow up”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.138539.
- Torner, J., Cacho, I., Moreno, A., Sierro, F.J., Martrat, B., Rodriguez-Lazaro, J., Frigola, J., Arnau, P., Belmonte, Á., Hellstrom, J., Cheng, H., Edwards, R.L., Stoll, H.; **“Ocean-atmosphere interconnections from the last interglacial to the early glacial: An integration of marine and cave records in the Iberian region”**; Quaternary Science Reviews; 2019; DOI: 10.1016/j.quascirev.2019.106037.
- Torrent, L., Marguí, E., Queralt, I., Hidalgo, M., Iglesias, M.; **“Interaction of silver nanoparticles with mediterranean agricultural soils: Lab-controlled adsorption and desorption studies”**; Journal of Environmental Sciences (China); 2019; DOI: 10.1016/j.jes.2019.03.018.
- Torres-Garcia, D., Faria, M., Soares, A.M.V.M., Barata, C., Montes, R., Baeza, M., Ponsá, S., Sala, M., Cañedo-Argüelles, M.; **“Lethal and sub-lethal effects of nanosized titanium dioxide particles on Hydropsyche exocellata Dufour, 1841”**; Aquatic Insects; 2020; DOI: 10.1080/01650424.2020.1712422.
- Trechera, P., Moreno, T., Córdoba, P., Moreno, N., Zhuang, X., Li, B., Li, J., Shangguan, Y., Kandler, K., Dominguez, A.O., Kelly, F., Querol, X.; **“Mineralogy, geochemistry and toxicity of size-segregated respirable deposited dust in underground coal mines”**; Journal of Hazardous Materials; 2020; DOI: 10.1016/j.jhazmat.2020.122935.
- Trias-Llimós, S., Alustiza, A., Prats, C., Tobias, A., Riffe, T.; **“The need for detailed COVID-19 data in Spain”**; The Lancet Public Health; 2020; DOI: 10.1016/S2468-2667(20)30234-6.
- Triguero-Mas, M., Martínez-Solanas, E., Barrera-Gómez, J., Agis, D., Pérez, N., Reche, C., Alastuey, A., Querol, X., Pérez, K., Basagaña, X.; **“Public Transport Strikes and Their Relationships with Air Pollution, Mortality, and Hospital Admissions”**; American Journal of Epidemiology; 2020; DOI: 10.1093/aje/kwz202.
- Trudeau, V.L., Thomson, P., Zhang, W.S., Reynaud, S., Navarro-Martin, L., Langlois, V.S.; **“Agrochemicals disrupt multiple endocrine axes in amphibians”**; Molecular and Cellular Endocrinology; 2020; DOI: 10.1016/j.mce.2020.110861.

- Tu, W., Martínez, R., Navarro-Martin, L., Kostyniuk, D.J., Hum, C., Huang, J., Deng, M., Jin, Y., Chan, H.M., Mennigen, J.A.; **“Bioconcentration and Metabolic Effects of Emerging PFOS Alternatives in Developing Zebrafish”**; Environmental Science and Technology; 2019; DOI: 10.1021/acs.est.9b03820.
- Tucça, F., Luarte, T., Nimptsch, J., Woelfl, S., Pozo, K., Casas, G., Dachs, J., Barra, R., Chiang, G., Galbán-Malagón, C.; **“Sources and diffusive air–water exchange of polycyclic aromatic hydrocarbons in an oligotrophic North–Patagonian lake”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.139838.
- Turull, M., Fontàs, C., Díez, S.; **“Conventional and novel techniques for the determination of Hg uptake by lettuce in amended agricultural peri-urban soils”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2019.02.244.
- Turull, M., Fontàs, C., Díez, S.; **“Diffusive gradient in thin films with open and restricted gels for predicting mercury uptake by plants”**; Environmental Chemistry Letters; 2019; DOI: 10.1007/s10311-019-00864-2.
- Valdivielso, S., Vázquez-Suñé, E., Custodio, E.; **“Origin and variability of oxygen and hydrogen isotopic composition of precipitation in the Central Andes: A review”**; Journal of Hydrology; 2020; DOI: 10.1016/j.jhydrol.2020.124899.
- Valhondo, C., Carrera, J., Martínez-Landa, L., Wang, J., Amalfitano, S., Levantesi, C., Diaz-Cruz, M.S.; **“Reactive barriers for renaturalization of reclaimed water during soil aquifer treatment”**; Water (Switzerland); 2020; DOI: 10.3390/W12041012.
- Valhondo, C., Carrera, J.; **“Water as a finite resource: From historical accomplishments to emerging challenges and artificial recharge”**; Sustainable Water and Wastewater Processing; 2019; DOI: 10.1016/B978-0-12-816170-8.00001-6.
- Valhondo, C., Martínez-Landa, L., Carrera, J., Díaz-Cruz, S.M., Amalfitano, S., Levantesi, C.; **“Six artificial recharge pilot replicates to gain insight into water quality enhancement processes”**; Chemosphere; 2020; DOI: 10.1016/j.chemosphere.2019.124826.
- van Drooge, B.L., Marco, E., Perez, N., Grimalt, J.O.; **“Influence of electronic cigarette vaping on the composition of indoor organic pollutants, particles, and exhaled breath of bystanders”**; Environmental Science and Pollution Research; 2019; DOI: 10.1007/s11356-018-3975-x.
- van Drooge, B.L., Rivas, I., Querol, X., Sunyer, J., Grimalt, J.O.; **“Organic air quality markers of indoor and outdoor pm2.5 aerosols in primary schools from Barcelona”**; International Journal of Environmental Research and Public Health; 2020; DOI: 10.3390/ijerph17103685.
- van Meerveld, H.J.I., Sauquet, E., Gallart, F., Sefton, C., Seibert, J., Bishop, K.; **“Aqua temporaria incognita”**; Hydrological Processes; 2020; DOI: 10.1002/hyp.13979.
- Vassalle, L., Sunyer-Caldú, A., Díaz-Cruz, M.S., Arashiro, L.T., Ferrer, I., Garfí, M., García-Galán, M.J.; **“Behavior of uv filters, uv blockers and pharmaceuticals in high rate algal ponds treating urban wastewater”**; Water (Switzerland); 2020; DOI: 10.3390/w12102658.
- Vassalle, L., Sunyer-Caldú, A., Uggetti, E., Díez-Montero, R., Díaz-Cruz, M.S., García, J., García-Galán, M.J.; **“Bioremediation of emerging micropollutants in irrigation water. The alternative of microalgae-based treatments”**; Journal of Environmental Management; 2020; DOI: 10.1016/j.jenvman.2020.111081.
- Velázquez-Gómez, M., Hurtado-Fernández, E., Lacorte, S.; **“Differential occurrence, profiles and uptake of dust contaminants in the Barcelona urban area”**; Science of the Total Environment; 2019; DOI: 10.1016/j.scitotenv.2018.08.058.
- Velázquez-Gómez, M., Lacorte, S.; **“Nasal lavages as a tool for monitoring exposure to organic pollutants”**; Environmental Research; 2019; DOI: 10.1016/j.envres.2019.108726.

- Velázquez-Gómez, M., Lacorte, S.; **“Organic pollutants in indoor dust from Ecuadorian Amazonia areas affected by oil extractivism”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109499.
- Viana, M., de Leeuw, F., Bartonova, A., Castell, N., Ozturk, E., González Ortiz, A.; **“Air quality mitigation in European cities: Status and challenges ahead”**; Environment International; 2020; DOI: 10.1016/j.envint.2020.105907.
- Viana, M., Rizza, V., Tobías, A., Carr, E., Corbett, J., Sofiev, M., Karanasiou, A., Buonanno, G., Fann, N.; **“Estimated health impacts from maritime transport in the Mediterranean region and benefits from the use of cleaner fuels”**; Environment International; 2020; DOI: 10.1016/j.envint.2020.105670.
- Vicedo-Cabrera, A.M., Sera, F., Liu, C., Armstrong, B., Milojevic, A., Guo, Y., Tong, S., Lavigne, E., Kyselý, J., Urban, A., Orru, H., Indermitte, E., Pascal, M., Huber, V., Schneider, A., Katsouyanni, K., Samoli, E., Stafoggia, M., Scortichini, M., Hashizume, M., Honda, Y., Ng CFS, Hurtado-Díaz, M., Cruz, J., Silva, S., Madureira, J., Scovronick, N., Garland, R.M., Kim, H., Tobías, A., Íñiguez, C., Forsberg, B., Åström, C., Ragettli, M.S., Röösli, M., Guo, Y.L., Chen, B.Y., Zanobetti, A., Schwartz, J., Bell, M., Kan, H., Gasparrini, A.; 2020; **“Short term association between ozone and mortality: global two stage time series study in 406 locations in 20 countries”**; British Medical Journal; <https://doi.org/10.1136/bmj.m108>.
- Vicente, E.D., Vicente, A., Nunes, T., Calvo, A., del Blanco-Alegre, C., Oduber, F., Castro, A., Fraile, R., Amato, F., Alves, C.; **“Household Dust: Loadings and PM10-Bound plasticizers and polycyclic aromatic hydrocarbons”**; Atmosphere; 2019; DOI: 10.3390/ATMOS10120785.
- Vicente, E.D., Vicente, A.M., Evtugina, M., Oduber, F.I., Amato, F., Querol, X., Alves, C.; **“Impact of wood combustion on indoor air quality”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2019.135769.
- Vidal, L.G., Vannuci-Silva, M., Alonso, M.B., Feo, M.L., Corcellas, C., Bisi, T.L., Flach, L., Fragoso, A.B.L., Lima Silva, F.J., Carvalho, V.L., de Meirelles, A.C.O., Domit, C., Barbosa, L.A., Cremer, M.J., Azevedo, A.F., Torres, J.P.M., Malm, O., Lailson-Brito, J., Eljarrat, E.; **“Pyrethroid insecticides along the Southwestern Atlantic coast: Guiana dolphin (*Sotalia guianensis*) as a bioindicator”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.138749.
- Vidal-Macua, J.J., Nicolau, J.M., Vicente, E., Moreno-de las Heras, M.; **“Assessing vegetation recovery in reclaimed opencast mines of the Teruel coalfield (Spain) using Landsat time series and boosted regression trees”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.137250.
- Vila-Costa, M., Cerro-Gálvez, E., Martínez-Varela, A., Casas, G., Dachs, J.; **“Anthropogenic dissolved organic carbon and marine microbiomes”**; ISME Journal; 2020; DOI: 10.1038/s41396-020-0712-5.
- Vila-Costa, M., Sebastián, M., Pizarro, M., Cerro-Gálvez, E., Lundin, D., Gasol, J.M., Dachs, J.; **“Microbial consumption of organophosphate esters in seawater under phosphorus limited conditions”**; Scientific Reports; 2019; DOI: 10.1038/s41598-018-36635-2.
- Vilarrasa, V., Carrera, J., Olivella, S., Rutqvist, J., Laloui, L.; **“Induced seismicity in geologic carbon storage”**; Solid Earth; 2019; DOI: 10.5194/se-10-871-2019.
- Vilarrasa, V., Makhnenko, R.Y., Parisio, F.; **“Geomechanics and Fluid Flow in Geothermal Systems”**; Geofluids; 2020; DOI: 10.1155/2020/6085738.
- Vilarrasa, V., Poo, M., De Simone, S., Carrera, J.; **“Dissolved CO<sub>2</sub> injection to eliminate the risk of CO<sub>2</sub> leakage in geologic carbon storage”**; Environmental Science and Engineering; 2019; DOI: 10.1007/978-981-13-2227-3\_11.

- Vlachou, A., Tobler, A., Lamkaddam, H., Canonaco, F., Daelenbach, K.R., Jaffrezo, J.-L., Minguillón, M.C., Maasikmets, M., Teinemaa, E., Baltensperger, U., El Haddad, I., Preávôt, A.S.H.; **“Development of a versatile source apportionment analysis based on positive matrix factorization: a case study of the seasonal variation of organic aerosol sources in Estonia”**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-7279-2019.
- Wang, Y., Peris, A., Rifat, M.R., Ahmed, S.I., Aich, N., Nguyen, L.V., Urík, J., Eljarrat, E., Vrana, B., Jantunen, L.M., Diamond, M.L.; **“Measuring exposure of e-waste dismantlers in Dhaka Bangladesh to organophosphate esters and halogenated flame retardants using silicone wristbands and T-shirts”**; Science of the Total Environment; 2020; DOI: 10.1016/j.scitotenv.2020.137480.
- Wijaya, L., Alyemeni, M., Ahmad, P., Alfarhan, A., Barcelo, D., El-Sheikh, M.A., Pico, Y.; **“Ecotoxicological effects of ibuprofen on plant growth of Vigna unguiculata L.”**; Plants; 2020; DOI: 10.3390/plants9111473.
- Wu, P., Li, J., Zhuang, X., Querol, X., Moreno, N., Li, B., Ge, D., Zhao, S., Ma, X., Cordoba, P., Shangguan, Y.; **“Mineralogical and environmental geochemistry of coal combustion products from Shenhua and Yihua Power Plants in Xinjiang Autonomous Region, Northwest China”**; Minerals; 2019; DOI: 10.3390/min9080496.
- Yao, C., Zhuang, X., Querol, X., Li, J., Li, B., Moreno, N., Zhang, F.; **“New data and evidence on the mineralogy and geochemistry of wulantuga high-ge coal deposit of shengli coalfield, Inner Mongolia, China”**; Minerals; 2020; DOI: 10.3390/min10010017.
- You, R., Domínguez, C., Matamoros, V., Bayona, J.M., Díez, S.; **“Chemical characterization and phytotoxicity assessment of peri-urban soils using seed germination and root elongation tests”**; Environmental Science and Pollution Research; 2019; DOI: 10.1007/s11356-019-06574-0.
- You, R., Margenat, A., Lanzas, C.S., Cañameras, N., Carazo, N., Navarro-Martín, L., Matamoros, V., Bayona, J.M., Díez, S.; **“Dose effect of Zn and Cu in sludge-amended soils on vegetable uptake of trace elements, antibiotics, and antibiotic resistance genes: Human health implications”**; Environmental Research; 2020; DOI: 10.1016/j.envres.2020.109879.
- Yu, J., Yang, D., Kim, Y., Hashizume, M., Gasparrini, A., Armstrong, B., Honda, Y., Tobias, A., Sera, F., Vicedo-Cabrera, A.M., Kim, H., Íñiguez, C., Lavigne, E., Ragettli, M.S., Scovronick, N., Acquavota, F., Chen, B., Guo, Y.L., De Sousa Zanotti, S.C.M., Saldiva, P., Zanobetti, A., Schwartz, J., Bell, M.L., Diaz, M., De La Cruz Valencia, C., Holobâc, I., Fratiani, S., Chung, Y.; **“Seasonality of suicide: A multi-country multi-community observational study”**; Epidemiology and Psychiatric Sciences; 2020; DOI: 10.1017/S2045796020000748.
- Yu, X., Sui, Q., Lyu, S., Zhao, W., Liu, J., Cai, Z., Yu, G., Barcelo, D.; **“Municipal solid waste landfills: An underestimated source of pharmaceutical and personal care products in the water environment”**; Environmental Science and Technology; 2020; DOI: 10.1021/acs.est.0c00565.
- Yus-Díez, J., Udina, M., Soler, M.R., Lathon, M., Nilsson, E., Bech, J., Sun, J.; **“Nocturnal boundary layer turbulence regimes analysis during the BLLAST campaign”**; Atmospheric Chemistry and Physics; 2019; DOI: 10.5194/acp-19-9495-2019.
- Zareidarmiyani, A., Salarirad, H., Vilarrasa, V., Kim, K.-I., Lee, J., Min, K.-B.; **“Comparison of numerical codes for coupled thermo-hydro-mechanical simulations of fractured media”**; Journal of Rock Mechanics and Geotechnical Engineering; 2020; DOI: 10.1016/j.jrmge.2019.12.016.
- Zawisza, B., Sitko, R., Queralt, I., Margui, E., Gagor, A.; **“Cellulose mini-membranes modified with TiO<sub>2</sub> for separation, determination, and speciation of arsenates and selenites”**; Microchimica Acta; 2020; DOI: 10.1007/s00604-020-04387-4.



- Zeka, A., Tobias, A., Leonardi, G., Bianchi, F., Lauriola, P., Crabbe, H., Vardoulakis, S., Guo, Y., Honda, Y., Gasparri, A., Hashizume, M., Vicedo, A.M., Knudsen, L.E., Sera, F., Ashworth, M., Scientific Committee of the International Network of Public Health and Environmental Tracking; **“Responding to COVID-19 requires strong epidemiological evidence of environmental and societal determining factors”**; The Lancet Planetary Health; 2020; DOI: 10.1016/S2542-5196(20)30169-8.
- Zhang, X., Zhang, Z., Tauler, R.; **“Evaluation of the extension of rotation ambiguity associated to multivariate curve resolution solutions by the application of the MCR-BANDS method”**; Talanta; 2019; DOI: 10.1016/j.talanta.2019.05.002.
- Zheng, W., Wang, S., Sprenger, M., Liu, B., Cao, J.; **“Response of soil water movement and groundwater recharge to extreme precipitation in a headwater catchment in the North China Plain”**; Journal of Hydrology; 2019; DOI: 10.1016/j.jhydrol.2019.06.071.
- Zhou, B., Wang, J., Zhang, H., Shi, H., Fei, Y., Huang, S., Tong, Y., Wen, D., Luo, Y., Barceló, D.; **“Microplastics in agricultural soils on the coastal plain of Hangzhou Bay, east China: Multiple sources other than plastic mulching film”**; Journal of Hazardous Materials; 2020; DOI: 10.1016/j.jhazmat.2019.121814.
- Zhu, M., Wang, S., Kong, X., Zheng, W., Feng, W., Zhang, X., Yuan, R., Song, X., Sprenger, M.; **“Interaction of surface water and groundwater influenced by groundwater over-extraction, waste water discharge and water transfer in Xiong’an New Area, China”**; Water (Switzerland); 2019; DOI: 10.3390/w11030539.

## Other publications

- Blázquez-Pallí, N., Shouakar-Stash, O., Palau, J., Trueba-Santiso, A., Varias, J., Bosch, M., Soler, A., Vicent, T., Marco-Urrea, E., Rosell, M.; 2019; **“Use of C-Cl CSIA to elucidate origin and fate of DCM in complex contaminated field sites”**; E3S Web of Conferences; DOI: 10.1051/e3sconf/20199812003; <http://doi.org/10.1051/e3sconf/20199812003>.
- Cama, J., Gutiérrez-León, J., Palau, J., Fernández-Rojo, L., Soler, J.M.; 2019; **“Column experiments to study the interaction between acid mine drainage and rock and Portland cement”**; E3S Web of Conferences; DOI: 10.1051/e3sconf/20199809003; <http://doi.org/10.1051/e3sconf/20199809003>.
- Cojocariu, C., Postigo, C., Richardson, S.D., Barcelo, D., Silcock, P.; 2019; **“Discovery of emerging disinfection by-products in water using gas chromatography coupled with orbitrap-based mass spectrometry”**; Brazilian Journal of Analytical Chemistry; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85072633469&partnerID=40&md5=1a0f60d8bd31f25d340d570d1bc41a63>.
- de Juan, A., Tauler, R.; 2019; **“Data Fusion by Multivariate Curve Resolution”**; Data Handling in Science and Technology; DOI: 10.1016/B978-0-444-63984-4.00008-9; <http://doi.org/10.1016/B978-0-444-63984-4.00008-9>.
- Figueras, A., de Andrés, A., Allende, A., Prieto, C., Sánchez, G., Grimalt, J.O.; 2020; **“Lo que conviene saber sobre SARS-CoV-2 en playas, piscinas, ríos, lagos, embalses, balnearios, pozas y aguas residuales”**; The conversation; Link: <https://theconversation.com/lo-que-conviene-saber-sobre-sars-cov-2-en-playas-piscinas-rios-lagos-embalses-balnearios-pozas-y-aguas-residuales-138228>.
- García-Lledó, A., Rodríguez-Martín, S., Tobías, A., Martín, J.A., Ansedo Cascudo, J.C., de Abajo, F.J.; 2019; **“Olas de calor, temperatura ambiente y riesgo de infarto de miocardio: un estudio ecológico en la Comunidad de Madrid”**; Revista Española de Cardiología; DOI: 10.1016/j.recesp.2019.05.009; <https://doi.org/10.1016/j.recesp.2019.05.009>.
- Gylling, B., Lanyon, B., Soler, J., Nilsson, K., Löfgren, M., Trincherro, P., Selroos, J.-O., Poteri, A., Koskinen, L.; 2019; **“Increasing the realism in solute transport modeling”**; International High-Level Radioactive Waste Management; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85067098528&partnerID=40&md5=e5915fa0bb745801b18fbee7e4b467c>.
- López-García, E., Postigo, C., Barceló, D., López de Alda, M.; 2019; **“The value of wastewater-based epidemiology in the estimation of alcohol use”**; Current Opinion in Environmental Science & Health; <https://doi.org/10.1016/j.coesh.2019.03.003>.
- Marazuela, M.A., Vázquez-Suñé, E., Custodio, E., Ayora, C., Palma, T., García-Gil, A.; 2020; **“La importancia de incorporar la hidrodinámica de la interfaz salina en la gestión de los recursos minerales y ecosistemas de los salares”**; Boletín Geológico y Minero.

- Margari, V., Skinner, L. C., Menviel, ., Capron, E., Rhodes, R.H., Mleneck-Vautravers, M.J., Ezat, M.M., Martrat, B., Grimalt, J.O., Hodell, D.A., Tzedakis, P.C.; 2020; **“Fast and slow components of interstadial warming in the North Atlantic during the last glacial”**; Communications Earth and Environment 1, 6; <https://doi.org/10.1038/s43247-020-0006-x>.
- Navarro-Martín, L., Martyniuk, C.J., Mennigen, J.A.; 2020; **“Comparative epigenetics in animal physiology: An emerging frontier”**; Comparative Biochemistry and Physiology - Part D: Genomics and Proteomics; DOI: 10.1016/j.cbd.2020.100745; <https://doi.org/10.1016/j.cbd.2020.100745>.
- Piña, B., Portugal, J., Barata, C.; 2019; **“Ecotoxicology, Genetic”**; Reference Module in Biomedical Sciences, 11344.
- Pocurull, E., Marcé, R.M., González-Mariño, I., Rodil, R., Montes, R., Estévez-Danta, A.,
- Andreu, V., Bijlsma, L., Celma, A., Hernández, F., López de Alda, M., López-García, E., Picó, Y., Postigo, C., Rico, A., Valcárcel, Y., Quintana, J.B.; 2020; **“El análisis de aguas residuales con fines epidemiológicos: presente y futuro en España”**; Revista Española de Drogodependencias; Link: <https://pesquisa.bvsalud.org/portal/resource/pt/ibc-ET5-1621>.
- Prats, R.M., van Drooge, B., Fernández, P., Grimalt, J.O.; 2020; **“Transport difús de contaminants orgànics persistents en zones d’alta muntanya i impacte sobre la salut dels ecosistemes”**; Revista de la Societat Catalana de Química. 19, pp. 72 – 82; DOI: 10.2436/20.2003.01.118; <http://doi.org/10.2436/20.2003.01.118>.
- Querol, X., Ramasco, J.J., Viana, M., Moreno, T.; 2020; **“Movilidad urbana y calidad del aire. Urban mobility and air quality”**; Boletín del Grupo Español del Carbón, 58, 9-14; ISSN 2172 – 6094; Link: <http://www.gecarbon.org/boletingec58.asp>.
- Soria, M.; Gutiérrez-Cánovas, C.; Bonada, N.; Acosta, R.; Rodríguez-Lozano, P.; Fortuño, P.; Burgazzi, G.; Vinyoles, D.; Gallart, F.; Latron, J.; Llorens, P.; Prat, N.; Cid, N.; 2019; **“Natural disturbances can produce misleading bioassessment results: Identifying metrics to detect anthropogenic impacts in intermittent rivers”**; Journal of Applied Ecology, 00: 1– 13; DOI: 10.1111/1365-2664.13538; <https://doi.org/10.1111/1365-2664.13538>.
- Tobías, A., Casals, M., Peña, J., Tebé, C.; 2019; **“FIFA World Cup and climate change: Correlation is not causation”**; RICYDE: Revista Internacional de Ciencias del Deporte; DOI: 10.5232/ricyde2019.057ed; <http://doi.org/10.5232/ricyde2019.057ed>.
- Valdivielso, S., Vázquez-Suñé, E., Custodio, E.; 2020; **“Isotopía ambiental de las precipitaciones y de las aguas superficiales y subterráneas en los Andes Centrales: revisión”** Boletín Geológico y Minero.

## Edited books

- Abdelazim M. Negm, Abdelkader Bouderbala, Haroun Chenchouni and D. Barceló;
- **“Water Resources in Algeria-Part I”**; 2020; Springer Verlag; Handbook of Environmental Chemistry, vol. 97 Págs. Inicial-final: 1-336; ISBN 978-3-030-57895-4; DOI: 10.1007/978-3-030-57895-4; <https://doi.org/10.1007/978-3-030-57895-4>.
- Abdelazim M. Negm, Abdelkader Bouderbala, Haroun Chenchouni and D. Barceló;
- **“Water Resources in Algeria-Part II”**; 2020; Springer Verlag; Handbook of Environmental Chemistry, vol. 98 Págs. Inicial-final: 1-334; ISBN 978-3-030-57887-9; DOI: 10.1007/978-3-030-57887-9; <https://doi.org/10.1007/978-3-030-57887-9>.
- Álvarez-Muñoz, D., Farré, M.; 2020; **“Environmental Metabolomics”**; Applications in Field and Laboratory Studies to Understand from Exposome to Metabolome; ISBN: 978-0-12-818196-6; <https://doi.org/10.1016/C2018-0-03345-9>.
- Barceló, D.; 2019; **“Series Editors’ Preface”**; Comprehensive Analytical Chemistry, 86; Elsevier; ISBN: 978-044464266-0; DOI: 10.1016/S0166-526X(19)30083-2; [http://doi.org/10.1016/S0166-526X\(19\)30083-2](http://doi.org/10.1016/S0166-526X(19)30083-2).
- Barcelo, D.; 2019; **“Series editor’s preface”**; Comprehensive Analytical Chemistry, 85; Elsevier; ISBN: 978-044464264-6; DOI: 10.1016/S0166-526X(19)30069-8; [http://doi.org/10.1016/S0166-526X\(19\)30069-8](http://doi.org/10.1016/S0166-526X(19)30069-8).
- Barcelo, D.; 2019; **“Series editor’s preface”**; Comprehensive Analytical Chemistry, 84; Elsevier; ISBN: 978-012819831-5; DOI: 10.1016/S0166-526X(19)30056-X; [http://doi.org/10.1016/S0166-526X\(19\)30056-X](http://doi.org/10.1016/S0166-526X(19)30056-X).
- Barceló, D., Kostianoy, A.G.; 2019; **“Series preface”**; Handbook of Environmental Chemistry, 77; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85061099490&partnerID=40&md5=073690eba11a3fa07ed00cd7be0bf0e5>.
- Barcelo, D.; 2019; **“Series Editor’s Preface”**; Comprehensive Analytical Chemistry, 83; Elsevier; ISSN: 0166526X; DOI: 10.1016/S0166-526X(19)30009-1; [http://doi.org/10.1016/S0166-526X\(19\)30009-1](http://doi.org/10.1016/S0166-526X(19)30009-1).
- Barceló, D., Kostianoy, A.G.; 2019; **“Series preface”**; Handbook of Environmental Chemistry, 73; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85059468668&partnerID=40&md5=b554ef4b9dc61dc316594bc6d597b2ea>.

- Barceló, D., Kostianoy, A.G.; 2019; **“Series Preface”**; Handbook of Environmental Chemistry, 71; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85059011494&partnerID=40&md5=ce1a3b1b1bfa529d1c4a1f5eb7c0d0624>.
- Barceló, D., Kostianoy, A.G.; 2019; **“Series preface”**; Handbook of Environmental Chemistry, 79; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85055635590&partnerID=40&md5=1677f308ab500d24f394540602b07e77>.
- Barceló, D., Kostianoy, A.G.; 2019; **“Series preface”**; Handbook of Environmental Chemistry, 72; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85055630192&partnerID=40&md5=1784575db4472821c6a61a692b13ff8a>.
- Barceló, D., Kostianoy, A.G.; 2019; **“Series Preface”**; Handbook of Environmental Chemistry, 66; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85049361790&partnerID=40&md5=8ed88cc6e77ce896eb6fcef357ff79a2>.
- Barceló, D., Kostianoy, A.G.; 2019; **“Series preface”**; Handbook of Environmental Chemistry, 68; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85047866324&partnerID=40&md5=ffe72a390bc2a6e74f2a8891ace43ca1>.
- Barceló, D.; 2020; **“Series editor’s preface”**; Comprehensive Analytical Chemistry, 91; Elsevier; ISBN: 978-0-323-85371-2; DOI: 10.1016/S0166-526X(20)30103-3; [https://doi.org/10.1016/S0166-526X\(20\)30103-3](https://doi.org/10.1016/S0166-526X(20)30103-3).
- Barceló, D., Kostianoy, A.G.; 2020; **“Series Preface”**; Handbook of Environmental Chemistry, 91; Springer Science and Business Media Deutschland GmbH; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093970041&partnerID=40&md5=92ed2dc6e8158bce0b78142d8e02d918>.
- Barceló, D., Kostianoy, A.G.; 2020; **“Series Preface”**; Handbook of Environmental Chemistry, 95; Springer Science and Business Media Deutschland GmbH; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093923604&partnerID=40&md5=4d30cd7976bd5535928fcb26da193762>.
- Barceló, D., Kostianoy, A.G.; 2020; **“Series preface”**; Handbook of Environmental Chemistry, 105; Springer Science and Business Media Deutschland GmbH; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093827930&partnerID=40&md5=e8a774e7160dd56abb98e7f9f6dac129>.
- Barceló, D., Kostianoy, A.G.; 2020; **“Series preface”**; Handbook of Environmental Chemistry, 96; Springer Science and Business Media Deutschland GmbH; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093114618&partnerID=40&md5=5240b933b4cba5082170c0dec2d552d8>.
- Barceló, D., Kostianoy, A.G.; 2020; **“Series preface”**; Handbook of Environmental Chemistry, 104; Springer Science and Business Media Deutschland GmbH; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091698117&partnerID=40&md5=a1379dc2b7a79ae754ca42626ad376ed>.
- Barceló, D., Kostianoy, A.G.; 2020; **“Series preface”**; Handbook of Environmental Chemistry, 101; Springer Science and Business Media Deutschland GmbH; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091418666&partnerID=40&md5=2fd004e651fe1f763c8efa5e641ded93>.
- Barceló, D.; 2020; **“Series editor preface”**; Comprehensive Analytical Chemistry, 90; Elsevier; ISBN: 978-0-444-64341-4; DOI: 10.1016/S0166-526X(20)30074-X; [https://doi.org/10.1016/S0166-526X\(20\)30074-X](https://doi.org/10.1016/S0166-526X(20)30074-X).

- Barceló, D., Kostianoy, A.G.; 2020; **“Series preface”**; Handbook of Environmental Chemistry, 94; Springer; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090570062&partnerID=40&md5=29d573d0daec2f44a2cfad64d4f00117>.
- Barceló, D., Kostianoy, A.G.; 2020; **“Series preface”**; Handbook of Environmental Chemistry, 86; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85067503798&partnerID=40&md5=c9e6de005ee9b0de579005ae5a7237b6>.
- Barceló, D., Kostianoy, A.G.; 2020; **“Series preface”**; Handbook of Environmental Chemistry, 88; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85066929509&partnerID=40&md5=958abe7a8101fd5bb0afc05db4c86cb>.
- Barceló, D., Kostianoy, A.G.; 2020; **“Series preface”**; Handbook of Environmental Chemistry, 87; Springer Verlag; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85065398221&partnerID=40&md5=6a96d1ae0456e9fd99ea1b8536d1a382>.
- Brown, S., Tauler, R., Walczak, B.; 2020; **“Comprehensive Chemometrics”**; Chemical and Biochemical Data Analysis, Reference Work, Second Edition; Elsevier; ISBN: 978-0-444-64166-3; Link: <https://www.sciencedirect.com/reference-work/9780444641663/comprehensive-chemometrics>.
- Eljarrat, E.; 2020; **“Preface”**; Handbook of Environmental Chemistry, 92; Springer; ISSN: 1867979X; Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090005227&partnerID=40&md5=-030f93abccae8a41b29be7cd9828b549>.
- Eljarrat, E.; 2020; **“Pyrethroid Insecticides”**; The Handbook of Environmental Chemistry; Springer, Cham; ISBN: 978-3-030-55695-2; <https://doi.org/10.1007/978-3-030-55696-9>.

## Book chapters

- Aznar-Alemany, O., Eljarrat, E.; 2019; **“Halogenated and organophosphorus flame retardants”**; Advances in the Determination of Xenobiotics in Foods; Bentham Science Publishers; ISBN: 9789811421570; DOI: 10.2174/97898114215871190101; Link: <https://www.eurekaselect.com/175240/volume/1>.
- Aznar-Alemany, O., Eljarrat, E.; 2020; **“Chapter 5: Food contamination on flame retardants”**; Emerging Halogenated Flame Retardants in the Environment; Comprehensive Analytical Chemistry; Elsevier; ISBN: 978-0-444-64339-1; DOI:10.1016/bs.coac.2019.11.005; <https://doi.org/10.1016/bs.coac.2019.11.005>.
- Aznar-Alemany, O., Eljarrat, E.; 2020; **“Chapter 1: Introduction to pyrethroid insecticides: Chemical structure, properties, mode of action and use”**; Pyrethroid insecticides (E.Eljarrat ed.); The Handbook of Environmental Chemistry; Springer-Verlag Berlin Heidelberg; ISBN: 978-3-030-55695-2; DOI:10.1007/698\_2019\_435; [https://doi.org/10.1007/698\\_2019\\_435](https://doi.org/10.1007/698_2019_435).
- Aznar-Alemany, O., Eljarrat, E.; 2020; **“Chapter 8: Bioavailability and bioaccumulation of pyrethroid insecticides in wildlife and humans”**; Pyrethroid insecticides (E.Eljarrat ed.); The Handbook of Environmental Chemistry; Springer-Verlag Berlin Heidelberg; ISBN: 978-3-030-55695-2; DOI:10.1007/698\_2020\_466; [https://doi.org/10.1007/698\\_2020\\_466](https://doi.org/10.1007/698_2020_466).
- Aznar-Alemany, Ò., Eljarrat, E.; 2020; **“Bioavailability and Bioaccumulation of Pyrethroid Insecticides in Wildlife and Humans”**; Handbook of Environmental Chemistry; Springer, Cham; ISBN: 978-3-030-55695-2; DOI: 10.1007/698\_2020\_466; [https://doi.org/10.1007/698\\_2020\\_466](https://doi.org/10.1007/698_2020_466).
- Aznar-Alemany, Ò., Eljarrat, E.; 2020; **“Introduction to Pyrethroid Insecticides: Chemical Structures, Properties, Mode of Action and Use”**; Handbook of Environmental Chemistry; Springer, Cham; ISBN: 978-3-030-55695-2; DOI: 10.1007/698\_2019\_435; [https://doi.org/10.1007/698\\_2019\\_435](https://doi.org/10.1007/698_2019_435).
- Aznar-Alemany, Ò., Eljarrat, E.; 2020; **“Food contamination on flame retardants”**; Comprehensive Analytical Chemistry; Elsevier; ISBN: 978-0-444-64339-1; DOI: 10.1016/bs.coac.2019.11.005; <https://doi.org/10.1016/bs.coac.2019.11.005>.
- Benavides, J., Soret, A., Guevara, M., Pando, C.P.-G., Snyder, M., Amato, F., Querol, X., Jorba, O.; 2020; **“Potential Impact of a Low Emission Zone on Street-Level Air Quality in Barcelona City Using CALIOPE-Urban Model”**; Springer Proceedings in Complexity; Springer, Cham; ISBN: 978-3-030-22054-9; DOI: 10.1007/978-3-030-22055-6\_27; [https://doi.org/10.1007/978-3-030-22055-6\\_27](https://doi.org/10.1007/978-3-030-22055-6_27).
- Cama J., Soler J.M. and Ayora C.; 2019; **“Acid water-rock-cement interaction and multicomponent reactive transport modeling”**; Reviews in Mineralogy and Geochemistry, 85; <https://doi.org/10.2138/rmg.2018.85.15>.

- de Juan, A., Tauler, R.; 2019; **“Data fusion by Multivariate Curve Resolution”**; Data Fusion Methodology and Applications; Elsevier; ISBN: 978-0-444-63984-4; DOI: 10.1016/B978-0-444-63984-4.00008-9; <https://doi.org/10.1016/B978-0-444-63984-4.00008-9>.
- Díaz-Cruz, M.S.; 2020; **“Chemical UV filters: Analysis in marine waters”**; The Handbook of Environmental Chemistry; Springer, Berlín, Heidelberg; ISBN: 978-3-030-56076-8; [https://doi.org/10.1007/698\\_2020\\_561](https://doi.org/10.1007/698_2020_561).
- Díaz-Cruz, M.S.; 2020; **“Chemical uv filters: Analysis in marine waters”**; Handbook of Environmental Chemistry, 94; Springer, Cham; ISBN: 978-3-030-56076-8; DOI: 10.1007/698\_2020\_561; [https://doi.org/10.1007/698\\_2020\\_561](https://doi.org/10.1007/698_2020_561).
- Ekpe, O.D., Choo, G., Barceló, D., Oh, J.E.; 2020; **“Introduction of emerging halogenated flame retardants in the environment”**; Emerging Halogenated Flame Retardants in the Environment , Comprehensive Analytical Chemistry; Elsevier; ISBN: 978-0-444-64339-1; <https://doi.org/10.1016/bs.coac.2019.11.002>.
- Eljarrat, E.; 2020; **“Chapter 12: Conclusions and future trends”**; Pyrethroid insecticides (E.Eljarrat ed.); The Handbook of Environmental Chemistry; Springer-Verlag Berlin Heidelberg; Link: <https://www.springerprofessional.de/en/conclusions-and-future-trends/18248054>.
- Eljarrat, E.; 2020; **“Conclusions and Future Trends”**; Handbook of Environmental Chemistry, 92; Springer, Cham; ISBN: 978-3-030-55695-2; DOI: 10.1007/698\_2020\_478; [https://doi.org/10.1007/698\\_2020\\_478](https://doi.org/10.1007/698_2020_478).
- Farré, M. Barceló D.; 2020; **“Chapter 6: Microfluidic Devices: Biosensors”**; Chemical Analysis of Food, 2e; Elsevier; ISBN: 978-0-12-813266-1; <https://doi.org/10.1016/B978-0-12-813266-1.00006-1>.
- Farré, M.; 2020; **“Chapter: 12 Future trends and conclusions”**; Environmental Metabolomics applications in field and laboratory studies; Elsevier, Amsterdam, NL; ISBN: 9780128181966.
- Fuertes, I., Vila-Costa, M., Asselman, J., Piña, B., Barata, C.; 2020; **“Data Processing for RNA/DNA Sequencing”**; Reference Module in Chemistry, Molecular Sciences and Chemical Engineering; DOI: 10.1016/B978-0-12-409547-2.14595-0; <https://doi.org/10.1016/B978-0-12-409547-2.14595-0>.
- Gómez-Canela, C., Santos, M., Franquet-Griell, H., Alves, A., Ventura, F., Lacorte, S.; 2020; **“Predicted Environmental Concentrations: A Useful Tool to Evaluate the Presence of Cytostatics in Surface Waters”**; Fate and Effects of Anticancer Drugs in the Environment; Springer book, Springer International; ISBN 978-3-030-21047-2; [https://doi.org/10.1007/978-3-030-21048-9\\_2](https://doi.org/10.1007/978-3-030-21048-9_2).
- Grimalt, J.O.; 2019; **“L’aigua i la seva depuració”**; “Laudato Si” i grans Ciutats; Claret Publishing Group; ISBN: 9788491362081; Link: <https://www.claret.cat/ca/lilibre/LAUDATO-SI-GRANS-CIUTATS-849136208>.
- Grimalt, J.O., Capodiferro, M., Junqué, E., Garí, M.; 2020; **“La nostra salut està ancorada en la del Mar”**; Natura ús o abús?; Institut d’Estudis Catalans; Link: <https://natura.llocs.iec.cat/>.
- Icardi, M., Boccardo, G., and Dentz, M.; 2019; **“Upscaling Flow and Transport Processes”**; Flowing Matter. Soft and Biological Matter; Springer, Cham; ISBN: 978-3-030-23369-3; [https://doi.org/10.1007/978-3-030-23370-9\\_5](https://doi.org/10.1007/978-3-030-23370-9_5).
- Ivanova, A., Vilarrasa, V., Rutqvist, J., Kummerow, J., and Lüth, S.; 2019; **“Thermal Processes during GSC: Field Observations, Laboratory and Theoretical Studies”**; Science of Carbon Storage in Deep Saline Formations: Process Coupling across Time and Spatial Scales; Elsevier; ISBN: 9780128127520; <https://doi.org/10.1016/C2016-0-03237-0>.



- Jaumot, J., Bedia, C.; 2020; **“Mass Spectrometry Imaging: Chemometric Data Analysis”**; Comprehensive Chemometrics (Second Edition), Chemical and Biochemical Data Analysis; Elsevier; ISBN: 978-0-444-64166-3; <https://doi.org/10.1016/B978-0-12-409547-2.14599-8>.
- Jha, A. Farré, M.; 2020; **“Chapter 9: Metabolomic effects of nanomaterials”**; Environmental Metabolomics applications in field and laboratory studies; Elsevier, Amsterdam, NL; ISBN: 978-0-12-818196-6; <https://doi.org/10.1016/B978-0-12-818196-6.00009-1>.
- Jurado A., Walther M., Díaz-Cruz S.; 2020; **“Occurrence, Fate and Associated Risks of the Organic Micropollutants Included in the Watch List (Decision 2018/840/EU) in the European Groundwater Bodies”**. Emerging Contaminants; Springer Nature; ISBN: 978-3-030-69078-6. [https://doi.org/10.1007/978-3-030-69079-3\\_2](https://doi.org/10.1007/978-3-030-69079-3_2)
- Méjanelle, L., Jara, B., Dachs, J.; 2020; **“Fate of Pyrethroids in Freshwater and Marine Environments”**; Handbook of Environmental Chemistry, 92; Springer, Cham; ISBN: 978-3-030-55695-2; DOI: 10.1007/698\_2019\_433; [https://doi.org/10.1007/698\\_2019\\_433](https://doi.org/10.1007/698_2019_433).
- Mohammad Jafari, J., de Juan, A., Tauler, R.; 2019; **“Factor Analysis/Multivariate Curve Resolution”**; Chemistry Molecular Sciences and Engineering, Enciclopedia analytical Chemistry; Elsevier; ISBN: 978-0-12-409547-2; <https://doi.org/10.1016/B978-0-12-409547-2.14043-0>.
- Montemurro, N., Peña-Herrera, J.M., Ginebreda, A., Eichhorn, P., Pérez, S.; 2020; **“The Journey of Human Drugs from Their Design at the Bench to Their Fate in Crops”**; Interaction and Fate of Pharmaceuticals in Soil-Crop Systems - The Impact of Reclaimed Wastewater; The Handbook of Environmental Chemistry, 103; ISBN: 978-3-030-61289-4; Springer, Cham; [https://doi.org/10.1007/698\\_2020\\_643](https://doi.org/10.1007/698_2020_643).
- Negm, A., Bouderbala, A., Chenchouni, H., Barceló, D.; 2020; **“Water Resources in Algeria-Part I”**; Handbook of Environmental Chemistry, vol. 97; Springer Verlag; ISBN: 978-3-030-57894-7; DOI: 10.1007/978-3-030-57895-4; <https://doi.org/10.1007/978-3-030-57895-4>.
- Obiso, V., Jorba, O., García-Pando, C.P., Pandolfi, M.; 2020; **“Aerosol Intensive Optical Properties in the NMMB-MON-ARCH”**; Springer Proceedings in Complexity; Springer, Cham; ISBN: 978-3-030-22054-9; DOI: 10.1007/978-3-030-22055-6\_66; [https://doi.org/10.1007/978-3-030-22055-6\\_66](https://doi.org/10.1007/978-3-030-22055-6_66).
- Pay, M.T., Pérez-García Pando, C., Guevara, M., Jorba, O., Napelenok, S., Querol, X.; 2020; **“Unravelling the Origin of High Ozone Concentrations in Southwestern Europe”**; Springer Proceedings in Complexity; Springer, Cham; ISBN: 978-3-030-22054-9; DOI: 10.1007/978-3-030-22055-6\_3; [https://doi.org/10.1007/978-3-030-22055-6\\_3](https://doi.org/10.1007/978-3-030-22055-6_3).
- Piña, B., Barata, C., Portugal, J.; 2019; **“Ecotoxicology, Genetic”**; Reference Module in Biomedical Sciences; Elsevier, Amsterdam; ISBN: 978-0-128-01238-3; DOI: 10.1016/B978-0-12-801238-3.11344-3.
- Rutqvist, J., Rinaldi, A. P., Vilarrasa, V. and Cappa, F.; 2019; **“Numerical geomechanics studies of GCS”**; Science of Carbon Storage in Deep Saline Formations: Process Coupling across Time and Spatial Scales; Elsevier; ISBN: 9780128127520; <https://doi.org/10.1016/C2016-0-03237-0>.
- Sanchís, J., Farré, M.; 2020; **“Volatile Dimethylsiloxanes in Aquatic Systems”**; Handbook of Environmental Chemistry, 89; Springer, Cham; ISBN: 978-3-030-50134-1; DOI: 10.1007/698\_2018\_363; [https://doi.org/10.1007/698\\_2018\\_363](https://doi.org/10.1007/698_2018_363).
- Sauvêtre, A., Eichhorn, P., Pérez, S.; 2020; **“Metabolism of Pharmaceuticals in Plants and Their Associated Microbiota”**; Interaction and Fate of Pharmaceuticals in Soil-Crop Systems - The Impact of Reclaimed Wastewater; The Handbook of Environmental Chemistry, 103;

- Springer, Cham; ISBN: 978-3-030-61289-4; [https://doi.org/10.1007/698\\_2020\\_607](https://doi.org/10.1007/698_2020_607).
- Tauler, R., Maeder, M.; 2020; **“Multivariate Curve Resolution. Error in Curve Resolution”**; Comprehensive Chemometrics, 2nd edition; Elsevier; ISBN: 978-0-444-64166-3; <https://doi.org/10.1016/B978-0-12-409547-2.14729-8>.
  - Tauler, R., Maeder, M., de Juan, A.; 2020; **“Multiset Data Analysis: Extended Multivariate Curve Resolution”**; Comprehensive Chemometrics, 2nd edition; Elsevier; ISBN: 978-0-444-64166-3; <https://doi.org/10.1016/B978-0-12-409547-2.14702-X>.
  - Valhondo, C., Carrera, J.; 2019; **“Water as a resource – quality, supply, distribution, and aquifer recharge”**; Sustainable Water and Wastewater Processing; Elsevier; ISBN: 9780128161708; Link: <https://www.elsevier.com/books/sustainable-water-and-wastewater-processing/galanakis/978-0-12-816170-8>.
  - van Drooge, BL., Prats, RM., Fernandez, P., Grimalt JO. 2019. **“Anàlisi de contaminants orgànics a l’aire i les aigües dels estanys d’alta muntanya del Parc Nacional d’Aigüestortes i Estany de Sant Maurici”**. In E. Llevot (Ed.). XI Jornades sobre Recerca al Parc Nacional d’Aigüestortes i Estany de Sant Maurici. LTER Aigüestortes. pp 43-52; ISBN 978-84-393-9944-5
  - Valhondo, C., Carrera, J., Martínez-Landa, L., Wang, J., Amalfitano, S., Levantesi, C., Diaz-Cruz, M.S.; 2020; **“Reactive barriers for renaturalization of reclaimed water during soil aquifer treatment”**; In: Tewodros Tena, editor. Water: Ecology and Management. Hyderabad, India: Vide Leaf. ISBN: 978-81-944664-2-0. Link: <https://videleaf.com/reactive-barriers-for-renaturalization-of-reclaimed-water-during-soil-aquifer-treatment/>
  - Viana, M.; 2019; **“Europe urban air quality – re-assessing implementation challenges in cities”**; European Environment Agency Kongens Nytorv 61050. Copenhagen. Luxembourg: Publications Office of the European Union; ISBN 978-92-9480-059-6/ISSN 1977-8449; DOI: 10.2800/214599.
  - Viana, M., Gallart, F., Soler, J.M., Moreno, T., Querol, X.; 2020; **“Scientific challenge # 5: Environmental quality assessment”**; Libro Blanco Dynamic earth: Probing the past, assessing the present, preparing for the future (CSIC, Ed.); ISBN: 978-84-697-5167-1.
  - Vilarrasa, V., Makhnenko, R. and Rutqvist, J.; 2019; **“Field and laboratory studies of geomechanical response to the injection of CO<sub>2</sub>”**; Science of Carbon Storage in Deep Saline Formations: Process Coupling across Time and Spatial Scales; Elsevier; ISBN: 9780128127520; <https://doi.org/10.1016/B978-0-12-812752-0.00009-5>.

---

## Oral presentations in conferences

- Abad E. **Análisis de dioxinas. Métodos, legislación y aplicaciones.** 5º Congreso Internacional en Seguridad Alimentaria ACOFESAL. 06/2019.
- Albinet A., Petit JE., Lambe A., Kalogridis A., Heikkinen L., Graeffe F., Cirtog M., Féron A., Allan J., Bibi Z., Amodeo T., Karoski N., Aujay-Plouzeau R., Meunier L., Noblet C., Lestremau F., Besombes J.-L., Gros V., Bonnaire N., Sarda-Estève R., Truong F., Ehn M., Jokinen T., Aurela M., Maasikmets M., Marin C., Marmureanu L., Eriksson A., Ahlberg E., Freney E., Minguillón MC., Croteau P., Jayne J., Williams L., Favez Croteau O., Jayne J., Williams L., Favez O. **Overview of the ACMCC particulate organonitrates (pON) intercomparison.** American Association for Aerosol Research 37th Annual Conference, AAAR2019. 10/2019.
- Amalfitano S., Luprano ML., Zoppini AM., Petruccioli M., Melita M., Valhondo C., Carrera J., Levantesi C. **Microbial Community and Antibiotic Resistance Genes within Reactive Barriers for Artificial Aquifer Recharge.** Goldschmidt 2019.
- Ayala JF., Ábalos M., Abad E., Moyano E., Santos JF. **Atmospheric pressure photoionization for GC-HRMS analysis of PCDD/Fs and dioxin-like PCBs in food and environmental samples.** 1st Iberian Meeting on Separation Sciences and Mass Spectrometry. 10/2019.
- Ayala-Cabrera JF., Ábalos M., Abad E., Moyano E., Santos FJ. **Gas Chromatography – Atmospheric Pressure Photoionization – High Resolution Mass Spectrometry for the determination of PCDD/Fs in environmental and food samples.** 39th International Symposium on Halogenated Persistent Organic Pollutants. 08/2019.
- Ayora C. **Geochemistry of rare earth elements in acid mine drainage.** XXIX Goldschmidt 2019. 08/2019.
- Azibeiro LA., Sierro FJ., Capotondi L., Lirer F., Alonso-García M., González-Lanchas A., Cortina A., Grimalt J., Martrat B., Cacho I., Flores JA., Canals M. **Western-eastern Mediterranean freshening during MIS 12 deglaciation.** INQUA 2019. 07/2019.
- Aznar-Luque C., Porte C., Postigo C. **Disinfection by-products in reclaimed water: integration of high-resolution mass spectrometry and in vitro toxicity assays data to characterize toxic DBPs.** 17th International Conference on Chemistry and the Environment ICCE 2019. 06/2019.
- Aznar-Luque MC., Perez-Albaladejo E., Porte C., Postigo C. **ENFOCAR: An approach to minimize exposure to toxic pollutants of disinfected water.** 11th World Congress of EWRA on Water Resources and Environment: Managing Water Resources for a Sustainable Future. 06/2019.

- Balasch A., López M., Viana M., Reche C., Moreno T., Eljarrat E. **Exposure of e-waste dismantlers in Catalonia (Spain) to organophosphate and halogenated flame retardants.** SETAC2020. Online conference.
- Barata C., Fuertes I., Piña B. **Single and combined low concentrations of neuro-active drugs disrupt keyneurological signalling pathways in *Daphnia magna* affecting reproduction and lipid metabolism.** SETAC Europe 30th Annual Meeting. 05/2020.
- Barbieri MV., Postigo C., López de Alda M. **High throughput analysis of medium to highly polar pesticides in surface and groundwater from agriculture-impacted areas of Catalonia using on-line SPE-LC-MS/MS.** 1st Iberian Meeting in Separation Sciences and Mass Spectrometry. 10/2019.
- Barbieri MV., Monllor-Alcaraz S., Guillem-Argiles N., Rambal-Alegre M., Postigo C., López de Alda M. **Mass spectrometry to evaluate the fate of pesticides in the Ebro River Delta (NE Spain) – risk assessment for aquatic organisms and adsorption coefficients.** SETAC Europe 29th Annual Meeting: One Environment. One Health. Sustainable societies. 05/2019.
- Barbieri MV., Postigo C., Roda R., Isla-Gil E., Frances G., Casanovas A., Queralt E., Sola V., Martín-Alonso J., De la Cal A., López-García E., Boleda MR., Ginebreda A., Barceló D., López de Alda M. **Participatory water governance to protect drinking water resources in an agricultural peri-urban area.** 11th WORLD CONGRESS OF EWRA on Water Resources and Environment: Managing Water Resources for a Sustainable Future. 06/2019.
- Barceló D., Picò Y., Montemurro N., Perez S. **QTOF-MS System: The Best Choice for Emerging Contaminants Discovery in Wastewater Reuse and Plant uptake.** 67th ASMS Conference on Mass Spectrometry and Allied Topics. 06/2019.
- Barceló D., Picò Y., Montemurro N., Perez S. **High Resolution MS: The Best Choice for Emerging Contaminants Discovery in Wastewater Reuse and Plant uptake.** 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety. 05/2019.
- Barceló D. **The EU Globaqua Project on multiple stressors in rivers under water scarcity and global change: a reconnaissance study in selected European river basins and the water-energy-food Nexus.** Global Consortium for Sustainability Outcomes Workshop. 01/2019.
- Barceló D. **Canvi climatic, sequera i contaminants emergents: reptes en la gestió dels rius.** DSFP- King Saud University-College of Science, Botany and Microbiology. 02/2019.
- Barceló D. **The EU Globaqua Project on multiple stressors in rivers under water scarcity and global change: a reconnaissance study in selected European river basins and the water-energy-food nexus.** 03/2019.
- Barceló D. **Emerging contaminants: risk and challenges for water quality in Iberian river basins and plant uptake. Solutions with advanced treatment technologies.** Conferència en Zhejiang Agricultural and Forestry University (ZAFU). 03/2019.
- Barceló D. **Emerging contaminants and Microplastics in Water Reuse and Plant Uptake.** Conferència en Zhejiang University of Technology. 03/2019.
- Barceló D. **Analysis, Occurrence and Removal of Microplastic Pollution in Water: Current Perspectives and Future Directions.** Conferència en Zhejiang University of Technology. 04/2019.
- Barceló D. **Analysis, Occurrence and Removal of Microplastic Pollution in Water: Current Perspectives and Future Directions.** JRC-Ispra. 05/2019.

- Barceló D. **Coupling of UV/H<sub>2</sub>O<sub>2</sub> and biological treatment for the removal of the pharmaceuticals metropolol and metropolol acid from hospital wastewater.** American Chemical Society Fall 2019 National Meeting and Exposition. Division of Environmental Chemistry. 08/2019.
- Barceló D. **Analysis, occurrence and removal of microplastic pollution in water (and soil): current perspectives and future directions.** Environmental Sciences Special Seminar- University of California Riverside. 08/2019.
- Barceló D. **Contaminants: Risk and Challenges for Water Quality, Water Reuse and Plant Uptake. Solutions using advanced treatment technologies in Europe.** 16th International Conference on Environmental Science & Technology. 09/2019.
- Barceló D. **MALDI-TOF MS Imaging and LC-HRMS: New tools for degradation studies of polymer probes exposed to different wastewater environments: Linking chemical transformations and potential microbial consumers (DNA + Proteomic analysis).** 16th International Conference on Environmental Science & Technology. 08/2019.
- Barceló D. **Emerging Contaminants and Microplastics in treated wastewaters in agriculture.** 1st International Conference on Sem-Arid Mountain Environment. 09/2019.
- Barceló D. **MALDI-TOF MS Imaging and LC-HRMS: The best choices for Emerging Contaminants Discovery and Proteomic Analysis in Wastewaters.** 4th International Mass Spectrometry School. 09/2019.
- Barceló D. **Contaminants and Microplastics in water reuse and plant uptake: solutions using advanced treatment technologies.** Nanjing- Institute of Soil Science, Chinese Academy of Sciences. 10/2019.
- Barceló D. **Analysis, occurrence and removal of microplastic pollution in water (and soil): current perspectives and future directions.** Shangai East Normal University-School of Resources and Environmental Engineering. 10/2019.
- Barceló D. **Emerging Contaminants and Microplastics: Risk and Challenges for Water Quality, Water Reuse and Plant Uptake. Solutions using advanced treatment technologies.** 12th International Conference on Sustainable Energy & Environmental Protection SEEP 2019. 11/2019.
- Barceló D. **L'impacte de la qualitat de l'aigua, medicaments i plàstics amb el canvi climàtic.** Residencia d Investigadors del CSIC- Conferencies. L'Ordre Nacional del Merit. 11/2019.
- Barceló D. **Membrane technologies, eco-friendly fungal treatment and advanced oxidation processes for efficient removal of pharmaceuticals in urban and hospital wastewaters.** 2nd Conference on Green Technologies for Sustainable Water. 12/2019.
- Barceló D. **Microplásticos.** I Jornadas ANTROPOCEN-Los Contaminantes Emergentes en el Parque Natural de l'Albufera. 12/2019.
- Barceló D. **Microplastics pollution in coastal waters, rivers and soil: monitoring, assessment and remediation.** DSFP- King Saud University-College of Science, Botany and Microbiology. 02/2020.
- Barceló D. **Microalgae-based technology for the removal of benzalkonium chloride in oil and gas produced water: Biotransformation and environmental effects.** American Chemical Society Fall 2020 National Meeting and Exposition. Division of Environmental Chemistry. 08/2020.
- Barceló D., Farré M., Petrovic M., López de Alda MJ., Picó Y. **LC-MS-MS Analysis of Emerging Contaminants (EDCs, PPCPs and PFAs), Nanomaterials and Polymers (Microplastics) in the Aquatic Environment.** Pittcon 2019. 03/2019.
- Barceló D., Ginebreda A., Vila-Costa M., Zonja B., Montemurro N., Martinez-Varela A., Perez S., Rivas D. **MALDI-TOF Imaging and LC-HRMS: New tools for degradation studies of polymer probes exposed to different wastewater**

- environments.** American Society for Mass Spectrometry (ASMS). 06/2019.
- Barceló D., Pico Y., Montemurro N., Perez S. **High Resolution MS the best choice for emerging contaminants discovery in wastewater reuse and plant uptake.** 15th Annual LC-MS/MS Workshop on Environmental and Food Safety. 05/2019.
  - Barceló D., Pico Y., Montemurro N., Perez S. **QTOFMS the best choice for emerging contaminants discovery in wastewater reuse and plant uptake.** 67th Conference on Mass Spectrometry and Allied Topics. 06/2019.
  - Bedia B., Jaumot J., Sierra A., Tauler R. **Analysis of mass spectrometry imaging data by using the ROIMCR procedure.** Colloquium Chemiometricum Mediterraneum. 06/2019.
  - Bedia C., Jaumot J., Tauler R. **Multiple mass spectrometry image analysis by using a multivariate curve resolution alternating least squares based strategy.** X Colloquium Chemiometricum Mediterraneum. 06/2019.
  - Benaiges-Fernandez R., Palau J., Offeddu F., Cama J., Urmeneta J., Soler JM., Dold B. **Reductive dissolution of Fe(III) oxides by Shewanella loihica under submarine tailings disposal conditions.** Goldschmidt 2019. 18–23/08/2019.
  - Bonada N., Gallart F., Prat N., Bertran G., Cañedo-Argüelles M., Cid N., Fortuño P., Gomà J., Gutiérrez-Cánovas C., Latorre J., Llorens P., Múrria C., Soria M., Verkaik I., Viñoles D. **Paying attention to the isolated pools phase in temporary rivers. A challenge to the ecological quality assessment of temporary rivers.** EGU General Assembly 2020, Wien (Austria). 04/2020.
  - Botey i Bassols J., Vázquez-Suñé E., López-Arilla À. **Drenaje de las obras de construcción de los túneles viarios de la Plaça de les Glòries de Barcelona. Revisión conceptual y metodológica.** VII Simposio de Túneles de Carretera. Barcelona. 02/2019
  - Brienza M., Montemurro N., Manasfi R., Pérez S., Chiron S. **Uptake and accumulation of pharmaceuticals in drip surface-irrigated lettuce: A field study.** 12th IWA International Conference on Water Reclamation and Reuse. 06/2019.
  - Cacciabue L., Ayora C., Cama J. **Arsenic release from Argentinean volcanic glass and ashes.** Goldschmidt 2019. 08/2019.
  - Cama J., Gutiérrez-León J., Palau J., Fernández-Rojo L., Soler JM. **Column experiments to study the interaction between acid mine drainage and rock and Portland cement.** 16th International Symposium on Water-Rock Interaction. 21–26/07/2019.
  - Cama J., Gutiérrez-León J., Soler JM. **Column experiments to study the interaction between acid mine drainage and rock and Portland cement.** WRI-16 meeting.
  - Cama J., Soler JM., Ayora C. **Acid water-rock-cement interaction and multicomponent RT modeling (MCRTM).** Goldschmidt 2019. 08/2019.
  - Cama J., Soler JM., Gutiérrez-León J., Fernández-Rojo L., Pérez-Hueros P. **The interaction of Acid Mine Drainage with Portland cement and rock.** 5th International Workshop on Mechanisms and Modelling of Waste-Cement Interactions. 5–27/03/2019.
  - Carnerero C., Querol X. **Phenomenology of ground-level ozone episodes in Spain.** Clean Air Dialogues (European Commission). 9/10/2019
  - Carnerero C., Pérez N., Petäjä T., Laurila TM., Ahonen LR, Kontkanen J., Ahn KH., Alastuey A., Querol X. **Unlinking summer new particle formation and high ozone episodes.** 7th International Symposium on Ultrafine Particles Air Quality and Climate. 15/05/2019
  - Carrera J., Valhondo C., Martínez-Landa L., Wang J., Saaltink M., Diaz-Cruz S. **Water Quality Challenges in Managed Aquifer Recharge.** Goldschmidt 2019. 08/2019.

- Carrera J., Valhondo C., Martínez-Landa L., Wang J., Saaltink M., Díaz-Cruz S. **Water quality in managed aquifer recharge.** Goldschmidt 2019. 08/2019.
- Carrey R., Valhondo C., Martínez-Landa L., Soler A., Otero N. **Artificial Recharge Using Wastewater Treatment Plant Effluents: Evaluation of Nitrogen Fate in Meso-Scale Experiments by Means of an Isotopic Approach.** Goldschmidt 2019. 08/2019.
- Chen G., Minguillon MC., Prevot ASH., COLOSSAL team. **Investigations of the spatial and temporal variations in organic aerosols sources within Europe using 23 long-term ACSM datasets.** European Aerosol Conference, EAC2020. 09/2020.
- Criollo R., Vázquez-Suñé E., Cardona F., Enrich M., Burdons S. **An approach in groundwater data migration and integration.** Sensor systems for water and climate (co-organized). EGU2019-18261. EGU General Assembly 2019.
- Dachs J., Casal P., Casas G., Vila-Costa M., Cabrerizo A., Pizarro M. & Jiménez B. **Snow Amplification of Organic Pollutants at Coastal Antarctica.** Goldschmidt2019. 08/2019.
- Dentz M. **Upscaling of non-equilibrium transport from the pore to the Darcy scale.** Workshop on Upscaling in Porous Media. 04/2019.
- Dentz M. **Mixing and Dispersion in Porous and Fractured Media.** Institute for Cross-Disciplinary Physics and Complex Systems (IFISC). 03/2019.
- Dentz M. **Mixing and Dispersion in Porous and Fractured Media.** Institute of Geoscience (University of Halle). 01/2019.
- Díaz-Cruz S., Barceló D. **Presencia y acumulación de plaguicidas en lechugas cultivadas con aguas residuales regeneradas.** 1º Simposio NOVEDAR "Presencia y eliminación de microcontaminantes en agua". 06/2019.
- Díaz-Cruz S., Barceló D., Soler, AC. **Risks of pollution and its assessment in wastewater irrigated agricultural systems (ROUSSEAU).** IWA 2019. 06/2019.
- Díez S. **Los dispositivos DGT como herramienta útil para la determinación de mercurio biodisponible en sistemas acuáticos y terrestres.** 2º simposio nacional del mercurio en Almadén. 07/2019.
- Domínguez C., Bayona JM. **Fingerprinting of new products: coal & related products.** 24-26/04/2019.
- Eide M., Goksøyr A., Yadetie F., Gilabert A., Bartosova Z., Froyso H., Fallahi S., Zhang X., Blaser N., Jonassen I., Porte C., Karlsen OA. **A multi-omics approach to study PPAR mediated regulation of lipid metabolism in Atlantic cod.** 8th Norwegian Environmental Toxicology Symposium. Ocean Health in the Anthropocene NETS 2020. 11/2020.
- Eljarrat E. **Chemical impact of plastics in marine biota.** MARLICE 2019: International Forum on Marine Litter and Circular Economy. 2019.
- Eljarrat E. **Chemical impact of plastics in marine biota.** ETAC Latin America 13th Biennial Meeting. 2019.
- Eljarrat E. **Organophosphate esters in edible fish from the Mediterranean Sea.** 1as Jornadas sobre Contaminación por Plásticos (PLASTIC'2020): Retos científicos, empresariales y legislativos. 10/2020.
- Eljarrat E. **Estimación de la exposición a OPEs y HFRs de trabajadores de reciclaje de residuos electrónicos mediante pulseras de silicona y camisetas.** 1as Jornadas sobre Contaminación por Plásticos (PLASTIC'2020): Retos científicos, empresariales y legislativos. 10/2020.
- Escribano M., Fernandez J., García A., Reche C., Ibarrola-Ulzurrun E., Viana M. **Air quality monitoring and comparison in olympic stadiums of five continents using low cost sensors.** Air Sensors International Conference, California (USA). 12-15/05/2020.

- Esteban A. **Actualización y desafíos en el control de dioxinas aplicado a la industria de las carnes.** Nuevas Normativas y Tendencias en el Control de Dioxinas y Residuos. 09/2019.
- Evans M., Abram N., Bothe O., Linderholm HW., Martrat B., McGregor HV., Neukom R., Phipps S., George SS., Eggleston S. **The PAGES 2k Network: Overview, Progress and Vision.** American Geosciences Union, Fall Meeting. 12/2019.
- Fagnani E., Montemurro N., Perez S. **Development of SPE-LC-HRMS method using suspect screening SWATH® technology for the detection of halogenated pharmaceuticals and their phototransformation products in surface waters.** 17th International conference on chemistry and the environment (ICCE). 06/2019.
- Fagnani E., Montemurro N., Pérez S. **Detection of pharmaceuticals and their phototransformation products in surface waters.** 2nd international conference on risk assessment of pharmaceuticals in the environment. 11/2019.
- Falster G., Konecky B., Martrat B., Iso2k project members. **New insights into spatial and temporal dynamics of the global water cycle from the Iso2k database.** American Geosciences Union, Fall Meeting. 12/2019.
- Faria M., Bedrossiantz J., Prats E., Raldua D. **The vibrational startle response assay for screening and deciphering the mode of action of pollutants impairing the fish larvae escape response.** 3rd International Caparica Conference on Pollutant Toxic Ions and Molecules. 11/2019.
- Faria M., Bedrossiantz J., Prats E., Raldua D. **The vibrational startle response assay for screening and deciphering the mode of action of pollutants impairing the fish larvae escape response.** 3rd International Caparica Conference on Pollutant Toxic Ions and Molecules. 11/2019.
- Faria M., Ziv T., Gómez-Canela C., Ben-Lulu S., Prats E., Novoa-Luna KA., Admon A., Piña B., Tauler R., Gómez-Oliván LM., Raldúa D. **Acrylamide acute neurotoxicity in adult zebrafish.** 11th Congreso Iberico, 8o Iberoamericano de Contaminacion y Toxicologia Ambiental – CICTA. 07/2019.
- Farrer M., Schirinzi G., Llorca M., Abad E. **Analysis of polystyrene microplastics and suspected screening of polymers in environmental samples.** SETAC Europe 29th Annual Meeting. 05/2019.
- Farré M. **Challenges related to bioplastics from a research perspective.** Workshop on the Environmentally Sound Management of Plastic Wastes and the prevention of marine litter and plastic pollution. 04/2019.
- Farré M., Llorca M., Schirinzi G., Ábalos M., Abad E. **Fate and occurrence of micro and nanoplastics in the Ebro Delta.** 1st Iberian Meeting on Separation Sciences and Mass Spectrometry. 10/2019.
- Fernández-Rojo L., Chaparro M C., Soler JM., Cama J. **Fractured core experiments to study water-rock-cement interaction under CO2 storage conditions.** 5th International Workshop on Mechanisms and Modelling of Waste-Cement Interactions. 5-27/03/2019.
- Fernández-Rojo L., Soler JM., Chaparro M C., Galí S., Queral I., Cama J. **Rock/cement fracture in geological CO2 storage.** Goldschmidt 2019. 18–23/08/2019.
- Fontàs C., Elias G., Diez S. **Innovative analytical methodologies based on a thiol-containing ionic liquid to facilitate Hg detection in natural waters.** ICMGP2019. 09/2019.
- Fortesa J., Latron J., García-Comendador J., Tomàs-Burguera M., Company J., Calsamiglia A., Estrany J. **Driving factors of non-linearity in rainfall-runoff relationships at different time scales in small Mediterranean-climate catchments.** EGU General Assembly 2020, Wien (Austria).04/2020.



- Fortuño P., Vinyoles D., Fabre N., Verkaik I., Cid N., Soria M., Bonada M., Gallart F., Prat N. **A polluted urban river as a resource to raise citizen awareness. The case of the Besòs river.** Daylighting Rivers: Inquiry Based Learning for Civic Ecology, Science Education for Civic Ecology. EU Erasmus + Programme. 02/12/2020. Online.
- Fuertes I., Campos B., Rivetti C., Piña B., Barata C. **Effects of single and combined low concentrations of neuroactive drugs on *Daphnia magna* reproduction and transcriptomic responses.** SETAC North America 40th Annual Meeting. 10/2019.
- Furger M., Rai P., Tripathi SN., Minguillón MC., Slowik JG., Prevot ASH., Baltensperger U. **Hourly elemental concentrations in ambient aerosols in New Delhi, India, measured with an online X-ray fluorescence spectrometer.** European Geosciences Union General Assembly 2019, EGU2019. 04/2019. Poster.
- Gallart F., Llorens P., Cayuela C., Sprenger M., Latron J. **Young water fractions at diverse time scales are driven by varying runoff generation processes in a Mediterranean small research catchment.** EGU General Assembly 2020, Wien (Austria).04/2020.
- Gallart F., Valiente M., Llorens P., Cayuela C., Sprenger M., Latron J. **Investigating young water fractions in different hydrological compartments of a small Mediterranean mountain catchment: Mountain catchments may release large young water fractions.** EGU General Assembly 2019, Wien (Austria). 04/2019.
- Gallego-Blanco S., Beguet J., Rouard N., Devers M., Perez S., Chiron S., Barcelo D., Martin-Laurent F. **Evaluation of the ecotoxicological impact of watering vegetables with waste water contaminated with pesticides and pharmaceutical residues.** 2nd international conference on risk assessment of pharmaceuticals in the environment. 11/2019.
- García E.L., Postigo C., Avila R., Blaquez P., Vicent T., López de Alda M. **High resolution mass spectrometry to investigate the fate of pesticides during microalgae-based bioremediation treatment of water.** SETAC Europe 29th Annual Meeting. 05/2019.
- García N., Casado M., Prats E., Faria M., Puig F., Pérez Y., Alonso I., Chuan-Yu H., Arick M., Ziv T., Ben Lulu S., Admon A., Piña B., Raldúa D. **Elucidating acrylamide adverse effects on zebrafish using a multi-omics approach.** ABFR 2019 Annual Meeting. 23/03/2019 to 26/04/2019.
- García N., Ziv T., Arick M., Gomez C., Conrow K., Watanabe K., Admon A., Piña B., Raldúa D. **Multi-omic approach to inform quantitative Adverse Outcome Pathway development for acute organophosphorus poisoning.** SOT 58th Annual Meeting. 10/03/2019-14/04/019.
- García-Gil A., Marazuela MÁ., Mejías M., Vázquez-Suñè E., Garrido E., Sánchez-Navarro JÁ. **The BSI indicator: preventing thermal interferences between groundwater heat pump systems.** EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-9579, <https://doi.org/10.5194/egusphere-egu2020-9579>, 2020
- Gesels J., Dollé F., Leclercq J., Jurado A., Brouyère S. **Groundwater Quality In The Urban and Industrial Sectors of The Walloon Region of Belgium.** 10th International Groundwater Quality Conference. 09/2019
- Giannetta M., Soler JM., Cama J. **Microbial reductive dissolution of iron oxides and subsequent heavy metal release in submarine tailings disposal.** Goldschmidt 2019. 18–23/08/2019.
- Gilabert A., Buenestado S., Eide M., Zhang X., Karlsen O., Goksøyr A., Porte C. **Lipidomics profiling of plasma and endoplasmic reticulum fraction of Atlantic cod liver for the detection of metabolic dysfunctions associated to pollutants exposure.** SETAC Europe 30th Annual Meeting. 05/2020.

- Gomez-Navarro JJ., Martrat B., Cortina A. **Northern Hemisphere atmospheric pattern enhancing Eastern Mediterranean Transient-type events during the past 1000 years.** CLIMOVAR\_IBCC-Io2k. 09/2019.
- Gonzalez-Gaya B., Martinez-Varela A., Vila-Costa M., Jimenez B., Dachs J. **Fate of atmospheric aromatic hydrocarbons into the oligotrophic ocean.** 4th Xiamen Symposium on Marine Environmental Sciences (XMAS-IV). 01/2019.
- Gonzalez-Mariño I., Montes R., Ares L., Andreu V., Bijlsma L., Fernández-Rubio J., Hernandez F., López-García E., Marcé RM., Picó Y., Pocurull E., Postigo C., Prieto A., Rico A., Rosende M., Valcárcel Y., Quintana JB., Rodil R. **Estimation of exposure to phthalate plasticizers of the Spanish population using wastewater-based epidemiology.** XXII Reunión de la Sociedad Española de Química Analítica. 07/2019.
- González-Mariño I., Rodil R., Montes R., Ares L., Andreu V., Bijlsma L., Etxebarria N., Hernández F., López-de-Alda M., López-García E., Marcé RM., Miró M., Picó Y., Pocurull E., Postigo C., Rico A., Valcárcel Y., Quintana JB. **Assessment of the Spanish population exposure to phthalate plasticizers as obtained by wastewater-based epidemiology.** SETAC Europe 30th Annual Meeting. 05/2020.
- González-Mariño I., Ares L., Montes R., Rodil R., Cela R., López-García E., Postigo C., López de Alda M., Pocurull E., Marcé R.M., Bijlsma L., Hernández F., Picó Y., Andreu V., Rico A., Valcárcel Y., Miró M., Etxebarria N., Quintana J.B. **Estimating phthalate exposure at the population level by the analysis of wastewater: case-study within thirteen Spanish cities.** PLASTIC'2020. I Jornada sobre contaminación por plásticos. 10/2020.
- Gylling B., Lanyon B., Soler J., Nilsson K., Löfgren M., Selroos JO., Poteri A., Koskinen L. **Increasing the realism in solute transport modelling.** International High-Level Radioactive Waste Management 2019. 14–18/04/2019.
- Hidalgo J., Dentz M. **Transport under advective trapping.** EGU General Assembly. 2020.
- Hidalgo J., Dentz M. **Convective mixing in heterogeneous porous media. Stochastic mechanisms of dispersion in a porous medium: Upscaling flow and transport from the pore to the Darcy scale.** 11th International Society for Porous Media - Interpore 2019. 05/2019.
- Hidalgo J., Dentz M. **Convective mixing in heterogeneous porous media.** EGU General Assembly. 2019.
- Izquierdo M. **Iodine and uranium isotopes in forest soils around Chernobyl, 30 years after deposition.** XXV IUFRO Forest Research and Cooperation for Sustainable Development. 10/2019.
- Izquierdo M. **Kinetics of <sup>99</sup>Tc in aerobic soils: a 2.5 yr experimental study.** Goldschmidt 2019. 08/2019.
- Johnson D., Williamson BJ., Rollinson G., Moreno T., Trechera P., Lar R., Wrana A. **Automated mineralogical analysis of coal dust PM<sub>2.5</sub> and PM<sub>10</sub>.** Goldschmidt2019. 08/2019.
- Jurado A., Margareto A., Pujades E., Vázquez-Suñe E., Díaz S. **Temporal occurrence, fate and risk assessment of sulfonamide antibiotics in urban groundwater.** AGU Fall Meeting 2020. Online, 1–17 December 2020.
- Jurado A., Vázquez-Suñe E. **Contaminants of emerging concern in urban Aquifers: are they a problem for groundwater use? (CARE).** EGU General Assembly 2020. 05/2020.
- Jurado A., Vázquez-Suñe E. **Contaminants of emerging concern in urban Aquifers: are they a problem for groundwater use? (CARE).** EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-7385, <https://doi.org/10.5194/egusphere-egu2020-7385>, 2020
- Jurado A., Vázquez-Suñe E., Pujades E. **Potential Uses of Pumped Urban Groundwater: A Case Study In Sant Adrià Del Besòs (Barcelona, NE Spain).** 10th International Groundwater Quality Conference. 09/2019.

- Kalogridis A., Petit JE., Albinet A., Lambe A., Heikkinen L., Graeffe F., Cirtog M., Féron A., Allan J., Bibi Z., Amodeo T., Noblet C., Karoski N., Aujay-Plouzeau R., Meunier L., Gros V., Bonnaire N., Sarda-Estève R., Truong F., Ehn M., Jokinen T., Aurela M., Maasikmets M., Marin C., Marmureanu L., Eriksson A., Ahlberg E., Freney E., Minguillón MC., Gini M., Eleftheriadis K., Croteau P., Jayne J., Williams L., Favez O. **Intercomparison of AMS and ACSM measurements for particulate organonitrates (pON)**. American Association for Aerosol Research 37th Annual Conference, AAAR2019. 10/2019.
- Lacorte S. **The intriguing link between chemical exposure and biological effects**. 17th International Conference on Chemistry and the Environment. 06/2019. Oral presentation.
- Lacorte S. **Consumption of pharmaceuticals and risk for the environment. Risk Perception. Pollution of pharmaceutical wastes in river courses**. 05/2019.
- Lacorte S., Cristale J., Velázquez-Gómez M. **Quina pols... efecte dels contaminants orgànics en ambients d'interior**. Jornada de Joves Investigadors de la Societat Catalana de Química. 02/2020.
- Latron J., Llorens P., Gallart F. **Water and sediment dynamics of Mediterranean mountain environments in a global change context**. Consorci Centre de Ciència i Tecnologia Forestal de Catalunya, Solsona (Catalonia). 02/2019.
- Latron J., Moreno de las Heras M., Molina A., Gallart F., Cervera T., Baiges T., Garcia J., Borràs G., Munné A., Manzano A., De Cáceres M., Llorens P. **Investigating blue water response to green management in a Mediterranean headwater catchment**. EGU General Assembly 2020, Wien (Austria). 04/2020.
- Lázaro W., Alves AR., Guimarães JRD., Díez S. **Environmental impact of small hydropower plants in cascades on the accumulation of MeHg in fish from Brazilian Amazonia and Pantanal rivers**. ICMGP2019. 09/2019
- Lebreiro S., Nave S., Anton L., Michel E., Kissel C., Waelbroeck C., McCave N., Hodell DA., Flores JA., Martinez-Ruiz F., Martrat B., Roque C., Pietrowski A., Skinner LC., Sierro FJ., Terrinha P., Cornen G., Reguera I., Lozano-Luz R., Bravo N. **Drilling the Tore Seamount –archive of a natural oceanic sediment trap**. European Geosciences Union General Assembly, EGU2020. 05/2020.
- Levia DF., Guswa AJ., Tetzlaff D., Selker JS., Carlyle-Moses DE., Boyer EW., Bruen M., Cayuela C., Creed IF., van de Giesen N., Grasso D., Hannah DM., Hudson JE., Hudson SA., Iida S., Jackson RB., Katul GG., Kumagai T., Llorens P., Lopes F., Michalzik B., Nanko K., Oster C., Pataki DE., Peters CA., Rinaldo A., Sanchez D., Trifunovic B., Zalewski M., Haagsma M. **Ecohydrology in the 21st Century: A Convergence of opportunities for global sustainability and social justice and equity**. 12/2019.
- Llorca-Casamayor M., Ábalos M., Abad E., Farrer M. **Evaluation of the Adsorption Capacity of Microplastics in Water/Sediment Systems Polluted with Persistent Organic Contaminants**. SETAC Europe 29th Annual Meeting. 05/2019.
- López-García E., Postigo C., Mastroianni N., Barceló D., López de Alda M. **Análisis de aguas residuales con fines epidemiológicos en Catalunya**. IV Jornada de estimación del abuso de drogas y análisis de aguas residuales con fines epidemiológicos. 05/2019.
- López-García E., Barbieri MV., Postigo C., Avila R., Blánquez P., Rambla-Alegre M., Sola V., Vicent T., López de Alda M. **Microalgae-bioremediation of water containing pesticides: The experience of the BECAS project**. 11th WORLD CONGRESS OF EWRA on Water Resources and Environment: Managing Water Resources for a Sustainable Future. 06/2019.
- López-García E., Postigo C., Moren-Merino L., López de Alda M. **A high-sensitivity method for analysis of a mixture of relevant anthropogenic emerging organic contaminants in waters from remote areas**. 1st Iberian Meeting in Separation Sciences and Mass Spectrometry. 10/2019

- Manasfi R., Brienza M., Aït-Mouheb N., Montemurro N., Perez S., Chiron S. **Wastewater-borne organic micropollutants accumulation in soil and lettuce leave using QuEChERS extraction methods and LC-QTOF-MS: A field study.** 16th Annual Workshop on Emerging High-resolution Mass Spectrometry (HRMS) and LC/MS/MS Applications in Environmental Analysis and Food Safety. 10/2020.
- Manasfi R., Brienza M., Montemurro N., Perez S., Chiron S. **Transformation of selected pharmaceuticals and personal care products by trichoderma species.** 17th International conference on chemistry and the environment (ICCE). 06/2019.
- Manasfi R., Brienza M., Montemurro N., Perez S., Chiron S. **Transformation of selected pharmaceuticals and personal care products by trichoderma species.** 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety. 05/2019.
- Manasfi R., Brienza M., Montemurro N., Perez S., Chiron S. **Pharmaceutical plant uptake and soil accumulation in crops irrigated with treated wastewater: A field study.** 2nd International Conference on Risk Assessment of Pharmaceuticals in the Environment. 11/2019.
- Marazuela MA., Ayora C., Vázquez-Suñé E., Olivella S., García A. **A hydro-thermo-haline numerical approach of the groundwater flow to explain the extreme Li-enrichment in the Salar de Atacama (NE Chile).** EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-9524, <https://doi.org/10.5194/egusphere-egu2020-9524>, 2020
- Marazuela MA., Ayora C., Vázquez-Suñé E., Olivella S., García-Gil A. **From the origin to the mature stage of salt flats: implications for the extreme Li-enrichment of its interstitial brines.** Session. Abstract identification number MR11C-0060. 2019
- Marazuela MÁ., Vázquez-Suñé E., Ayora C., García-Gil A. **The damping capacity of the water balance of salt flats subjected to brine pumping: The Salar de Atacama example.** Session HS8.2.5 – Hydrogeology of coastal zones: processes, consequences and potentials. EGU2019-15892. EGU General Assembly 2019.
- Margari V., Chronis P., Drysdale R., Skinner L., Menviel L., Rhodes R., Taschetto A., Hodell D., Crowhurst S., Hellstrom J., Fallick A., Grimalt JO., McManus J., Martrat B., Parrenin F., Regattieri E., Roe K., Zanchetta G. **Enhanced climate instability in the North Atlantic and southern Europe during the Last Interglacial.** INQUA 2019. 07/2019.
- Margari V., Skinner LC., Menviel L., Capron E., Rhodes R., Vautravers M., Ezat MM., Martrat B., Grimalt J., Hodell DA., Tzedakis PC. **Fast and slow components of millennial-scale climate changes during Marine Isotope Stage 3.** European Geosciences Union General Assembly, EGU2020. 05/2020.
- Martinez L., Angel M., Luquot L., Folch A., Del L., Goyetche T., Diego-Feliu M., Saaltink M., Rodellas V., Pool M., Bellmunt F., Garcia-Orellana J., Pezard P., Ledo J., Vazquez-Suñe E., Carrera J. **Facing geological heterogeneity impact on reciprocal coastal systems.** Session HS8.2.5 - Hydrogeology of coastal zones: processes, consequences and potentials. EGU2019-18314. EGU General Assembly 2019.
- Martinez-Varela A., Casas G., Piña B., Dachs J., Vila-Costa M. **Large enrichment of anthropogenic organic matter degrading bacteria in the sea-surface microlayer at coastal Antarctica.** 7th International Symposium on Marine Sciences (VII ISMS). 07/2020.
- Martins V., Faria T., Diapouli E., Manousakas MI., Eleftheriadis K., Viana M., Almeida SM. **Assessment of size-segregated particulate matter in urban microenvironments.** European Aerosol Conference (EAC2020). 30/08/2020 to 04/09/2020.
- Martrat B. **Trends and anomalies in the Mediterranean paleoarchive.** INQUA 2019. 07/2019.

- Martrat B. **Consilience: Communication between archaeologists, historians and natural scientists for addressing climate change in the Mediterranean with a common agenda.** WATERMARKS - Interdisciplinary Workshop on Drought and Adaptation during the Little Ice Age (1300 – 1850 AD). 10/2019.
- Martrat B. **Climatological, Meteorological and Environmental factors in the COVID-19 pandemic.** World Meteorological Organisation. 07/2020.
- Martrat B., Marie-France L., Kaufman D. **Open-paleo-data implementation: PAGES 2k and SISAL databases and others.** European Geosciences Union General Assembly. 04/2019.
- Martínez R., Vera-Chang MN., Haddad M., Zon J., Navarro-Martín L., Piña B., Trudeau VL., Mennigen JA. **Developmental fluoxetine exposure in zebrafish reduces offspring basal cortisol concentration via life stage-dependent maternal transmission.** 8th Young Environmental Scientists Meeting, SETAC. 02/2019.
- Martínez-Landa L., Valhondo C., Carrera J. **Hydrogeological Characterization of a Meso-Scale Artificial Recharge Experiment Focused on Emerging Contaminants Fate.** Goldschmidt 2019. 08/2019.
- Mennigen J., Allaire-Leung M., Tyler Eng, Navarro-Martin L., Martínez R. **Acute and long-term effects of developmental BPA and EE2 exposure in zebrafish.** Canadian Ecotoxicology Workshop. 10/2019.
- Minguillon MC., Prevot ASH., Riffault V., Favez O., Gilardoni S., Mocnik G., Platt S., Green D., Ovadnevaite J., Kasper-Giebl A., Alastuey A., Marmureanu L., Eriksson A., Sokolovic D., COLOSSAL team. **Source Apportionment of Carbonaceous Aerosols based on High-Time Resolution Instrumentation.** European Aerosol Conference, EAC2019. 08/2019.
- Minguillon MC., Prevot ASH., Riffault V., Favez O., Gilardoni S., Mocnik G., Platt S., Green D., Ovadnevaite J., Kasper-Giebl A., Alastuey A., Marmureanu L., Eriksson A., Sokolovic D., COLOSSAL team. **Fine aerosol chemical composition and sources in Europe using high time resolution instrumentation.** 12th International Conference on Air Quality - Science and Application, Air Quality 2020. 03/2020.
- Montemurro N., Manasfi R., Guerrero A., Chiron S., Barcelò D., Perez S. **Exposure and accumulation of different contaminants of emerging concern in radish crops grown under controlled conditions.** 2nd international conference on risk assessment of pharmaceuticals in the environment. 11/2019.
- Montemurro N., Manasfi R., Perez S. **Differential uptake of pharmaceuticals in Raphanus sativus using hybrid QTOF system.** 1st Iberian Meeting in Separation Sciences & MS, XIX Conference of SECyTA, IX Conference of SEEM, and VI Conference of the MS Group of the PSC. 10/2019.
- Montemurro N., Manasfi R., Peña JM., Chiron S., Barcelò D., Perez S. **Uptake and accumulation of commonly wastewater-derived pollutants in lettuce and radish grown in a controlled environment.** 17th International conference on chemistry and the environment (ICCE). 06/2019.
- Montemurro N., Pérez S. **Earthworms impact on the uptake of selected pharmaceuticals in lettuce crops irrigated with wastewater.** 16th Annual Workshop on Emerging High-resolution Mass Spectrometry (HRMS) and LC/MS/MS Applications in Environmental Analysis and Food Safety. 10/2020.
- Montemurro N., Sabater L., Barceló D., Pérez S. **SWATH Technology for target and suspect screening of emerging contaminants in wastewater effluents.** QTOF X500R - HRMS Easy. 04/2019.
- Morao, Felix R., Vieira S., Barata C., Lemos MF. **Stress response gene expression markers and their relation to metal concentrations in blood of Sao Tome endangered green sea turtles (Cheloniemydas).** SETAC Europe 30th Annual Meeting. 05/2020.

- Moreno T. **Air quality conditions inside taxis.** Goldschmidt2019. 08/2019. Invite talk.
- Moreno T. **Sostenibilitat ambiental a les ciutats.** Bus Strategy 2020. TMB. 02/2020.
- Moreno T., Pacitto A., Fernández A., Amato F., Marco E., Grimalt J., Buonanno G., Querol X. **Vehicle interior air quality conditions inside taxis.** 2019 European Aerosol Conference (EAC 2019). 08/2019.
- Navarro-Martín L., Martínez R., Tauler R., Piña B. **Alterations of DNA methylation levels of key genes related to BPA exposures in zebrafish embryos.** SETAC Europe 30th Annual Meeting. 05/2020.
- Palau J., Benaiges R., Offeddu F., Urmeneta J., Soler JM., Cama J., Dold B. **Reductive dissolution of magnetite from iron mine tailings: potential impacts on coastal environments.** Goldschmidt 2019. 18–23/08/2019.
- Palma P., Fialho S., Lima A., Novais MH., Costa MJ., Monllor-Alcaraz L., Guillem-Argiles N., Perez S., Barcelò D., Lopez de Alda M. **Avaliação de risco de compostos farmacêuticos em ribeiras afluentes ao reservatório de Alqueva (Sul de Portugal).** Congresso Nacional das Escolas Superiores Agrárias. 11/2019.
- Parisio F., Vilarrasa V., Wang W., Kolditz O., Nagel T. **Cooling effects on induced seismicity in supercritical geothermal systems.** EGU 2020 Sharing Geoscience. 05/2020.
- Parisio F., Vilarrasa V., Wang W., Kolditz O., Nagel T. **Coupled thermo-hydro-mechanical simulations of a supercritical geothermal system.** Decovalex 2019 Symposium. 11/2019.
- Parisio F., Vilarrasa V., Wang W., Kolditz O., Nagel T. **Fault stability during re-injection in deep geothermal systems.** 7th International Conference on Coupled THMC Processes in Geosystems, GeoProc2019. 07/2019
- Perez S., Barcelò D., Montemurro N. **Development of analytical methods using QuEChERS and HR-MS for the study of fate and uptake of pharmaceuticals and their metabolites in the soil-earthworm-lettuce system following irrigation with treated wastewater.** 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety. 05/2019.
- Perez S., Barceló D., Manasfi R., Chiron S., Montemurro N. **Fate and uptake of pharmaceuticals and their metabolites in the soil/earthworm/lettuce system irrigated with treated wastewater.** 2nd international conference on risk assessment of pharmaceuticals in the environment. 11/2019.
- Perez S., Barceló D., Manasfi R., Chiron S., Montemurro N. **Development of analytical methods using QuEChERS and HR-MS for the study of fate and uptake of pharmaceuticals and their metabolites in the soil-earthworm-lettuce system following irrigation with treated wastewater.** 17th International conference on chemistry and the environment (ICCE). 06/2019.
- Perez S., Chiron S., Manasfi R., Montemurro N. **Fate and uptake of pharmaceuticals and their metabolites in crops irrigated with treated wastewater – lab and field scale studies.** MUSE workshop, International REUSE MUSE Workshop: Agricultural Water Reuse - how to address health and environmental challenges? 10/2019.
- Perez S., Fagnani E., Montemurro N. **HR-MS-suspect screening of phototransformation products of wastewater-borne pharmaceuticals in rivers.** 17th International Conference on Chemistry and the Environment. 06/2019.
- Pérez Lázaro, Hidalgo J., Dentz M., Puiguyraud A. **Mixing-limited bimolecular chemical reactions at pore-scale.** 11th International Society for Porous Media - Interpore 2019. 05/2019.
- Pérez S., Fagnani E., Montemurro N. **Prioritizing drug TPs solely formed by photolysis in surface waters using LC-HR-MS.** 11th Micropol & Ecohazard Conference. 10/2019.

- Pérez S., Fagnani E., Montemurro N. **SPE-UPLC-HRMS suspect screening method for the identification of pharmaceuticals and their transformation products in surface water after photolysis.** 1st Iberian Meeting in Separation Sciences & MS, XIX Conference of SECyTA, IX Conference of SEEM, and VI Conference of the MS Group of the PSC. 10/2019.
- Pérez S., Montemurro N. **Differential uptake and metabolism of wastewater-borne drugs into soil-lettuce system studied by HR-LC-MS.** 16th Annual Workshop on Emerging High-resolution Mass Spectrometry (HRMS) and LC/MS/MS Applications in Environmental Analysis and Food Safety. 10/2020.
- Pérez-Cova M., Jaumot J., Leme G., Navarro-Martin L., Piña B., Tauler R., Stoll D. **Untargeted lipidomics of zebrafish (Danio rerio) embryos exposed to Bisphenol A and Estradiol using comprehensive 2D-LC-HRMS.** SETAC Europe 30th Annual Meeting. 05/2020.
- Pérez-Cova M., Leme G., Tauler R., Stoll DR., Jaumot J. **Desenvolupament de mètodes cromatogràfics multidimensionals per estudis de lipidòmica no dirigida.** 11a Trobada Joves Investigadors. 01/2020.
- Pérez-Cova M., Navarro-Martín L., Leme G., Piña B., Tauler R., Stoll DR., Jaumot J. **Comprehensive 2D-LC-HRMS for lipidomics: an application to zebrafish (Danio rerio) embryos exposed to endocrine disruptor chemicals (EDCs).** IDÆA - Young Researchers' Week YRW-2020. 09/2020.
- Pérez-Cova MC., Navarro-Martin L., Leme G., Piña B., Tauler R., Stoll D., Jaumot J. **Comparison of effects produced by the exposure of bisphenol A and estradiol in zebrafish embryos (Danio rerio) using an untargeted metabolomics approach.** European RFMF Metabomeeting 2020. 01/2020.
- Petit JE., Albinet A., Lambe A., Kalogridis A., Heikkinen L., Graeffe F., Cirtog M., Féron A., Allan J., Bibi Z., Amodeo T., Karoski N., Aujay-Plouzeau R., Meunier L., Gros V., Bonnaire N., Sarda-Estève R., Truong F., Ehn M., Jokinen T., Aurela M., Maasikmets M., Marin C., Marmureanu L., Eriksson A., Ahlberg E., Freney E., Minguillón MC., Croteau P., Jayne J., Williams L., Favez O. **Evaluation of the density and absorption properties of generated organonitrate particles (pON).** American Association for Aerosol Research 37th Annual Conference, AAAR2019. 10/2019.
- Peña JM., Montemurro N., Chiron S., Barcelò D., Perez S. **Determination of pharmaceuticals in biota using USE, d-SPE clean-up and SWATH acquisition by LC-MS/MS-QTOF system.** 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety. 05/2019.
- Peña JM., Montemurro N., Barcelò D., Pérez S. **Accumulation of Pharmaceuticals residues in fish tissues from polluted rivers.** 2nd international conference on risk assessment of pharmaceuticals in the environment. 06/2019.
- Peña JM., Montemurro N., Chiron S., Barceló D. Pérez S. **Determination of pharmaceuticals in biota using SWATH acquisition in LC-MS/MS-QTOF system: Method development and samples determination.** 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety. 05/2019
- Peña JM., Montemurro N., Chiron S., Pérez S. **Fast method for the extraction, clean-up and quantification of human pharmaceuticals residues in biological samples using USE, d-SPE and LC-HRMS-QTOF in SWATH mode.** 17th International conference on chemistry and the environment (ICCE). 06/2019.
- Pinos J., Latron J., Cayuela C., Nanko K., Levia DF., Llorens P. **Can drop characteristics explain differences in isotopic composition between open rainfall and throughfall?** EGU General Assembly 2019, Wien (Austria). 04/2019.
- Piña B., Raldua D., Prats E., Casado M., Faria M., Puig-Castellví F., Pérez Y., Alfonso I., Garcia-Reyero N., Arick M., Admon A., Ziv T., Hsu C., Ben-Lulu S. **Using a multiomic approach to unravel the mechanisms of acrylamide neurotoxicity.** SETAC North America 40th Annual Meeting. 10/2019.

- Porte C., Pérez-Albaladejo E., Marqueño A. **Using PLHC-1 topminnow liver cells to characterize and predict the effects of plastic additives in fish.** LINZ 2019. 22nd European Congress on Alternatives to Animal Testing. EUSAAT 2019. 19th Annual Congress of EUSAAT. 10/2019.
- Pujades E., Jurado A., Vázquez-Suñé E., Carrera J. **On the design of the dewatering system of a large excavation in Barcelona (Spain) used for the construction of the high-speed train tunnel.** EGU General Assembly 2020. 05/2020.
- Quintana MJ., de la Cal M., Boleda MR., Otero N., Carrey R., García-Galán MJ., García J., Sola V., Queralt E., Isla E., Casanovas A., Frances G., Monllor-Alcaraz LS., Barbieri MV., Postigo C., Barceló D., Ginebreda A., López de Alda M. **Presencia de pesticidas y origen de nitratos y amonio en las aguas. Jornada: Promovent la protecció de l'aigua a l'àrea metropolitana de Barcelona.** 11/2019.
- Radovic J., Bayona JM. **NOAA models to predict the short-term weathering in different marine scenarios.** 15th Bonn OSINET meeting. 24-26/04/2019.
- Rahimzadeh I., Vilarrasa V., Makhnenko R. **Laboratory and numerical assessment of potential CO2 leakage through the caprock.** International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, CouFrac 2020. 11/2020.
- Rahimzadeh I., Vilarrasa V., Makhnenko R. **Two-phase flow characterization of CO2-brine-rock systems: complementary experimental and numerical approaches.** IDAEA Young Researchers' Week (YRW). 09/2020.
- Rebscher D., Makhnenko R., May F., Nussbaum C., Schuster K., Vilarrasa V. **CO2 Long-term Periodic Injection Experiment at the Underground Rock Laboratory Mont Terri.** ECCSEL workshop on underground laboratories for CO2 geological storage research. 06/2019.
- Rebscher D., Nussbaum C., Makhnenko R., Vilarrasa V. **CO2 long-term periodic injection experiment at Mont Terri (CO2LPIE).** Mont Terri Technical Meeting TM-38. 01/2020.
- Rebscher D., Vilarrasa V., Makhnenko RY., Nussbaum C., Kipfer C., Wersin P. **CO2LPIE Project – Combining in-situ, laboratory, and modelling work to investigate periodic CO2 injection into an argillaceous claystone.** International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, CouFrac 2020. 11/2020.
- Rebscher D., Vilarrasa V., Nussbaum C., Hassanzadegan A., Schuster K., May F. **CO2 long-term periodic injection experiment at Mont Terri (CO2LPIE).** Mont Terri Technical Meeting TM-37. 02/2019
- Reche C., Viana M., van Drooge BL., Fernandez FJ., Escribano M., Castaño G., Nieuwenhuijsen M., Adami PE., Bermon S. **Athletes' exposure to air pollution during IAAF World Relays: a pilot study.** International Conference on Air Quality – Science and Application. 12th International Conference on Air Quality. 9-13/03/2020.
- Rivas D., Martínez P., Ginebreda A., Zonja B., Montemurro N., Pérez S., Martínez-Varela A., Vila-Costa M., Abian J., Carrascal M., Barceló D. **MALDI-TOF Imaging and LC-HRMS: New tools for degradation studies of polymer probes exposed to different wastewater environments: Linking chemical transformations and potential microbial consumers.** 67th ASMS Conference. 11/2019.
- Rodil R., González-Mariño I., Montes R., Estévez-Danta A., Hernández F., Celma A., Bijlsma L., Picó Y., Andreu V., Álvarez R., López de Alda M., Postigo C., López-García E., Valcárcel Y., Rico A., Pocurrull E., Marcé RM., Miró M., Prieto A., Quintana López JB. **Monitorizando el consumo de cannabis en España a través de las aguas residuales en el marco de la red ESAR-Net.** I Congreso Internacional sobre Cannabis y sus derivados: salud, educación y ley. 11/2019



- Sabater L., Ginebreda A., Montemurro N., Pérez S., Barceló D. **LC-HRMS/MS detection of transformation products and metabolites of pharmaceutical compounds in artificial river channel exposed to wastewater treatment plant effluent.** 2nd international conference on risk assessment of pharmaceuticals in the environment. 11/2019.
- Salgot M., Folch M., Díaz-Cruz S., Barceló D., Fernández-Alba AR., Bueno MJ., García G., Soler, AC. Risks of pollution and its assessment in wastewater irrigated agricultural systems (ROUSSEAU). IWA 2019. 06/2019.
- Sánchez-Fortún M., De C., López-Carmona S., Díez S., Sanpera C. **Temporal mercury dynamics throughout the rice cultivation cycle: an integrative approach.** ICMGP2019. 09/2019.
- Sauquet E., van Meerveld I., Sefton C., Gallart F., Laaha G., Bezdán A., Banasik K., de Girolamo AM., Gauster T., Karagiozova T., Ninov P., Osuch M., Parry S., Rutkowska A., Tzoraki O. **A catalogue of the representative European intermittent rivers.** EGU General Assembly. 09/04/2019.
- Scheiber L., Vazquez-Suñé E., Bogaard T., Bofill S., Pérez S., Ginebreda A., Luquot L., Rusiñol M., Criollo R., Girones R., Fores E., Gómez E., Duporté G., Garcia-Rios M. **JPI\_URBANWAT project. Tools and criteria for URBAN groundwater management.** EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-8958, <https://doi.org/10.5194/egusphere-egu2020-8958>, 2020
- Scheiber L., Vázquez-Suñé E. **Multivariate statistical analysis as tool for quantifying groundwater reactions.** Session HS8.2.4 – Groundwater flow understanding in water management and environmental problems. EGU2019-7449. EGU General Assembly 2019.
- Sciandra D., Vilarrasa V., Rahimzadeh I., Makhnenko R., Nussbaum C., Rebscher D. **Modeling of the CO2 long-term periodic injection experiment (CO2LPIE) into stratified hard clay rock at Mont Terri.** International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, CouFrac 2020. 11/2020.
- Solaun O., Larreta J., Menchaca I., Rodríguez J.G., López-García E., Martínez E., Zonja B., Postigo C., López de Alda M., Barceló D., Borja Á., Manzanos A. **Occurrence of EU Watch List substances in wastewater and receiving water within the Basque estuaries and coast.** VII International Symposium on Marine Sciences (ISMS 2020). 07/2020.
- Solé M., Montemurro N., Pérez S. **Biomarker responses and metabolites identification in Lumbricus terrestris exposed to drugs of environmental concern, an in vivo and in vitro approach.** 16th Annual Workshop on Emerging High-resolution Mass Spectrometry (HRMS) and LC/MS/MS Applications in Environmental Analysis and Food Safety. 10/2020.
- Soler JM. **Interacció aigua-roca, mineralogia i medi ambient.** MinerMat 2020, Expominer. 25/11/2020.
- Soler JM. **Aigües subterrànies, residus i contaminació.** Jornades Lacetània 2019, I.E.S. Lacetània, Manresa. 12/04/2019.
- Soler JM. **Cement-rock interaction in the framework of experiments at the Grimsel Test Site.** 5th International Workshop on Mechanisms and Modelling of Waste-Cement Interactions. 5–27/03/2019.
- Soler JM., Fernández-Rojo L., Chaparro M C., Queralt I., Galí S., Cama J. **Flow and reaction along the cement-rock interface during CO2 injection. Laboratory experiments and modeling.** EGU General Assembly. 4-8/5/2020.
- Soler JM., Steefel C I., Gimmi T., Leupin O X., Cloet V. **The effect of ionic strength on diffusion in clay. Modeling solute transport and retention in the DR-A experiment at Mont Terri.** Migration 2019. 15–20/09/2019.

- Soler JM., Steefel C I., Gimmi T., Leupin O X., Cloet V. **The ionic strength – EDL effect on diffusion in clay. Modeling an in situ experiment at Mont Terri.** Goldschmidt 2019. 18–23/08/2019.
- Soler JM., Steefel C I., Gimmi T., Leupin O X., Cloet V. **Modeling the effect of ionic strength on diffusion. The DR-A experiment in Opalinus Clay at Mont Terri.** Euroclay 2019. 1–5/07/2019.
- Sprenger M., Llorens P., Cayuela C., Gallart F., Latron J. **Observation of continuously separated mobile and immobile soil water pools despite temporary full saturation.** EGU General Assembly 2019, Wien (Austria). 04/2019
- Sprenger M., Llorens P., Cayuela C., Gallart F., Latron J. **Detecting different subsurface water flow mechanisms with stable isotopes.** Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology and Geochemistry, Andover (USA). 06/2019.
- Sprenger M., Llorens P., Cayuela C., Gallart F., Latron J. **Detecting different subsurface water flow mechanisms with stable isotopes.** Postdoctoral Research Symposium, Raleigh, (USA). 06/2019.
- Sprenger M., Llorens P., Gallart F., Allen ST., Benettin P., Latron J. **Constraining water age estimations for runoff and evapotranspiration fluxes via multi-objective parameterization of storage selection functions based on stable isotopes sample.** AGU Fall Meeting. 12/2020.
- Sprenger M., Llorens P., Gallart F., Latron J. **Subsurface runoff and recharge dynamics in a Mediterranean catchment based on Storage selection functions and end-member splitting analysis.** EGU General Assembly 2020, Wien (Austria). 04/2020.
- Steefel C I., Tournassat C., Soler J. **A mean electrostatic model for ion transport through heterogeneous clay.** Euroclay 2019. 1–5/07/2019. Keynote lecture.
- Sunyer A., Díaz S. **QuEChERS application to the analysis of PPCPs in crops and soils irrigated with secondary and tertiary-treated wastewater.** SETAC 2020. 05/2020.
- Tobías A. **Health effects of desert dust and sand storms: results from the WHO systematic review.** inDust Experts Meeting on Dust Exposure Events & Products and Health Effects. International Network to Encourage the Use of Monitoring and Forecasting Dust Products (inDust COST Action CA16202). 10-11/01/2019.
- Tobías A. **Dust impact on health-WHO report overview.** 3rd inDust General Meeting. International Network to Encourage the Use of Monitoring and Forecasting Dust Products (inDust COST Action CA16202). 22-24/10/2020.
- Tobías A. **Time-series studies for the short-term health effects of desert dust.** inDust Experts Meeting on Dust Exposure Events & Products and Health Effects. International Network to Encourage the Use of Monitoring and Forecasting Dust Products (inDust COST Action CA16202). 24/02/2020.
- Tobías A. **Geographical variability of the minimum mortality temperature on a global scale in a climate change context.** Symposium Climate change: Impact on human health. National Institute of Environmental Studies. 14-15/02/2020.
- Tobías A. **Estimating short and long-term effects of air pollution from a populational mortality cohort with 40 years follow-up.** Symposium Climate change: Impact on human health. National Institute of Environmental Studies. 14-15/02/2020.
- Turull M., Díez S., Fontàs C. **Diffusive Gradient in Thin Films as a useful tool to measure bioavailable mercury in aquatic and terrestrial environments.** 1st Meeting of the Iberian Ecological Society & XIV AEET Meeting (SIBECOL). 02/2019.

- Vaezi I., Vilarrasa V. **Modeling coupled processes in fractured media using a continuum approach.** International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, CouFrac 2020. 11/2020.
- Valdivielso S., Hassanzadeh A., Vázquez-Suñé E., Custodio E., Criollo R. **Main factors that condition the isotopic composition of rain in northern Chile.** Goldschmidt 2019. 08/2019.
- Valdivielso S., Hassanzadeh A., Vázquez-Suñé E., Custodio E., Criollo R. **Drivers of rainfall isotope composition in the northern Chilean.** 46th AIH Congress. Málaga, Spain, 23th to 27th September 2019.
- Valdivielso S., Vázquez-Suñé E., Custodio E. **Atmospheric Circulation and Isotopic Composition of Precipitation in the Central Andes.** AGU Fall Meeting 2020. Online, 1–17 December 2020.
- Valhondo C., Carrera J., Díaz S. **Does the use of organic substrates favour the degradation of emerging organic contaminants during artificial recharge of aquifers?** SETAC 2019. 05/2019.
- Valhondo C., Díaz S., Carrera J. **Quality restoration of Impaired wáter through artificial recharge.** Goldschmidt 2019. 08/2019.
- Valhondo C., Martínez-Landa L., Carrera J., Díaz-Cruz S. **Quality restoration of impaired water through artificial recharge using organic substrates.** EGU General Assembly 2019. 04/2019.
- Valhondo C., Martínez-Landa L., Carrera J., Díaz-Cruz S., Amalfitano S., Levantesi C. **Accelerating quality water improvement with horizontal reactive barriers during artificial recharge of aquifers (notes from ACWAPUR project).** International Congress on Managed Aquifer Recharge ISMAR10. 05/2019
- Vance L. Trudeau, Marylin N. Vera-Chang, Martínez R., Menigen J., Navarro-Martin L., Moon TW. **The antidepressant fluoxetine is a transgenerational neuroendocrine disruptor of stress and behavior.** Canadian Ecotoxicology Workshop (CEW). 10/2019.
- Vázquez-Suñé E., Marazuela MA., Scheiber L., Criollo R., Diviu M., Mayer-anhalt L., Botey J. **Finding geothermal resources under an urban area (Barcelona).** 46th AIH Congress. Málaga, Spain, 23th to 27th September 2019.
- Vázquez-Suñé E. **Rec comtal, el camíno del agua. Segundo itinerario de Baró de Viver a Sant Adria del Besos.** Jornada de Hidrogeodia. Asociación Internacional de Hidrogeólogos–Grupo Español AIH-GE / FCIHS. Barcelona. 23/05/2019.
- Vázquez-Suñé E. **Tools and criteria for urban groundwater management.** Kick-off meeting: Water JPI 2018 Joint Call on Closing the Water Cycle Gap. ERA-NET Cofund Water-Works (JPI Water). Stockholm, Sweden, 12 /04/2019
- Vázquez-Suñé E. **Desafios y oportunidades para los hidrogeólogos.** Conferencia universidad autonoma nacional de honduraSs (UNAH). Instituto Hondureño de Ciencias de la Tierra (IHCIT), Unidad de cambio climático y recursos hídricos. Tegucigalpa (HONDURAS), 12 /09/2019.
- Vázquez-Suñé E. **Por un futuro con agua.** Conferencia. FINISH. Webinar, 14/07/2020
- Vázquez-Suñé E. **Hidrogeologia de salares: desarrollos conceptuales y su aplicación en modelos numéricos.** Workshop. Litica Resources S.A. (Salta – Argentina). Webinar, 3+3 h, 15 y 23/10/2020
- Vázquez-Suñé E., Scheibe L., Criollo R., Valdivielso S., Poza L. **Modelación numérica de los acuíferos de la cuenca de katari (bolivia)– (on-line).** Banco Interamericano de Desarrollo / Ministerio de Medio Ambiente y Agua (MMAyA) de Bolivia. Webinar, 30/11/2020

- Vázquez-Suñé E., Scheiber L., Criollo R., Valdivielso S., Poza L. **Validación, sistematización y apoyo a la implementación de un modelo hidrológico e hidrogeológico de la cuenca katari y lago menor del titicaca – (on-line)**. WORKSHOP. Banco Interamericano de Desarrollo / Ministerio de Medio Ambiente y Agua (MMAyA) de Bolivia. Webinar, 5/02/2020.
- Vega A., Llorca M., Schirinzi G., Ábalos M., Abad E., Farré M. **Microplastics adsorption capacity and transport of contaminants in seawater**. 1st Iberian Meeting on Separation Sciences and Mass Spectrometry. 10/2019.
- Via M., Minguillon MC., Reche C., Querol X., Alastuey A. **Fine aerosol and organic sources variation over four years in Barcelona**. European Aerosol Conference, EAC2020. 09/2020.
- Viana M. **Conventional and novel tools for BC and aerosol monitoring**. Regional Symposium on Combatting Air Pollution of Black Carbon, UN Environment West Asia/Climate and Clean Air Coalition. 26-27/03/2019.
- Viana M. **Traffic as a source of black carbon and major air pollutants in cities**. Regional Symposium on Combatting Air Pollution of Black Carbon, UN Environment West Asia/Climate and Clean Air Coalition. 26-27/03/2019.
- Viana M. **Impact of maritime transport emissions on coastal air quality in Europe**. International conference “Reducing Air Pollution From Maritime Transport In The Mediterranean Sea”. 18/03/2019.
- Viana M. **The Environmental and Health Impacts of Energy, Food and Waste Systems, Science-Policy in Action: Insights from GEO-6 and Major Global Assessments**. UN Environment Assembly (UNEA4). 13/03/2019.
- Viana M. **Impact of maritime transport emissions on coastal air quality in Europe**. International workshop “Environmental and socio-economic benefits of a SECA in the Mediterranean Sea”. 15/01/2019.
- Viana M., Monfort E., Sanfélix V., Salmatonidis A. **Safe production and use of nanomaterials in the ceramic industry: overview of results from the CERASAFE project**. EOH Nano conference. 2-6/06/2019.
- Viana M., Salmatonidis A., Ribalta C., Monfort E., Fraga S., Teixeira JP., Cassee F. **Chemical characterization of airborne nanoparticles in an industrial scenario**. EOH Nano conference. 2-6/06/2019.
- Vila-Costa M., Cerro-Gálvez E., Martínez-Varela A., González-Gaya B., Lundin D. & Dachs J. **Interactions between Anthropogenic Dissolved Organic Carbon and Marine Microorganisms**. Goldschmidt2019. 08/2019.
- Vila-Costa M., Cerro-Galvez E., Martínez-Varela A., Dachs J. **Studies of interaction between hydrophobic anthropogenic dissolved organic carbon and marine microorganisms**. 1st Meeting of the Iberian Ecological Society SIBECOL. 02/2019. Invited talk
- Vila-Costa M., Cerro-Galvez E., Martínez-Varela A., Lundin D., Dachs J. **Microbial responses to anthropogenic dissolved organic carbon in the ocean**. TransCon2019. 05/2019.
- Vilarrasa V. **A journey from investigating anisotropic transport evolution in a rough fracture undergoing shear to predicting injection-induced seismicity**. International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, CouFrac 2020. 11/2020.
- Vilarrasa V. **Using geologic resources to mitigate climate change**. Inaugural Meeting of the InterPore Spanish Chapter. 01/2020.
- Vilarrasa V. **CC(U)S as part of the solution to reach zero emissions with low risk of inducing seismicity**. K-COSEM Research Center Special Workshop. 07/2019.

- Vilarrasa V. **CCS remains a safe option to significantly reduce CO2 emissions.** 10th International CCS Environmental Forum. 07/2019.
- Vilarrasa V. **Process understanding of induced seismicity.** Workshop Quo Vadis Hydrogeology Group UPC-CSIC. 06/2019.
- Vilarrasa V. **Is fault width evolution in induced seismicity analogous to that of natural seismicity?** Workshop Hydrogeology Group UPC-CSIC. 04/2019.
- Vilarrasa V. **CO2 injection in liquid state as an efficient storage concept for reducing greenhouse gas emissions.** International Conference on Innovative Applied Energy IAPE'19. 03/2019.
- Vilarrasa V., Makhnenko R. **CO2 leakage potential as a result of induced seismicity.** 10th Trondheim CCS Conference. 06/2019.
- Vilarrasa V., Parisio F. **The role of geological resources in the decarbonization.** III Conference of University Research on Climate Change: Climate Change and Sustainable Energy. 10/2020.
- Vilarrasa V., Parisio F., Makhnenko R., Wu H. and Rahimzadeh Kivi I. **The role of fault offset in induced seismicity potential.** EGU 2020 Sharing Geoscience. 05/2020.
- Vilarrasa V., Pujades E. **Uncertainty on the hydraulic and geotechnical properties of the ground can be continuously reduced by using smart interpretation techniques.** Ferrovial Build Up!. 12/2019.
- Vilarrasa V., Rebscher D., Makhnenko R., Nussbaum C. **Modeling a long-term CO2 injection experiment at the underground rock laboratory of Mont Terri.** Proceedings of 11th Workshop of CODE\_BRIGHT Users. 05/2019
- Vilarrasa V., Zareidarmiyani A., Makhnenko R., Parisio F. **Long-term effects of fluid injection and production on the thermo-hydro-mechanical behavior of a fractured reservoir.** International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, CouFrac 2020. 11/2020.
- Wu H., Vilarrasa V. **Numerical and analytical solutions to assess induced seismicity.** Workshop Quo Vadis Hydrogeology Group UPC-CSIC. 06/2019.
- Wu H., Vilarrasa V., De Simone S., Saaltink M. and Parisio F. **Assessment of the induced seismicity potential in pressurized and depleted reservoirs: the role of fault permeability.** International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, CouFrac 2020. 11/2020.
- Zareidarmiyani A., Salarirad H., Vilarrasa V. **The effect of discontinuities on the geomechanical response of carbonate reservoirs.** 7th Iranian Rock Mechanics Conference. 04/2020.

## Doctoral Thesis

- Alshahrani, Hamad O. **Evaluation of Ecological Pollution by Pesticides, Pharmaceuticals and Microplastics in Al-Hassa Lakes, Saudi Arabia**. King Saud University, Riyadh, Saudi Arabia. Damià Barceló Cullerès. 14 April 2020. Cum Laude.
- Batlle Vila, Santiago. **Test d'atenció sostinguda (TASS): desenvolupament, validació i estandardització d'un instrument d'avaluació per al cribratge de les dificultats atencionals**. Thesis Doctoral. Universitat Autònoma de Barcelona. Departament de Psiquiatria i Medicina Legal. Facultat de Medicina. Luis Miguel Martín López, Aurelio Tobías Garcés. 23 September 2020.
- Bravo Villarraso, Natàlia. **Contaminants organoclorats, organobromats i organofosforats en població general**. Universitat de Barcelona. Facultat de Química. Joan Grimalt Obrador. 21 November 2019.
- Castro Alcalá, Eduardo. **Laboratory experiments to evaluate the joint effect between heterogeneity and head fluctuation on mixing, effective porosity and tailing**. Universitat Politècnica de Catalunya (UPC). Hidrología Subterránea. Jesús Carrera Ramírez, Daniel Fernández García. 30 May 2019.
- Cayuela Linares, Carles. **Ecohydrological role of forest on the catchment hydrological dynamics**. Universitat Autònoma de Barcelona (UAB). Pilar Llorens; Jérôme Latron. 20 March 2019.
- Cerro Gálvez, Elena. **Analysis of the impact of organic pollutants on marine microbial communities**. Doctoral thesis. Funded by Catalan Government (FI awarded student). Ascribed to the PhD Program in Oceanography of Universitat Politècnica de Catalunya. Maria Vila Costa, Jordi Dachs Marginet. 19 September 2019.
- Céspedes Sánchez, Raquel. **Vigilancia ambiental de compuestos disruptores endocrinos y otros contaminantes prioritarios en el medio acuático mediante técnicas cromatográficas y biológicas**. Universitat de Barcelona, Departament de Química Analítica. Sílvia Lacorte Bruguera, Damià Barceló Cullerès. 29 January 2019. Q: Outstanding
- Criollo Manjarrez, Rotman A. **An approach for hydrogeological data management, integration and analysis**. Escola Tècnica Superior d'Enginyers Canals, Camins i Ports de Barcelona (ETSECCPB). Departament d'Enginyeria del Terreny. Programa de Doctorat Industrial (AGAUR). Enric Vázquez Suñé, Violeta Velasco. 8 March 2019.

- Dalmau Solà, Núria. **Evaluation of the lipidomic and phenotypic effects of environmental stressors on cell cultures through bioanalytic and chemometric approaches (manuscript drafting stage)**. Doctoral thesis. Universitat de Barcelona. Departament d'Enginyeria Química i Química Analítica. Romà Tauler Ferré, Carmen Bedia Girbés. 18 November 2019
- De Almeida Cerqueira, Francisco Diogo. **Influence of agricultural practices on the Microbiome and the Antibiotic Resistance Gene complement in soils, plants, and crops**. Doctoral thesis. Universitat Politècnica de Catalunya. Josep Maria Bayona, Benjamí Piña. 8 July 2020. Outstanding
- Elias Estañol, Gemma. **Innovative analytical methodologies based on ionic liquids for mercury determination in natural waters**. Universitat de Girona. Sergi Díez Salvador. 29 July 2019. Cum laude.
- Fortesa Bernat, Josep. **Assessing temporal variability and controlling factors on the hydrosedimentary response in Mediterranean catchments**. Doctoral thesis. Universitat de les Illes Balears. Joan Estrany (UIB), Jérôme Latron. 24 November 2020
- Garreta Lara, Elba. **Avaluació dels efectes dels factors ambientals en el metaboloma de la Daphnia magna mitjançant mètodes cromatogràfics i quimiomètrics**. Universitat de Barcelona, Departamento de Química Analítica. Romà Tauler Ferré, Sílvia Lacorte Bruguera. 11 November 2019. Q: Cum Laude.
- Junqué Martínez, Eva. **Vies d'exposició a compostos organoclorats i metalls en infants**. Universitat Pompeu Fabra. Departament of Experimental and Health Sciences. Joan Grimalt Obrador. 18 December 2019.
- Lozano Letellier, Alba. **Geochemistry rare earth elements in acid mine drainage precipitates**. Universidad de Barcelona. Carlos Ayora Ibáñez, Alejandro Fernández. 26 November 2019. Cum Laude
- Marazuela Calvo, Miguel Ángel. **Hydrogeology of salt flats: the Salar de Atacama example**. Escola Tècnica Superior d'Enginyers Canals, Camins i Ports de Barcelona (ETSEC-CPB). Departament d'Enginyeria del Terreny. Enric Vázquez Suñé, Sebastià Olivella. 3 July 2020.
- Marqueño Bassols, Anna. **Noves eines per a la detecció de disruptors lipídics i obèsogens ambientals**. Universitat de Barcelona. Química Analítica i Medi Ambient. Cinta Porte Visa. 21 September 2020. Cum lauden
- Martínez López, Rubén Francisco. **Integrative analysis of endocrine disruption in zebrafish (Danio rerio)**. Universitat de Barcelona Laia Navarro Martín, Benjamí Piña. 25 September 2020.
- Martínez Pérez, Laura. **Characterization of seawater intrusion and submarine groundwater discharge in alluvial coastal aquifers: field and laboratory approach**. Universitat Politècnica de Catalunya. Hidrologia. Jesús Carrera Ramírez, Linda Luquot. 9 July 2020.
- Mekni, Sabrine. **Étude de la contamination par diverses familles des polluants organiques persistants d'un écosystème marin (Lagune de Bizerte) par les méthodes chromatographiques couplée à la spectrométrie de masse en tandem**. Faculté des Sciences de Bizerte, Túnez. Ethel Eljarrat Esebag. 14 February 2020. Cum Laude

- Peña Herrera, Juan Manuel. **Análisis cualitativo y cuantitativo de los contaminantes orgánicos polares en peces por medio de espectrometría de masas de alta resolución.** Universitat de Barcelona. Sandra Pérez Solsona, Damià Barceló Cullerès. 4 May 2020.
- Schirinzi, Gabriella. **Chemical and ecotoxicological assessment of microplastics and emerging risks in the coastal environments.** Universitat de Barcelona. Ciències Químiques. Damià Barceló Cullerès, Marinel·la Farré Urgell. 9 June 2020. Cum Laude.
- Soler Sagarra, Joaquim. **Mathematical formulations of water mixing for reactive transport through heterogeneous media.** Universitat Politècnica de Catalunya. Hidrologia Subterrànea. Jesús Carrera Ramírez. 18 July 2020.
- Tadić, Đorđe. **Uptake and metabolization of antibiotics in crops.** Doctoral Thesis. Universitat Politècnica de Catalunya. Josep Maria Bayona i Termens, Benjamí Piña Capó. 4 November 2020
- Turull López, Marta. **Novel developments in the Diffusive Gradient in Thin films (DGT) technique for the determination of bioavailable mercury and other trace metals in aquatic and terrestrial environments.** Universitat de Girona. Sergi Díez Salvador. 19 July 2019. Cum laude.
- Velázquez Gómez, Miguel. **Organic micropollutants in indoor dust: method development, site Specific monitoring and human exposure.** Universitat de Barcelona, Departamento de Química Analítica. Sílvia Lacorte Bruguera. 21 October 2019. Q: Cum Laude.



## Master Thesis

- Astorch Cardona, Aina. **Optimització d'un mètode d'anàlisi de concentracions traça de glifosat i AMPA en mostres d'aigua i orina humana**. Master in Laboratory of Clinical Analysis. Universitat Pompeu Fabra. Joan Grimalt Obrador, Pilar Fernández. Junio 2019.
- Aznar Luque, María del Carmen. **Subproductos de desinfección en agua residual regenerada: anàlisi per espectrometria de masses d'alta resolució i determinació de la toxicitat emprant assajos in vitro**. Master thesis. Universitat de Barcelona. Facultat de Química. Cristina Postigo Rebollo, Cinta Porte Visa. 16 July 2019. Q: Excellent
- Blanco, Yesenia. **Minimal effective time exposure assessment for endocrine disruptors in zebrafish eleutheroembryos. Effects on morphological parameters and initial exploration of potential miRNA targets**. Master thesis. Benjamí Piña Capó, Laia Navarro Martín. Institute of Environmental Assessment and Water Research (IDÆA-CSIC), Spain. November 2020.
- Bulboa Foronda, Ignacio Christian. **Modelo numérico 3D del sector de peine, acuífero cuenca Salar de Atacama, II Región de Antofagasta, Chile**. Master "Profesional en Hidrología Subterránea". Escuela Técnica Superior d'Enginyers Canals, Camins i Ports de Barcelona (ETSECCPB). Departament d'Enginyeria del Terreny. Enric Vázquez Suñé. July 2019.
- Canals Angerri, Anna. **Study of the organic aerosol in a residential neighborhood under influence of multiple emission sources**. Master thesis. Universitat de Barcelona. 21 July 2020.
- De Llobet, Sara. **Spatial and temporal dynamics in soil moisture and their relation to catchment runoff response in the Can Vila catchment (Vallcebre, Catalonia)**. Master thesis. School of Geosciences, University of Aberdeen (UK). Pilar Llorens, Jérôme Latron. January 2020
- De Souza, André Henrique. Modelación numérica del sistema acuífero poroso/cárstico - Grupo Vazante (Paracatu/Minas Gerais/Brasil). Master "Profesional en Hidrología Subterránea". Escuela Técnica Superior d'Enginyers Canals, Camins i Ports de Barcelona (ETSECCPB). Departament d'Enginyeria del Terreny. Enric Vázquez Suñé. September 2020.
- Fernández Moreno, Estefanía. **Comportamiento de contaminantes emergentes de origen urbano durante la recarga artificial de acuíferos y su transferencia mediante la utilización del agua regenerada en agricultura**. Master thesis. Cristina Valhondo, Silvia Díaz-Cruz, Maarten Saaltink. Universitat Politècnica de Catalunya. Barcelona. 21 October 2019
- García Pérez, Helena. **Occurrence and distribution of persistent bioaccumulative toxic pollutants in fish from high-mountain lakes**. Master in Laboratory of Clinical Analysis. Universitat Pompeu Fabra. Pilar Fernández, Joan Grimalt Obrador. June 2020.

- González Romero, Adolfo. **Áreas fuente de polvo desértico e impacto en la mortalidad en Ahvaz, SW de Irán**. Master “Riesgos Geológicos”. Universitat de Barcelona, Universitat Autònoma de Barcelona. Xavier Querol Carceller, Aurelio Tobías Garcés. 2019.
- Guerrero Rubio, Alberto. **Determining the fate of pharmaceutical active compounds in greenhouse lettuce (*Lactuca sativa*) irrigated with reclaimed wastewater**. Universitat de Barcelona-IDÆA. Facultat de Farmàcia. Sandra Pérez Solsona. 9 July 2019. Q: Apto
- Herrera Batista, María Fernanda. **Evaluación de mezclas de subproductos de desinfección con espectrometría de masas usando análisis dirigidos y no dirigidos: identificación y priorización**. TFM “Ingeniería Ambiental”. Universitat Politècnica de Catalunya. María Jesús García Galán, Cristina Postigo Rebollo. July 2020.
- Labad Roig, Francesc. **Determinación de la adsorción y el metabolismo de fármacos en rábanos irrigados con LC-HRMS**. Universitat de Barcelona. Facultat de Químiques. Sandra Pérez Solsona, Nicola Montemurro. 2019. Q: 9.5
- Le Quilleuc, Benjamin. **Analyse multi-échelle de la réponse hydrologique de bassins versants méditerranéens de montagne (Vallcebre, Catalogne)**. Master thesis. Université de Montpellier. Jérôme Latron. September 2019.
- López Fernández, Laia. **Lipidomic evaluation of single and combined effects of polyethylene microplastics and two PCB congeners on human hepatoma cells**. Master thesis. Universitat de Barcelona. Joaquim Jaumot Soler, Carmen Bedia Girbés. September 2020
- Martínez López, Ruben. **Integrative analysis of endocrine disruption in zebrafish (*Danio rerio*)**. Universitat de Barcelona. Benjamí Piña Capó, Laia Navarro Martín. 25 September 2020.
- Mayhua López, Idelfonso Walter. **Definición de sistema de desaguado para la estación el cruce del metro de Lima (Perú)**. Master “Profesional en Hidrología Subterránea”. Escola Tècnica Superior d’Enginyers Canals, Camins i Ports de Barcelona (ETSECCPB). Departament d’Enginyeria del Terreny. Enric Vázquez Suñé. September 2020.
- Menéndez Pedriza, Albert. **Lipidomic evaluation of single and combined effects of polyethylene microplastics and two PCB congeners on human hepatoma cells**. Master thesis. Barcelona. Carmen Bedia Girbés. 13 September 2020.
- Mohamed Rodríguez, Naíma. **Estudi de la degradació de l’Oxibenzona en la recàrrega gestionada d’aqüífers amb barrera reactiva mitjançant HPLC-MS/MS i tècniques electroquímiques**. Universitat de Barcelona. Nuria Serrano, M. Silvia Díaz Cruz. 21 July 2020.
- Morillo Santana, Inayser Alicia. **Evaluación de la Recarga Artificial de Acuíferos como Tratamiento Terciario en Depuración de Aguas Residuales y Comparación Frente a otros Tratamientos Terciarios**. Master thesis. Universitat Politècnica de Catalunya. Silvia Maria Diaz-Cruz; Maarten Saaltink, Cristina Valhondo González. Barcelona. 21 October 2020
- Morillo Santana, Ineyser Alicia. **Evaluación de la Recarga Artificial de Acuíferos como Tratamiento Terciario en Depuración de Aguas Residuales y Comparación Frente a otros Tratamientos Terciarios**. Universitat Politècnica de Catalunya. M. Silvia Díaz Cruz, Cristina Valhondo González. 21 October 2020.
- Muschiatti, Alessandra. **Voltammetric determination of benzotriazoles with screen-printed electrodes**. Universitat de Barcelona. M. Silvia Díaz-Cruz, José Manuel Díaz-Cruz. 16 July 2019.
- Navarro Odriozola, José Oriol. **Propuesta de drenaje para las obras de soterramiento de la Gran Vía en el entorno de la Plaza de las Glorias de Barcelona**. Master “Profesional en Hidrología Subterránea”. Escola Tècnica Superior d’Enginyers Canals, Camins i Ports de Barcelona (ETSECCPB). Departament d’Enginyeria del Terreny. Enric Vázquez Suñé. July 2019.

- Oró Nolla, Bernat. **Determination and occurrence of bisphenols and benzophenone-type ultraviolet filters in white-tailed eagles (*Haliaeetus albicilla*)**. Universitat de Barcelona. Sílvia Lacorte Bruguera. Smøla, Norway. June 2019.
- Pla Bagaria, Marta. **Estudi de pesticides organofosforats i piretroides en mostres d'orina d'infants de 8 anys de la cohort d'Astúries**. Master in Laboratory of Clinical Analysis. Universitat Pompeu Fabra. Joan Grimalt Obrador. June 2020.
- Poza López, Laura. Modelación numérica de los acuíferos de la cuenca Katari (Bolivia). Master "Profesional en Hidrología Subterránea". Escola Tècnica Superior d'Enginyers Canals, Camins i Ports de Barcelona (ETSECCPB). Departament d'Enginyeria del Terreny. Enric Vázquez Suñé. September 2020.
- Quintana López, Gerard. **Estudi de la transferència de fàrmacs en el cultiu de vegetals amb aigües residuals tractades: calibratge mitjançant elèctrodes serigrafiats i anàlisi per HPLC-MS/MS**. Universitat de Barcelona. José Manuel Díaz-Cruz, M. Sílvia Díaz-Cruz. 14 September 2020.
- Ramos Ccaira, Richard H. **Modelo hidrogeológico 2D del Sector de Quelana en el Salar de Atacama, Chile**. Master "Profesional en Hidrología Subterránea". Escola Tècnica Superior d'Enginyers Canals, Camins i Ports de Barcelona (ETSECCPB). Departament d'Enginyeria del Terreny. Enric Vázquez Suñé. July 2019.
- Savva, Katerina. **Biopolymers in the environment**. Universitat de Barcelona. Marinel·la Farré Urgell. 2020. Q: Apto.
- Véjar Ferrada, Tamara Andrea. **Modelo de flujo en la cuenca del Río San José, Región de Arica y Parinacota, Chile**. Master "Profesional en Hidrología Subterránea". Escola Tècnica Superior d'Enginyers Canals, Camins i Ports de Barcelona (ETSECCPB). Departament d'Enginyeria del Terreny. Enric Vázquez-Suñé. July 2019.

## Final Degree Projects

- Balasch García, Aleix. **Análisis de contaminantes emergentes en muestras de biota marina**. End of course project. Universitat de Barcelona, Facultat de Química. Ethel Eljarrat. July 2019. Q: 9
- Blanco, Alexandra. **Study of the environmental exposure and risks of priority mixtures of contaminants in mussels**. Universitat Politècnica de Catalunya. Master Thesis Ciencias Ambientales. Marinel·la Farré Urgell. 2019. Q: Excellent.
- Bravo, Carlota. **Análisis de plastificantes organofosforados en muestras de biota**. End of course project. Universitat de Barcelona, Facultat de Química. Ethel Eljarrat. January 2020. Q: 9.1
- Cabaret, Gaëlle. **Étude de l'absorption de molécules pharmaceutiques sur des barrières réactives: Décontamination des eaux de station d'épuration**. End of course project. Linda Luquot; Geoffroy Deporté, Cristina Valhondo González. Université de Montpellier. BarcelonaMontpellier, 18 September 2020
- Condeminas Rodríguez, Miriam. **Assessment of chromatographic separations and retention time predictions of polar metabolites**. End of course project. Universitat de Barcelona. Joaquim Jaumot Soler. 20 July 2020
- Delgado, Ana. **Detection of degradation genes of organic pollutants in the marine environment**. Marine Science. BSc thesis in Universitat de Barcelona. Maria Vila Costa. 2020.
- Durany, Xavier. **How widespread is antibiotic resistance in the oceans?** Marine Science. BSc thesis in Universitat de Barcelona. Maria Vila Costa. 2020.
- Esquiús Cano, Ferran. **Study of the neurotoxicity of Daphnia magna after the exposure of serotonin and fluoxetine**. Universitat Ramon Llull. IQS. Carlos Barata Martí. June 2019.
- Goyenechea Cunillera, Júlia. **Daphnia magna exposure to  $\beta$ -blockers and neuroactive pharmaceuticals**. Universitat Ramon Llull. IQS. Carlos Barata Martí. June 2020.
- Hammoudan, Sara. **Análisis de compuestos perfluoroalquílicos en muestras ambientales**. Universitat de Barcelona. Facultat de Químiques. Marinel·la Farré Urgell. 2019. Q: Excellent.
- Julià Giraldo, Carmen. **Metabolomic studies of mixtures of MPLs in mussels**. Universitat de Barcelona. Facultat de Químiques. Marinel·la Farré Urgell. 2020. Q: Excellent.
- Llin Brosa, Marc. **Sorption of persistent organic contaminants (POPs) on environmental aged microplastics under environmental conditions**. Universitat de Barcelona. Ciencias Ambientales. Marinel·la Farré Urgell. 2019. Q: Excellent.

- López González, Natalia. **Biological effects and changes in neurotransmitters of zebrafish larvae and adults due to environmental pollutants**. End of course project. IQS School of Engineering. Melissa Faria. 25 June 2020.
- López Millán, Ana. **Accumulation and distribution of Stockholm Convention POPs in gull eggs as indicators of environmental pollution**. TFG. Universitat de Barcelona. Sílvia Lacorte Bruguera. June 2020.
- Mañé Bernabeu, Cora. **Optimization of the chromatographic conditions for the separation of complex mixtures using a design of experiments strategy**. End of course project. Universitat de Barcelona. Joaquim Jaumot Soler. January 2019
- Menéndez Pedriza, Albert. **Microplastics determination in environmental samples using a fluorescence-based approach**. End of course project. Universitat de Barcelona. Joaquim Jaumot Soler. June 2019
- Mestres Martínez, Júlia. **Development of a LC-MS method to evaluate reprotoxic effects in the model cell line JEG-3**. TFG "Química". Universitat de Barcelona. Cinta Porte Visa, Cristina Postigo Rebollo. 27 January 2020. Q: 8.5.
- Molina Millán, Lidia. **Non-target analysis of organic contaminants mixture in mussel from Ebro Delta**. Universitat de Barcelona. Facultat de Químiques. Marinel·la Farré Urgell. 2019. Q: Excellent.
- Molla Garcia, Marc. **Què respirem**. End of course project. Institut Milà Fontanals, Vilafranca del Penedès. March-May 2020. External supervision.
- Oulfanidou, Maria. **Metabolomic studies of mixtures of emerging contaminants in mussels**. Erasmus University of Thessaloniki (Greece). Faculty of Chemistry. Marinel·la Farré Urgell. November 2019.
- Parada, Tamara. **Análisis de retardantes de llama bromados en muestras de aire y polvo**. End of course project. Universitat de Barcelona, Facultat de Química. Ethel Eljarrat. July 2020. Q: 8.7
- Peiró Rivera, Amelia. **Determinació de productes de cura personal en plasma de sang de cordó umbilical humà**. Universitat de Barcelona (Bioteχνologia). M. Silvia Díaz Cruz. 10 September 2019
- Santamaría, Clara. **Utilización de CO<sub>2</sub> para obtención de compuestos orgánicos**. Trabajo de Investigación Bachillerato. Fundación San Pablo CEU. Belén Martrat. 1 October 2020.
- Savva, Katerina. **Metabolomic studies of microplastics in mussels**. Erasmus at the University of Crete (Greece). Faculty of Chemistry. Marinel·la Farré Urgell. 2019. Q: Excellent.
- Wu, Xiaona. **Assessing complex brain disorders induced by pollutants using zebrafish as model organism**. Minor thesis. Universitat de Barcelona. Melissa Faria. 17 July 2019.
- Xu, Jiaqui. **Interaction between CO<sub>2</sub>-rich water and Portland cement and maphic rock**. BSc Thesis. Universitat Politècnica de Catalunya (UPC), Universitat de Barcelona University (UB), Facultat de Geociències. Jordi Cama i Robert. 2019.
- Zareidarmiyan, Ahmad. **Simulation of Thermo-Hydro-Mechanical effects of gas injection on caprock integrity of carbonate reservoirs**. Amirkabir University of Technology, Iran. Hossein Salarirad, Víctor Vilarrasa. 22 February 2020. Q: Excellent (19 out of 20)

---

**Teaching activities**

- Abad, E. 2nd International Online Seminar “Contaminantes Orgánicos Persistentes: Experiencias en mejores técnicas disponibles y mejores prácticas ambientales”. Ministerio de Medioambiente de Colombia. 11/2020.
- Alastuey, A. University subject “Contaminación atmosférica y gestión de la calidad del aire”. Universitat de Barcelona. 02/2019.
- Ayora, C. MSc and PhD Course “Interacción Agua-roca”. Universidad Internacional de Andalucía. 2019/2020.
- Barata, C. Course “Biomarkers in Ecotoxicology: user-friendly approach”. Aveiro University. 2017-2019.
- Bedia, C. MSc and PhD Course “Advanced Course: Metabolomics as a tool in environmental research”. Universidade de Aveiro, Portugal. 2020.
- Bedia, C. MSc Course “Técnicas de imagen química para el estudio estructural y morfológico de tejidos. Aplicación al estudio de alimentos”. Institut Química de Sarrià (IQS). 12/05/2020.
- Carrera, J. Course “Hidrogeología”. CEDEX. 1988-ongoing
- Carrera, J. Course “Métodos numéricos para cálculo y diseño en ingeniería”. Centro Internacional de Métodos Numéricos en Ingeniería. 1987-ongoing
- Díaz-Cruz, S. “Contaminantes orgánicos en el medio acuático continental” en el Máster Universitario en Ingeniería Ambiental de la Universidad Politècnica de Catalunya (UPC). 2011-ongoing.
- Díaz-Cruz, S. PhD program “Química Analítica del Medi Ambient i la Pol.lució”. Universitat de Barcelona, UB. 2019/2020.
- Díez, S. PhD program “Ciencia y Tecnología del Agua”. Universidad de Girona. 2019/2020.
- Díez, S. PhD program “Gestión y Conservación del Mar”. Escuela Internacional de Doctorado en Estudios del Mar (EIDEMAR). 2019/2020.
- Díez, S. PhD program “Química Analítica del Medi Ambient i la Pol.lució”. Universitat de Barcelona, UB. 2019/2020.

- Eljarrat, E. MSc Course “Contaminants orgànics persistents” Escola Tècnica Superior d’Enginyers de camins, Canals i Ports, UPC. 2019/2020.
- Eljarrat, E. MSc Course “Contaminants orgànics persistents”. Facultad de Ciencias Químicas, UB. 2019.
- Farré, M. Course “Continuing Regional Supporting for the POPs Global Monitoring Plan under the Stockholm Convention”. UNEP, within the GEF GMP 2” GF4030-4F34 project. 03/2019.
- Farré, M. Course of the MSc on Toxicología Ambiental y evaluación de Riesgos. Universidad Rey Juan Carlos. 2018-2019.
- Farré, M. Organizer and teacher of the course “Analytical Chemistry for biotoxins”. ITN-Marie Curie NaToxAq. Barcelona. 02/2019.
- Farré, M., Abad, E. Seminar “Challenge related to Bioplastics from a Research Persepective”. Workshop on the Environmentally Sound Management of Plastic Wastes and the prevention of marine litter and plastic pollution. UN Environment. 03-05/04/2019
- Gallart, F. Seminar “Máster en Recursos Hídricos y Medio Ambiente”. Universidad de Málaga. 09/11/2020.
- Gallart, F. Seminar “Máster en Recursos Hídricos y Medio Ambiente”. Universidad de Málaga. 11/11/2019.
- Jurado, A. Activity “Urban groundwater: a strategic resource (HS 8.2)”. EGU General Assembly 2020. 05/2020.
- Jurado, A. Activity “Urban groundwater: a strategic resource (HS 8.2.7)”. EGU General Assembly 2019. 04/2019.
- Lacorte, S. MSc Course “Investigación Básica y Aplicada en Recursos Cinegéticos”. Universidad Castilla-La Mancha. 2019/2020.
- Lacorte, S. MSc Course “Química Analítica y del Medio Ambiente”. Universitat de Barcelona, UB. 12/2020.
- Minguillón, M.C. 4th PMF Training Course “The application of PMF to ACSM/AMS data”. AIRUSE Life Project ENV/ES/584. 02/2020.
- Montemurro, N. Course “Contaminants orgànics en ecosistemes aquàtics i el seu risc ambiental” of the Master Universitari en Enginyeria Ambiental. Universitat Politècnica de Catalunya. 09/2020-01/2021.
- Montemurro, N. Course “Contaminants orgànics en ecosistemes aquàtics i el seu risc ambiental” of the Master Universitari en Enginyeria Ambiental. Universitat Politècnica de Catalunya. 09/2019-01/2020.
- Navarro-Martín, L. “Multi-omic Approaches for the Understanding of Environmental Interactions in Fish Systems Biology”. Universitat de Barcelona, UB. 10/2019.
- Pandolfi, M. Course “Receptor Modelling (PMF v5.0 EPA)”. Institute of Environmental Assessment and Water Research (IDÆA-CSIC). 10/2019.
- Piña, B. Post-doc course “Circular economy associated risks: A toxicogenomic perspective” University of Concepción, Chile. 2019.
- Postigo, C. “Contaminants orgànics en ecosistemes aquàtics i el seu risc ambiental”. MSc “Enginyeria Ambiental”, Universitat Politècnica de Catalunya. 10/2019.

- Postigo, C. Seminar. "High-throughput LC-QToF analysis of Haloacetic acids". SCIEX Seminar "QTOF X500R HRMS facil". 04/2019.
- Querol, X. Curso "Una aproximació holística al medi ambient. La contaminació atmosfèrica urbana. Estat, causes, efectes i accions necessàries". IQS – Universitat Ramon Llull. 04/07/2019.
- Querol, X. Master de Meteorología. Facultat Física, Universitat Barcelona. 24/04/2019.
- Querol, X. Master Química ambiental y fundamental. Universidad A Coruña. 12/03/2019.
- Querol, X. Master Química ambiental y fundamental. Universidad A Coruña. 10/03/2020.
- Querol, X. Seminarios de transporte 2019. Movilidad y calidad del aire urbano. UPC Escuela de Ingenieros de Caminos Canales y Puertos. 06/03/2019.
- Querol, X. Universidad Internacional de Andalucía y Universidad de Huelva. Master Interuniversitario de Tecnología Ambiental. 30-31/01/2019.
- Querol, X. Universidad Internacional de Andalucía y Universidad de Huelva. Master Interuniversitario de Tecnología Ambiental. 01-02/02/2019.
- Querol, X. Universidad Internacional de Andalucía y Universidad de Huelva. Master Interuniversitario de Tecnología Ambiental. 30-31/01/2020.
- Raldúa, D. Webinar "Assessing Neurotoxicity in Aquatic Organisms: From Environmental to human Health Implications". Toxics (Journal from MPDI). 09/2020.
- Soler, J.M., Saaltink, M.W. Master. "Transporte Reactivo". Univ. Politècnica de Catalunya, Dep. de Ingeniería Civil y Ambiental. 2020.
- Tobías, A. Course. "32<sup>nd</sup> Residential summer course of the European Educational Programme (EEPE) in Epidemiology". World Health Organisation e International Epidemiology Association. 25-29/06/2019.
- Tobías, A. Course. "Training school on dust products. International Network to Encourage the Use of Monitoring and Forecasting Dust Products". inDust COST Action CA16202. 4-6/02/2019.
- Tobías, A. Course. "Training school on dust products". International Network to Encourage the Use of Monitoring and Forecasting Dust Products (inDust COST Action CA16202). 27-29/01/2020.
- Tobías, A. Course. "Training workshop on sand and dust storms in West and Northern Africa". World Meteorological Organization Sand and Dust Storm Warning Advisory and Assessment System (SDS-WAS). 9-11/12/2019.
- Tobías, A. Doctorate Program in Medicine. Universidade de Coimbra. November 2019.
- Tobías, A. Doctorate Program in Medicine. Universidade de Coimbra. 12/2020.
- Tobías, A. Master. "Basic Tools for Population/Public Health Research - Part 1: Introduction to Medical Statistics". Master of Public Health (MPH). The University of Tokyo. 04/2020.
- Tobías, A. Master. "Statistical computing". Master Tropical Medicine (MTP), Master International Health Development (MPH), Master Health Innovation (MSc). School of Tropical Medicine and Public Health, Nagasaki University. 11/2019.
- Tobías, A. Master. "Statistics for Population Health". Master Tropical Medicine (MTP), Master International Health Development (MPH), Master Health Innovation (MSc). School of Tropical Medicine and Public Health, Nagasaki University. 11/2019.



- Tobías, A. Master. “Statistics for Population Health”. Master Tropical Medicine (MTP), Master International Health Development (MPH), Master Health Innovation (MSc). School of Tropical Medicine and Public Health, Nagasaki University. 11/2020.
- Tobías, A. Post-conference workshop. “Time-series regression analysis in environmental epidemiology: concepts and its application”. 84<sup>th</sup> Annual Meeting of the Japanese Society of Health and Human Ecology. 3/11/2019.
- Tobías, A. Pre-conference workshop. “Modelling desert dust exposure events for epidemiological short-term health effects studies”. 31<sup>st</sup> Annual Conference of the International Society for Environmental Epidemiology (ISEE 2019). 25/08/2019.
- Tobías, A. Seminar. “A matter of curves”. COVID19 Webinars Program of the Spanish Society of Rheumatology. 18/06/2020.
- Tobías, A. Seminar. “Aplicaciones Shiny para visualización de datos de la epidemia de SARS-CoV-2 (COVID19–Tracker y COVID19–Global)”. Webinar PyData, DataLab, Universidad de Salamanca. 11/06/2020.
- Tobías, A. Seminar. “Epidemiología descriptiva en COVID-19: una cuestión de curvas”. Webinar of the Universidad Tecnológica Equinoccial y Centro de Investigación en Salud Pública y Epidemiología Clínica, Ecuador. 26/06/2020.
- Tobías, A. Seminar. “Epidemiología descriptiva en COVID-19: una cuestión de curvas”. PASPE Program Webinar, Instituto Nacional de Salud Pública, México. 29/10/2020.
- Tobías, A. Seminar. “Epidemiología descriptiva en COVID-19: una cuestión de curvas”. Webinar cycle of dialogues on the use of Scientific Evidence in times of Health Crisis, Universidad de La Frontera, Chile. 04/11/2020.
- Tobías, A. Seminar. “Epidemiología descriptiva en COVID-19: una cuestión de curvas”. Instituto de Efectividad Clínica y Sanitaria, Argentina. 10/12/2020.
- Tobías, A. Seminar. “Geographical variability of the minimum mortality temperature: A multi-country study”. Faculty of Health and Sports Sciences, University of Tsukuba. 29/02/2019.
- Tobías, A. Seminar. “Modelling desert dust exposure events for epidemiological short-term health effects studies”. Institute of Tropical Medicine, Nagasaki University. 14/02/2019.
- Tobías, A. Seminar. “Modelling desert dust exposure events for epidemiological short-term health effects studies”. Faculty of Health and Sports Sciences, University of Tsukuba. 28/02/2019.
- Tobías, A. Seminar. “Modelling desert dust exposure events for epidemiological short-term health effects studies”. Graduate School of Medicine, University of Tokyo. 04/03/2019.
- Tobías, A. Seminar. “Modelling desert dust exposure events for epidemiological short-term health effects studies”. Graduate School of Medicine, Fudan University. 1/04/2019.
- Tobías, A. Seminar. “Modelling desert dust exposure events for epidemiological short-term health effects studies”. Graduate School of Medicine, Graduate School of Public Health, Seoul National University. 3/04/2019.
- Tobías, A. Seminar. “Time-series regression analysis in epidemiological epidemiology studies”. Graduate School of Medicine, The University of Tokyo. 13/02/2020.
- Valhondo, C. Class in the Master’s degree in Environmental Engineering. Universitat Politècnica de Catalunya. 11/2020.
- Valhondo, C. Class in the Master’s degree in Environmental Engineering. Universitat Politècnica de Catalunya. 11/2019.

- Vázquez-Suñé, E. "Caracterización hidroquímica con AK-VAMAPS". Curso presencial de formación continua de la Fundación Centro Internacional de Hidrología Subterránea (FCIHS) en colaboración con el Instituto de Diagnóstico Ambiental y Estudios del Agua (IDÆA) del CSIC. 23-24/05/2019.
- Vázquez-Suñé, E. "Curso Internacional de Hidrología Subterránea, versión a distancia" Edición 19. (CIHS\_D). Fundación Centro Internacional de Hidrología Subterránea. ETSECCPB - Escola Tècnica Superior d'Enginyeria de Camins, Canals i Ports de Barcelona.
- Vázquez-Suñé, E. "Teoría de la modelación matemática del transporte en hidrología subterránea" IV CURSO, MODELACIÓN HIDROGEOLÓGICA AIH-GRUPO ESPAÑOL. Facultad de Ciencias Experimentales Universidad Pablo de Olavide. Sevilla. 12/07/2019
- Vázquez-Suñé, E. "Transporte de Solutos y Trazadores en Aguas Subterráneas" Maestría en Recursos hídricos (UNAH), 2019. Contaminación de Acuíferos Universidad Nacional de Honduras (UNAH). 11-12 /09/2019
- Vázquez-Suñé, E. CURSO "Modelos hidrogeológicos conceptuales y numéricos". Instituto Hondureño de Ciencias de la Tierra (IHCIT), Unidad de cambio climático y recursos hídricos. 09/2019.
- Vázquez-Suñé, E. Curso de Posgrado. "Curso Internacional de Hidrología Subterránea, versión a distancia". Edición 2ª. (CIHS\_D\_IHLLA).
- Vázquez-Suñé, E. Curso de Posgrado. "Curso Internacional de Hidrología Subterránea". Edición 53 CIHS. Fundación Centro Internacional de Hidrología Subterránea. ETSECCPB - Escola Tècnica Superior d'Enginyeria de Camins, Canals i Ports de Barcelona. 01-06/2020.
- Vázquez-Suñé, E. curso online "Transporte de Solutos y Trazadores en Aguas Subterráneas". MAESTRIA EN RECURSOS HÍDRICOS (UNAH). Contaminación de Acuíferos. Universidad Nacional de Honduras (UNAH). 09/2020
- Vázquez-Suñé, E. Curso Posgrado "Curso Internacional de Hidrología Subterránea, versión a distancia. Edición 18. (CIHS\_D)". Fundación Centro Internacional de Hidrología Subterránea. ETSECCPB - Escola Tècnica Superior d'Enginyeria de Camins, Canals i Ports de Barcelona. 2019
- Vázquez-Suñé, E. Curso Posgrado "Curso Internacional de Hidrología Subterránea" Fundación Centro Internacional de Hidrología Subterránea. ETSECCPB - Escola Tècnica Superior d'Enginyeria de Camins, Canals i Ports de Barcelona. 01-06/2019.
- Vázquez-Suñé, E. Master en Geología y Gestión Ambiental de los Recursos Minerales.
- Vázquez-Suñé E. Seminario ihlla. "Estudios hidrogeológicos en salares". Instituto de Hidrología de Llanuras "Dr. Eduardo Usunoff" (Argentina). Azul, Argentina, 10/02/2020.
- Vázquez-Suñé E., Alcaraz M. Seminario ihlla. "Energía geotérmica somera". Instituto de Hidrología de Llanuras "Dr. Eduardo Usunoff" (Argentina). Azul, Argentina, 30/09/ 2019
- Vázquez-Suñé E., Alcaraz M. Seminario Ihlla. "Uso de herramientas comunes en hidrogeología". Instituto de Hidrología de Llanuras "Dr. Eduardo Usunoff" (Argentina). Azul, Argentina. 14/06/2019
- Vázquez-Suñé E., Scheiber L. Taller de trabajo con comunidades y autoridades locales en Bolivia. "Taller de trabajo con comunidades y autoridades para la elaboración del mapa de presiones sobre los recursos hídricos de la cuenca Katari (Bolivia)". Banco Interamericano de Desarrollo / Ministerio de Medio Ambiente y Agua (MMAyA) de Bolivia. La Paz (Bolivia), 26/098/2019

- Vilarrasa, V. Seminar 'Combining geologic carbon storage with geothermal energy production'. Universitat Politècnica de Catalunya (UPC). 04/2019.
- Vilarrasa, V. Seminar 'Geological resources for reaching carbon neutrality'. Institute for Cross-Disciplinary Physics and Complex Systems (IFISC-CSIC). 07/2020.
- Vilarrasa, V. Seminar 'Geomechanical aspects of geologic carbon storage'. University of Florida. 11/2020.
- Vilarrasa, V. Seminar 'Geothermal energy in deep volcanic areas'. Universitat Politècnica de Catalunya (UPC). 05/2020
- Vilarrasa, V. Seminar 'Geothermal energy in supercritical reservoirs'. Mediterranean Institute for Advanced Studies (IMEDEA-CSIC). 10/2020.
- Vilarrasa, V. Seminar 'Induced seismicity potential of CCS'. Seoul National University. 07/2019.
- Vilarrasa, V. Seminar 'Non-isothermal effects induced by liquid CO2 injection'. Yonsei University. 07/2019.
- Vilarrasa, V. Seminar 'Subsurface resources for a changing climate'. Mediterranean Institute for Advanced Studies (IMEDEA-CSIC). 07/2019.
- Vilarrasa, V. Seminar 'Towards controlling induced seismicity'. Swiss Federal Institute of Technology ETH. 04/2019.

Dissemination  
Activities

| Activity                           | 2019   |           | 2020   |            |
|------------------------------------|--------|-----------|--------|------------|
|                                    | Amount | Attendees | Amount | Attendees  |
| Conferences, round tables, debates | 26     | 1000      | 19     | 3495 views |
| Guided visits, open days           | 0      | 0         | 1      | 39         |
| Workshops                          | 3      | 40        | 3      | 435        |
| Exhibitions                        | 2      | 400       | 0      | 0          |
| Outreach fairs                     | 1      | 500       | 1      | 1700 views |
| Training courses                   | 2      | 20        | 2      | 20         |

- Alastuey A., Querol X. "La contaminación urbana procedente del transporte. La situación actual en España". Fundación Naturgy, en la Jornada "Etiquetaje ambiental de vehículos y gestión de la contaminación urbana". 28/03/2019.
- Alastuey A., Querol X. "La contaminación urbana procedente del transporte. La situación actual en España". OCU, en la Jornada "El aire que nos asfixia". 19/11/2019.
- Barceló D., Eljarrat E., Rodríguez S. "Contaminació dels rius, mars i oceans". Aula de l'Aigua de CASSA – Aigües de Sabadell. 2019.
- Bedia C. "¡Información al poder! Los secretos de Data Science al alcance de todos". Semana de la Ciencia. Fundació Catalana de la Recerca. 18/11/2020.
- Carnerero C. "L'ozó: un gas d'efecte hivernacle que ens protegeix i ens contamina". IX Jornades de Medi Ambient (Societat Catalana de Química, Institut d'Estudis Catalans). 5/6/2019
- Díaz Cruz S. "Els elements químics i el seu rol en l'àrea de la salut i l'aigua". 13a Festa de la Ciència. Ajuntament de Barcelona. 10/2019.
- Díaz Cruz S. Yo Investigo. CSIC Catalunya. 02/2020.
- Díaz Cruz S. "Química y Medioambiente". Setmana de la Ciència. Escola Thau Barcelona. 02/2019

- Díaz Cruz S. “¿Son los filtros solares UV tan beneficiosos para el medio ambiente como lo son (o no) para nosotros?”. Jornadas de Medioambiente i-UNAT. 05/2019.
- Díaz Cruz S. “¿Los compuestos de protección solar suponen un riesgo para el ecosistema antártico? Situación actual y perspectivas futuras”. Jornada Científica: Impactos emergentes de la presencia humana en la Antártida. 10/2019.
- Díez S. Talk “El mercurio en la minería de oro: impactos y retos futuros”. MinerMat 2020, Expominer. 18/11/2020.
- Eljarrat E. “Problemática ambiental de la contaminación por plásticos”. Menos residuos, más futuro. Colegio San Miguel. 2019.
- Eljarrat E. “La contaminación por plásticos”. El matí de la recerca. Institut Montserrat. 2019.
- Eljarrat E. “Impacto de los aditivos químicos de los plásticos en la biota marina”. GCISA de la Universidad de Cauca. 2019.
- Eljarrat E. “Impacto de micro- y nano-plásticos en la cadena alimentaria”. IV Congreso de Veterinarios de Seguridad Alimentaria de Canarias 2019.
- López de Alda M., Eljarrat E. “Presencia de pesticidas en aguas y sedimentos en el bajo Ter y otras zonas agrícolas de Cataluña”. Jornada tècnica: Resultats de la prospecció de productes fitosanitaris en el BaixTer. 2019.
- Eljarrat E. “El plástico: Una amenaza para nuestra salud”. Conferències de Lletres i de Ciències. Centre Cívic Casa Golferichs. 2019.
- Eljarrat E. “Plastic pollution: Impact on marine environment”. Multidisciplinary Seminar Program. ETSEQ Universitat Rovira i Virgili. 2019.
- Eljarrat E. “Plastic pollution: Impact on marine environment”. Conferencia invitada en la Facultad de Ciencias de Bizerte Universidad de Cartago. 2020.
- Eljarrat E. “El plástico que comemos y que respiramos”. XVII edición de Encuentros con la Ciencia. 2020.
- Eljarrat E. “Contaminación por Plástico: Impacto en el Medio y en la Salud Humana”. PLASTIC’2020. IDÆA-CSIC. 10/2020.
- Eljarrat E. “Daños colaterales de la COVID-19: La pandemia del plástico” Semana de la Ciencia. Fundació Catalana de la Recerca. 11/2020.
- Eljarrat E. “El problema de los aditivos químicos en la economía circular” Nit de la Recerca. 11/2020.
- Eljarrat E. “Organophosphate and halogenated flame retardants in seafood: Considerations for seafood safety” IAEA Virtual Technical Meeting on the Use of Nuclear and Isotopic Techniques to Strengthen Member State Seafood Safety Programmes. 2020.
- Faria M. Hands-on workshop for high school students: Biomarkers of Oxidative stress, measurement of Catalase activity. Escolab (CSIC). 2019.
- Fernández-Arribas J., Olivero-Verbel R., Moreno T., Reche C., Minguiñón MC., Martines V., Johnson-Restrepo B., Eljarrat E. “Organophosphate plasticizers in air particles from subway stations”. PLASTIC’2020. IDÆA-CSIC. 10/2020.
- Gallart F. “Instalación de dos plafones informativos permanentes sobre *Cambios en el paisaje y Piedras en movimiento*”. Centro de Interpretación de Geología del Parque Natural Cadí-Moixeró, Vallcebre. 13/02/2019.

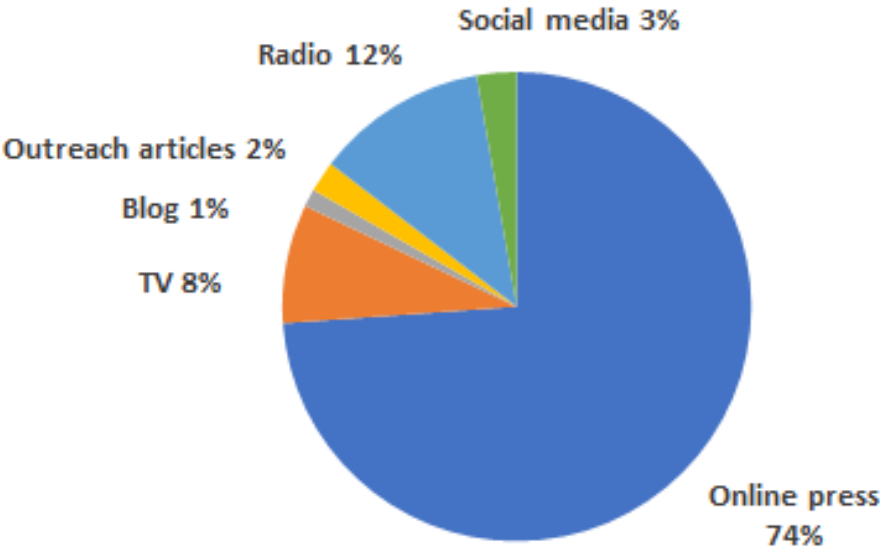
- Izquierdo M. "Sal sin sodio, bodegas y Chernóbil: la radioactividad que nos rodea". Nit de la Recerca. CosmoCaixa. 09/2019.
- Izquierdo M. "La radioactividad en el medio ambiente". Instituto Juan Manuel Zafra. 10/2019.
- Izquierdo, M. Yo Investigo. CSIC Catalunya. 07/2020.
- Lacorte S., Oró-Nolla B., Dulsat M. Ales de plàstic. Dia de la Ciència. Fundació Catalana de la Recerca. 11/2020
- Lacorte S. La Ciència en Primera Persona. Setmana de la Ciència. Fundació Catalana per a la Recerca i la Innovació (FCRI). 17/11/2020
- Llorens P., Latron, J., Moreno, M., Gallart, F. "Instalación de tres plafones informativos permanentes de las actividades que se realizan en las Cuencas de Investigación de Vallcebre". Centro de Interpretación de Geología del Parque Natural Cadí-Moixeró, Vallcebre. 18/11/2020.
- Minguillón MC. Workshop "El aire que respiramos". Día Internacional de la Mujer y la Niña en la Ciencia. Escola Fluvià. 13/02/2019.
- Minguillón MC. Workshop "Calidad del aire", within the EscoLab initiative. Institut Frederic Mompou. 12/0/2019.
- Minguillón MC. "Ventilación para reducir el riesgo de contagio de Covid-19". IDÆA weekly seminars. IDÆA-CSIC Seminars Committee. 7/10/2020
- Minguillón MC., Querol X. JM Felisi. "Ventilación de aulas en tiempos de Covid-19". FAPA Rivas and Criptorubania. 28/10/2020.
- Minguillón MC. "Aerosoles y Covid-19". Organización Médica colegial de España (OMC). 18/11/2020
- Minguillón MC. "Ventilación natural para reducir el riesgo de contagio de Covid-19", within the webinar "Ventilación, sumando medidas para frenar la COVID-19". MC Mutual. 19/11/2020
- Minguillón MC. "Transmisión del SARS-CoV-2: Aprende a medir la ventilación en un espacio cerrado". Semana de la Ciencia. IDÆA-CSIC y Semana de la Ciencia. 23/11/2020.
- Minguillón MC., Querol X. "Transmisión del SARS-CoV-2: ventilación en espacios de trabajo interiores". Delegación CSIC Cataluña. 26/11/2020
- Minguillón MC. "Criterios de ventilación en aulas", within the webinar "Per què hem de ventilar les aules". Intersindical Valenciana. 27/11/2020.
- Minguillón MC. "¿Qué es airear?", within the webinar "Cómo airear las aulas pasando menos frío, y conseguir espacios saludables". Aireamos. 14/12/2020
- Minguillón MC. "Recursos para AIREAR a disposición de colegios Profesionales". Jornada técnica "Espacios ventilados, espacios saludables". Aireamos. 21/12/2020
- Moreno N. Semana de la Ciencia. Escola Thau Barcelona. 2019/2020
- Moreno N. "Saps què respire?". Escola Thau Barcelona. 2019/2020
- Soler J. M. Talk "Interacció aigua-roca, mineralogia i media ambient". MinerMat 2020, Expominer. 25/11/2020.
- Viana M., Esquena, J. "Las chicas son de ciencias (CSIC-4Girls)". Semana de la Ciencia y la Tecnología en el CSIC. 29/11/2020.

- Vila M. "Interactions between anthropogenic dissolved organic carbon and marine microorganisms". Institute of Catalan Water Research (ICRA). 06/2019.
- Vila M. "Interactions between anthropogenic dissolved organic carbon and marine microorganisms". National Center of Biotechnology (CNB). 06/2019.
- Vila M., González-Gaya, B. Co-author of the tale for kids "The lonely bacteria and the toxic friends" within the book "Once Upon a Time... a Scientific Fairy Tale", volume II. Bremen, Germany. 2020.
- Pérez Solsona, S. Yo Investigo. CSIC Catalunya. 10/2020.
- Vilarrasa V. and Parisio, F. "Charge your electric car with the Earth". COP25 Chile UN Climate Change Conference. 12/2019.
- Vilarrasa V. "How to achieve zero emissions: the solution stays underground" CSIC's science blog "Ciencia para llevar" of the newspaper 20 minutos. 12/2020.
- Vilarrasa V. "The challenge of decarbonizing the economy". Inauguration speech as member of the Young Academy of Spain. 07/2020.

Media appearances

|                          | 2019 | 2020 |
|--------------------------|------|------|
| <b>Press releases</b>    | 15   | 14   |
| <b>Media appearances</b> | 131  | 198  |

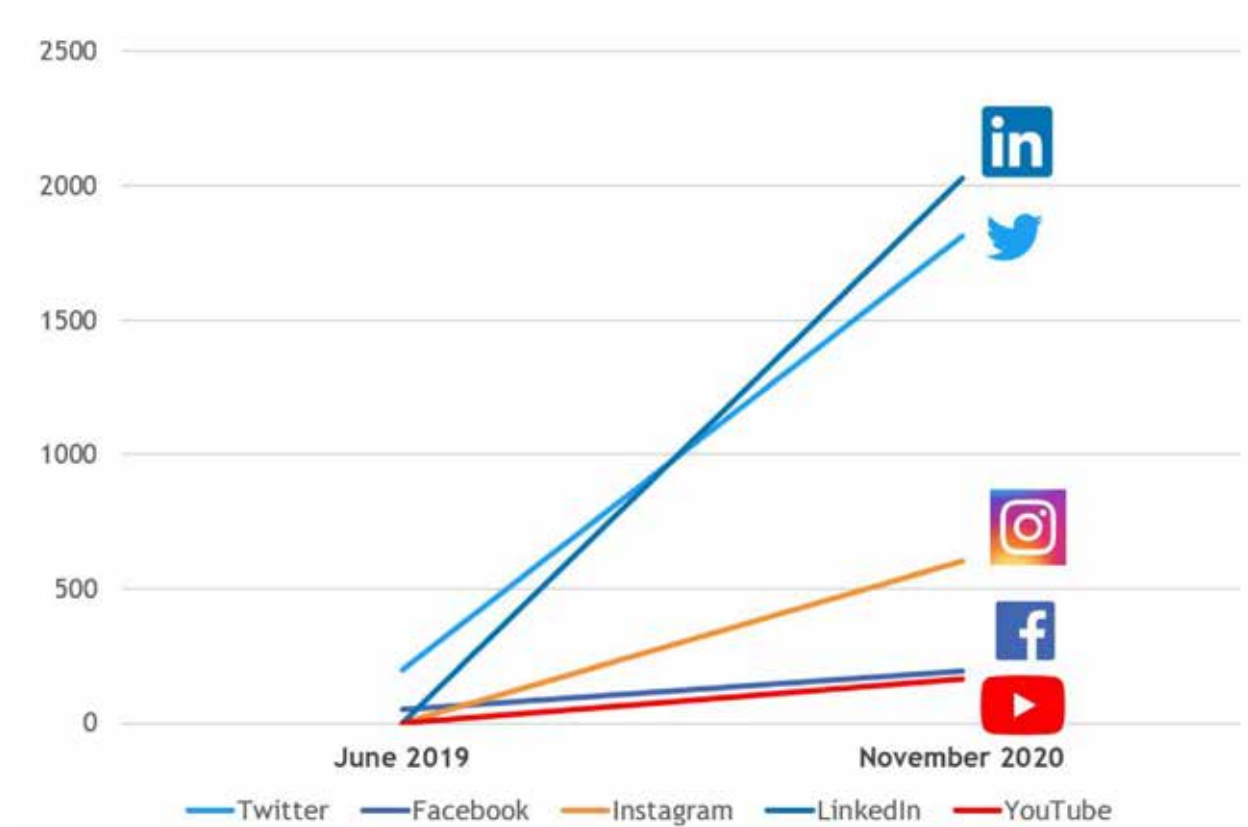
### Media appearances 2019-2020





Social media channels

IDÆA created its own account in the five main social media channels in 2019. All of them have been growing since then, allowing the IDÆA to inform about its research to the society and engaging with citizens, stakeholders and the rest of the scientific community.



Increase in the number of followers for each social media channel between June 2019 and November 2020

### Organisation of Conferences

- Abad, E. Member of the scientific committee of the 1st Iberian Meeting on Separation Sciences and Mass Spectrometry Conference (SECyTA-SEEM). 10/2019.
- Bedia, C., Via, M., Postigo, C., Martínez, R., Izquierdo, M., Criollo, R., Farré M., Pérez S., Flores, C., Marco, E., Queralt, I. IDÆA Young Researchers' Week. 09/2020.
- Dentz, M. Member of the scientific committee of the Interpore 2019 Conference. 05/2019.
- Dentz, M. Co-organizer of the "Mixing in Porous Media" workshop. 02/2020.
- Dentz, M. Organizer of a series of sessions on mixing and reactive transport in heterogeneous media. American Geophysical Union Fall meeting. 12/2019.
- Dentz, M. Organizer of a series of sessions on mixing and dispersion in porous media. European Geosciences Union General Assembly. 04/2019.
- Díaz-Cruz S. End-Users Meeting: Managed Aquifer recharge: addressing the risks of recharging regenerated water. 5/12/2019.
- Eljarrat, E. Organizer of "1as Jornadas sobre Contaminación por Plásticos (PLASTIC'2020): Retos científicos, empresariales y legislativos". 27-28/10/2020.
- Farré, M. Organizer and co-chair of the session "Towards a Sustainable Development of River-Sea Systems (RSS) and Coastal Areas". SETAC Helsinki. 05/2019.
- Gallart, F. "Hydrological connectivity: linking surface and subsurface flow". EGU General Assembly. 11/04/2019.
- Martrat, B; Thomas E; Gomez-Navarro, J. J; Beltrami H; Seim, A. Organizers of the session 'Studying the climate of the last two millennia' in EGU2019. 04/2019.
- Martrat, B. Organizer of CLIMOVAR\_IBCC-Io2k: Global and Iberian Climate Modes of Variability, international workshop. CosmoCaixa. 09/2019
- Minguillón, MC. Training School on source apportionment of organic aerosol. COST Action CA16109. 28-31/05/2019.

- Minguillón, MC. 4th PMF Training Course (Positive Matrix Factorization for source apportionment studies) of the AIRUSE Life Project ENV/ES/584. 5-7/02/2020.
- Minguillón, MC. Organizers of the IDÆA weekly seminar series. 02/2019-ongoing
- Minguillón, MC. Special Session at EAC2019: Source Apportionment of Organics, Black/brown Carbon Using On-line Instrumentation. 09/2019.
- Pérez, S. Scientific Committee of the 1st Iberian meeting in separation Sciences & Mass spectrometry. 10/2019.
- Pérez, S. Scientific Committee of the 15th annual workshop on LC/MS/Ms applications in Environmental analysis and food safety. 05/2019.
- Porte, C. Organizer of the session "Obesogens and Lipid Disorders" of the SETAC Europe 30<sup>th</sup> Annual Meeting. 05/2020.
- Postigo, C. Organizer and co-chair of the session "Mass spectrometry screening strategies for evaluation of human and environmental exposures: Where are we going and what have we learned?". SciCon, SETAC Europe 30<sup>th</sup> Annual Meeting. 05/2020.
- Postigo, C. Organizer and co-chair of the session "Target and NonTarget Mass Spectrometry for Human and Environmental Exposure Assessment". SETAC Europe 29<sup>th</sup> Annual Meeting. 05/2019.
- Querol, X. Organizer of the UIMP Seminar "Bases científicas técnicas para la mejora de la calidad del aire en España". UIMP-Generalitat Valenciana-MITECO-CSIC-IDÆA. 11-13/07/2019.
- Querol, X. Co-organizer of the conference day "Propuestas por AIRUSE LIFE+ para reducir la contaminación urbana causada por el tráfico. Retos científicos y políticos en la mejora de la calidad del aire urbano". Semana de la Ciencia. IDÆA-CSIC and Barcelona City Council. 16/11/2019.
- Tobías, A. "inDust Experts Meeting on Dust Exposure Events & Products and Health Effects". International Network to Encourage the Use of Monitoring and Forecasting Dust Products (inDust COST Action CA16202). 10-11/01/2019.
- Tobías, A. "inDust Experts Meeting on Dust Exposure Events & Products and Health Effects". International Network to Encourage the Use of Monitoring and Forecasting Dust Products (inDust COST Action CA16202). 24/02/2020.
- Vázquez, E. Member of the Organization Committee of the "1<sup>a</sup> Jornada de Geotermia Somera: Una energía renovable ubicua al alcance de todos". 10/2019
- Vila, M. Co-organizer and chair of SETAC session entitled "C02 - Biogeochemistry and fate of organic pollutants and mercury in aquatic systems". 05/2019.
- Vilarrasa, V. Member of the Organization Committee of the 2nd Conference on Coupled processes in Fractured geological media: Observation, modelling, and application (CouFrac). 11/2020.
- Vilarrasa, V., Makhnenko, R., Paricio, F., Yoshioka, K. Organizers of the session "Non-linear poromechanics in geoenery applications" of the AGU Fall Meeting 2020. 12/2020.

- Vilarrasa, V., Spielman-Sun, E., Tomac, I., Ding, J., Tatomir, A., Brondolo, F., Makhnenko, R. Organizers of the session “Integrated Rock Physics: Geochemical, Thermal, and Hydromechanical Processes in the Engineered Subsurface” of the AGU Fall Meeting 2020. 12/2020.
- Vilarrasa, V., Rinaldi, A. P., Cauchie, I., Harrington, R., Scuderi, M. M. Organizers of the session “Induced/triggered seismicity in geo-energy applications: monitoring, modeling, mitigation, and forecasting” of the EGU General Assembly 2020. 05/2020.
- Vilarrasa, V., Pujades, E., Bloemendal, M., Jurado, A., Bour, O., Menberg, K., Attard, G. Organizers of the session “Hydraulic, thermal, chemical and mechanical processes in porous and fracture media, with special emphasis on urban groundwater and geothermal energy” of the EGU General Assembly 2020. 05/2020.
- Vilarrasa, V., Makhnenko, R., Paricio, F., Yoshioka, K. Organizers of the session “Multiphysics of geosystems: coupled thermo-hydro-mechanical-chemical processes in fractured porous media” of the AGU Fall Meeting 2019. 12/2019.
- Vilarrasa, V., Rinaldi, A. P., Valoroso, L., Violay M. Organizers of the session “Induced/triggered seismicity in geoenergy applications: monitoring, modelling, mitigation, and forecasting”. 04/2019.
- Vilarrasa, V., Pujades, E., Jurado, A., Attard, G. Organizers of the session “Urban groundwater: a strategic resource” of the EGU General Assembly 2019. 04/2019.
- Yuval Burstyn; Belen Martrat; Jordi F. Lopez; Eneko Iriarte; Matthew J. Jacobson; Mahjoor Ahmad Lone; Michael Deininger. Organizer of the scientific committee of “Speleothems from the Eastern Mediterranean, Arabian Peninsula and Fertile Crescent: Water Limited Environments in the SISAL Database”. European Geosciences Union General Assembly, EGU2019. 04/2019.



### Awards

- Barceló Cullerès, Damià. Doctor Honoris Causa from the Universidad of Almeria. Relevant research in the field of the environment. 20 October 2020.
- Barceló Cullerès, Damià. Doctor Honoris Causa from the Universitat of Lleida. Relevant research in the field of the environment. 20 February 2020.
- Criollo Manjarrez, Rotman. Awarded with Accessit by the IIAMA Evaluation Committee in the category “Water Access and City”. Doctoral thesis “An approach for hydrogeological data management, integration and analysis”.
- EGAR. Environmental Geochemistry and Atmospheric Research Group of IDÆA. Special Mention. Ciutat de Barcelona Awards 2019. Work “Effectiveness of commercial face masks to reduce personal PM exposure”. 11 February 2020.
- Oró Nolla, Bernat. Wins the III Tesimarató de Química with his work entitled “Desenvolupament i validació d’un mètode analític per a la determinació de COPs a la sang de baldriga de les Bermudes (Pterodroma cahow)”. Facultat de Química. Universitat de Barcelona. 17 November 2020.
- Querol Carceller, Xavier. Doctor Honoris Causa from the Universitat Jaume I. November 2020.
- Querol Carceller, Xavier. National Research Awards 2020. “Alejandro Malaspina” Award. Natural Resources Sciences and Technologies Area. Ministry of Science and Innovation (Spain). 13 November 2020.
- Querol Carceller, Xavier. V Premi Carmina Virgili 2019. Geologist of the year. Col·legi de Geòlegs de Catalunya. 20 December 2020.
- Vázquez Suñé, Enric. Diploma for the direction of the Doctoral Thesis “An approach for hydrogeological data management, integration and analysis”. Autor ROTMAN CRIOLLO.
- Vilarrasa Riaño, Víctor. Chin-Fu Tsang Coupled Processes Award 2020 by the Commission on ‘Coupled Thermal-Hydro-Mechanical-Chemical Processes in Fractured Rock’ of the International Society for Rock Mechanics and Rock Engineering (ISRM). 2020.

**Manager (CID)**

Fajarí Agudo, Lluís

**Communication and Outreach (IDÆA-CID)**

Arroyo, Alicia

Conde Riquelme, Marta

Ochoa Escala, Amelia

Rodríguez Bermejo, Alejandro

Sotres Fernández, Ana

**EU Programmes and Fundraising (IDÆA)**

de Campos Paus, Sergio

Ratera Bastardas, Mercè

**Administration (IDÆA)**

Andreu Albertos, Rosa

Gómez Quiroga, Neila

**Library (CID)**

del Blanco Rodríguez, Fernando

**Animal Facility (CID)**

Padilla García, Alejandro

Prats Miravitllas, Eva (Supervisor)

Rodríguez Palacios, Juan Manuel

**Cell Culture (CID)**

Fabriàs Domingo, Gemma (Supervisor)

Pérez Pomedá, Ignacio

**Administration (CID)**

Aznar Carreño, José

Beltrán Fabregat, Lúdia

Bleda Hernández, María José

Burgos Fernández, Jordi

Burguete Pérez, Asunción

Cabrera Afonso, Eva

Cano Ybáñez, Antonio

Claparols Carrera, Immaculada

Farré Sánchez, Anna

Forcada Pardo, Neus

Garay, Maria

Guillem Argiles, Núria

Isart Margarit, Rosa

Jiménez Sánchez, Carmen

de Julián Margalef, Esperanza

López Pinar, David

Mañas Galán, Marc

Martínez Mateo, Joan Carles

Martínez Serra, Elena

Mata Aparicio, Paulino

Moliner Ferrer, Leonor

Monge Azemar, Marta

Pizarro Guerrero, Mariana

Quiroga Fernández, Àngels

Rodríguez Segura, Bernardino

Santalices Redondo, Carlos

Soto Núñez, Núria

Vega Roldán, Dolores

Vélez García, Carmen

Yélamos Muñoz, Esperanza

**Ad Honorem (IDÆA)**

Rodríguez Clemente, Rafael

idaea  EXCELENCIA  
SEVERO  
OCHOA

 **CSIC**  
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

[www.idaea.csic.es](http://www.idaea.csic.es)