

Part A. Personal Information

DATE	25/01/2021
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Surname(s)	Alastuey Urós	
Forename	José Andrés	
Social Security, Passport, ID number	18164195Z	
Sex	Male	
Age	54	
Researcher codes	WoS Researcher ID (*)	E-1706-2014
	SCOPUS Author ID(*)	7007084450
	Open Researcher and Contributor ID (ORCID)	0000-0002-5453-5495

(*) At least one of these is mandatory

A.1. Current position

Post/ Professional Category	Profesor de investigación / Research Professor	
UNESCO Code	2509.02; 2506.04; 2501.05	
Key Words	Atmospheric pollution; Climate change; Geochemistry	
Name of the University/Institution	Consejo Superior de Investigaciones Científicas	
Department/Centre	Institute of Environmental Assessment and Water Research / Dep. Geosciences	
	Full Address	IDAEA - CSIC, C/ Jordi Girona, 18-26, 08034, Barcelona
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	Phone Number	(+34) 934006124 / 607224681
Start date	2012	

A.2. Education (title, institution, date)

Year	University	Degree	Title
1989	Faculty of Sciences, University Zaragoza	First degree	Ciencias Geológicas
		Masters (if appropriate)	
1994	Faculty of Geology, University Barcelona	PhD	Ciencias Geológicas

A.3. Indicators of Quality in Scientific Production (See the instructions)

Total number of citations (without self-citation): 23565 15732 SCOPUS
Average citations during the last five years: 2282 SCOPUS
Total number of publications: 370 SCOPUS (90% in Q1 and 75% in D1)
Highly cited in field: 20 documents with more than 200 citations
h-index: 84 SCOPUS
Thesis supervised: 10 (2 ongoing)
Six-year research periods recognized (Sexenios): 4 (1993-1998; 1999-2004; 2005-2010, 2011-2016)
Included in the list of Highly Cited Researchers 2014 and 2015 in Geosciences, and in 2019 in Cross-Field, by Clarivate (1% most cited for subject fields and year of publication, http://highlycited.com/)

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

Bachelor in Geology from the University of Zaragoza (1989) and Doctor in Geology from the University of Barcelona (1994), I am currently a Research Professor at IDAEA –CSIC. I was Deputy Director of IDAEA from 2012 until May 2018. I have more than 25 years of experience on environmental geochemistry, namely on atmospheric pollution. My research career has been developed on the lines of environmental geochemistry and natural resources and recycling of industrial waste. In recent years, it has focused on the geochemistry of atmospheric aerosols, aerosols in urban, regional and remote environments, because of its impact on air quality, human and health radiative balance. In 1994 I started my research in this line of work during my postdoctoral stay at the Laboratory of Stable Isotopes (NIGL-NERC, Keyworth, UK), where I applied isotopic techniques for the study of atmospheric samples.

Currently, I am Research Professor in the Environmental Geochemistry and Atmospheric Research group (EGAR, www.idaea.csic.es/egar), from IDAEA. EGAR, consisting of some 30 people, including technicians and researchers, is a reference internationally in the application of geochemical methods to the characterization of atmospheric particulate material (MPA). We have developed an analytical methodology that allows the total characterization of atmospheric aerosols, and that allows to make models for identification of sources and the study of physical-chemical reactions between pollutants.

I acted as advisor for air quality of several important city councils, regional governments, the Spanish Ministry of Environment. I actively participate at the EMEP (program for monitoring and evaluation of the long range transmission of air pollutants in Europe) Task Force on Measurements and Modelling.

I have participated/coordinated around 50 research projects sponsored by the EU, other Spanish or international research bodies, the Ministry of the Environment and other private companies. The results obtained in the framework of these projects have been published in more than 300 scientific publications and in a large number of presentations at congresses and meetings, including more than 60 invited conferences (more than 20 as a speaker).

I am the scientist responsible of the EGAR network of stations measuring atmospheric aerosols, composed of urban background stations (Barcelona), regional background (Montseny) and remote background (Montsec). I led de participation of IDAEA CSIC in the ACTRIS RI (Aerosols, Clouds, and Trace gases Research InfraStructure) network). ACTRIS RI has been selected to the ESFRI roadmap in 2016.

Part C. Relevant accomplishments

C.1. Publications

1. Carnerero, C., Rivas, I., Reche, C., Pérez, N., Alastuey, A., Querol, X. Trends in primary and secondary particle number concentrations in urban and regional environments in NE Spain. *Atmospheric Environment*, 244, 1 January 2021, Article number 117982.
2. Valentini S, Bernardoni V, Bolzacchini E, Ciniglia D, Ferrero L, ForelloAC, Massabó D, Pandolfi M, Prati P, Soldan F, Valli G, Yus-Díez J, Alastuey A, Vecchi R. Applicability of benchtop multi-wavelength polar photometers to off-line measurements of the Multi-Angle Absorption Photometer (MAAP) samples, *Journal of Aerosol Science* (2020), doi: <https://doi.org/10.1016/j.jaerosci.2020.105701>.
3. Karanasiou A Panteliadis P Perez N Mingüillón M 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 vol: 747 pp: 141266, <https://doi.org/10.1016/j.scitotenv.2020.141266>
4. Cerro J 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 vol: 747 pp: 141187, <https://doi.org/10.1016/j.scitotenv.2020.141187>
5. Laj P Bigi A Rose C Andrews E Lund Myhre C Collaud Coen M Lin Y Wiedensohler A Schulz M Ogren J Fiebig M Gliß J Mortier A Pandolfi M Petäja T Kim S Aas W Putaud J Mayol-Bracero O Keywood M Labrador L Aalto P Ahlberg E Alados Arboledas L Alastuey A et al. A global analysis of climate-relevant aerosol properties retrieved from the network

- of Global Atmosphere Watch (GAW) near-surface observatories *Atmos. Meas. Tech.*, 13 (8), 4353–4392, 2020 <https://doi.org/10.5194/amt-13-4353-2020>
- 6. Collaud Coen M Andrews E Alastuey A et al. Multidecadal trend analysis of in situ aerosol radiative properties around the world. *Atmospheric Chemistry and Physics*, 2020 vol: 20 (14) pp: 8867-8908
 - 7. Brean J Beddows D Shi Z Temime-Roussel B Marchand N Querol X Alastuey A Minguillón M Harrison R. Molecular insights into new particle formation in Barcelona, Spain. *Atmospheric Chemistry and Physics*, 2020 vol: 20 (16) pp: 10029-10045. <https://doi.org/10.5194/acp-20-10029-2020>
 - 8. Pérez Pastor, R., Salvador, P., García Alonso, S., Alastuey, A., García dos Santos, S., Querol, X. and Artíñano, B.: Characterization of organic aerosol at a rural site influenced by olive waste biomass burning, *Chemosphere*, 248, 125896, doi:10.1016/J.CHEMOSPHERE.2020.125896, 2020.
 - 9. 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. and Colette, A.: Long-range and local air pollution: what can we learn from chemical speciation of particulate matter at paired sites?, *Atmos. Chem. Phys.*, 20(1), 409–429, doi:10.5194/acp-20-409-2020, 2020.
 - 10. 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. and Kelly, F. J.: Source apportionment of particle number size distribution in urban background and traffic stations in four European cities, *Environ. Int.*, 135(November 2019), 105345, doi:10.1016/j.envint.2019.105345, 2020.
 - 11. 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: X* (2019), doi: <https://doi.org/10.1016/j.aaeoa.2019.100051>.
 - 12. Titos, G., Ealo, M., Román, R., Cazorla, A., Sola, Y., Dubovik, O., Alastuey, A. and 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), *Atmos. Meas. Tech.*, 12(6), 3255–3267, 2019
 - 13. Querol, X., Pérez, N., Reche, C., Ealo, M., Ripoll, A., Tur, J., Pandolfi, M., Pey, J., Salvador, P., Moreno, T. and Alastuey, A.: African dust and air quality over Spain: Is it only dust that matters?, *Sci. Total Environ.*, 686, 737–752, 2019.
 - 14. Ealo, M., Alastuey, A., Pérez, N., Ripoll, A., Querol, X. and Pandolfi, M.: Impact of aerosol particle sources on optical properties in urban, regional and remote areas in the north-western Mediterranean, *Atmos. Chem. Phys.*, 18(2), 2018.
 - 15. Tobías, A., Rivas, I., Reche, C., Alastuey, A., et al.: Short-term effects of ultrafine particles on daily mortality by primary vehicle exhaust versus secondary origin in three Spanish cities, *Environ. Int.*, 111, 144–151, 2018.
 - 16. Alastuey, A., Querol, X., Aas, W., Lucarelli, F., et al.: Geochemistry of PM10 over Europe during the EMEP intensive measurement periods in summer 2012 and winter 2013, *Atmos. Chem. Phys.*, 16(10), 6107–6129, 2016.
 - 17. Pandolfi, M., Alastuey, A., Pérez, N., Reche, C., Castro, I., Shatalov, V. and Querol, X.: Trends analysis of PM source contributions and chemical tracers in NE Spain during 2004–2014: a multi-exponential approach, *Atmos. Chem. Phys.*, 16(18), 11787–11805, 2016.
 - 18. Sunyer, J., Esnaola, M., Alvarez-Pedrerol, M., Forns, J., Rivas, I., López-Vicente, M., Suades-González, E., Foraster, M., Garcia-Esteban, R., Basagaña, X., Viana, M., Cirach, M., Moreno, T., Alastuey, A., Sebastian-Galles, N.ú., Nieuwenhuijsen, M., Querol, X. (2015). Association between Traffic-Related Air Pollution in Schools and Cognitive Development in Primary School Children: A Prospective Cohort Study. *PLoS Medicine*, 12 (3), 24 p.
 - 19. Pey, J., Querol, X., Alastuey, A., Forastiere, F., & Stafiggia, M. (2013). African dust outbreaks over the Mediterranean Basin during 2001–2011: PM10 concentrations, phenomenology and trends, and its relation with synoptic and mesoscale meteorology. *Atmospheric Chemistry and Physics*, 13(3), 1395–1410.



C.2. Research Projects and Grants

Participation in 38 research projects and contracts since 2009: 14 funded by the European Union (3 as PI); 12 projects Spanish RTD Program Research (PN I+D+I; 5 as PI); 2 Transfer contracts / Administration (3 as PI); 2 research contracts with private companies and consortia (18 as PI)

1. Name of the project: FRontiers in dust minerAloGical composition and its Effects upoN climaTe (FRAGMENT). Funding: ERC Consolidator Grant 2017. Coordinator: Carlos Perez García-Pando (BSC). PI CSIC: Xavier Querol (CSIC). Dates: 2017 – 2021.
2. Name of the project: Cambios en la composicion de los aerosoles y sus implicaciones en calidad del aire y clima en el norte de España (CAIAC). PID2019-108990RB-I00. Funding: MICIN. Call: Programa estatal de investigación, desarrollo e innovación orientada a los retos de la sociedad. PIs: Xavier Querol, Marco Pandolfi (IDAEA-CSIC). Dates: 2020 - 2023.
3. Name of the project: ACTRIS IMP Aerosols, Clouds, and Trace gases Research Implementation project - contract 87115. Funding: European Commission. H2020-INFRADEV-2018-2020 (Development and long-term sustainability of new pan-European research infrastructures). Topic: INFRADEV-03-2018-2019. Coordinator: ILMATIETEEN LAITOS. PI CSIC: Andrés Alastuey (IDAEA). Dates: 01/01/2020- 31/12/2023.
4. Name of the project: High ozone, ultrafine particles and secondary aerosol episodes in urban and regional backgrounds in NE Spain (HOUSE). CGL2016-78594-R. Funding body: MINECO. Call: Programa estatal de investigación, desarrollo e innovación orientada a los retos de la sociedad. Principal investigators: Xavier Querol, Andrés Alastuey (IDAEA – CSIC), Dates: 2016 - 2019. Amount of subsidy: 322000.
5. Name of the project: ACTRIS2 Aerosols, Clouds, and Trace gases Research Infrastructure - contract 654619.. Funding body: European Commission. Research and Innovation action (RIA). Coordinator: Gelsomina Papalardo Consiglio Nazionale delle Ricerche (CNR). Principal investigator CSIC: Andrés Alastuey (IDAEA). Dates: 01/04/2015 - 31/03/2019. Total amount: 9,541,215.00. Amount CSIC; 108.863.00..
6. Name of the project::Propiedades ópticas y forzamiento radiativo de aerosoles atmosféricos en el Mediterráneo occidental en función de sus fuentes y composición química.- (PRISMA). Funding body: MEC, CGL2012-39623-C02-0. Coordinated project: Instituto de Diagnóstico Ambiental y Estudios del Agua (IDAEA – CSIC); Universidad Miguel Hernández de Elche, Universidad de Alicante, UPC, CEAM Coordinator: Andrés Alastuey (IDAEA). Dates: 2012- 2015. Amount IDAEA CSIC: 366.210 euros.
7. Name of the project: AIRUSE LIFE+. Testing and Development of air quality mitigation measures in Southern Europe. Funding body: European Commission (LIFE+) LIFE11 ENV/ES/000584. Principal Investigator: Xavier Querol (IDAEA CSIC). Dates: 2012- 2016. Total amount: 2.368.719. Type of participation: researcher.
8. Name of the project: ACTRIS Aerosols, Clouds, and Trace gases Research Infrastructure Network. Propuesta: 262254. Funding body: FP7-INFRASTRUCTURES-2010-1. Funding scheme Combination of CP & CSA.. Coordinator: Gelsomina Papalardo Consiglio Nazionale delle Ricerche (CNR). Principal investigator-CSIC: Andrés Alastuey (IDAEA). Entidades participantes: 28 organismos Europeos. Dates: 2011 - 2015. Amount CSIC; 136,058.20. Total amount project: 7,800,000.00.
9. Name of the project: BREATHE (BRain dEvelopment and Air polluTion ultrafine particles in scHool ChildrEn). Funding body: Advanced Grand ERC del 7ºPrograma Marco de la CE. Entidades participantes: CREAL, CSIC, NEUROVOX y CGR. Coordinator: Dr. Jordi Sunyer, (CREAL). Principal investigator-CSIC: Xavier Querol (IDAEA). Dates: 2011- 2013. Total amount: 2.5 M Euros. Amount CSIC; 0.185 MEuros. Type of participation: researcher.

C.3. Contracts

1. Name of project/contract: Elemental analysis of PM10 and PM2.5 filter samples by ICP-AES and ICP MS. Contractor: "Swiss Confederation" represented by Federal Office for the Environment (FOEN) 3003 Berne (Principal). Dates: June 2018-November 2019. PI: Andrés Alastuey.
2. Name of project/contract: Analysis of aerosol particles obtained by using instruments provided by the Company. Contractor: AEROSOL D.O.O. (SI-1000 Ljubljana). Dates: December 2018-July 2020. PI: Andrés Alastuey.
3. Name of project/contract: 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 Valdemingómez. Contrato: Apoyo Tecnológico. Ayuntamiento de Madrid, 02/09/2019 - 01/03/2021. IP: Andrés Alastuey.
4. Name of project/contract: Detección de episodios naturales de aportes transfronterizos de partículas y otras fuentes de contaminación de material particulado, y de formación de ozono troposférico. Funding body / Contractor: Ministerio de Agricultura y Pesca, Alimentación y Medio Ambiente (MAPAMA), Type of contract: Encargo del MPAMA al CSIC. Expediente N°: 17CAES010. Dates: 2018-2021. Principal investigator: Xavier Querol / Andres Alastuey. Amount: 359.130,57 Euros.. Cuantía: 551.634,27Euros.
5. Name of project/contract: Elemental analysis of PM10 and PM2.5 filter samples by ICP-AES and ICP MS. Funding body / contractor: "Swiss Confederation" represented by Federal Office for the Environment (FOEN) 3003 Berne (Principal). Dates: June 2018-November 2019. Principal investigator: Andrés Alastuey. Total amount: 100000 euros.
6. Name of project/contract: "Analysis of aerosol particles obtained by using instruments provided by the Company". Funding body / contractor: AEROSOL D.O.O. (SI-1000 Ljubljana). Dates: December 2018-July 2020. Principal investigator: Andrés Alastuey. Total amount: 83853 euros.
7. Name of project/contract: Monitorización de la composición química de los aerosoles atmosféricos en el marco del programa de vigilancia atmosférica global (VAG) del Centro de Investigación atmosférica de Izaña. Encomienda de Gestión. Funding body / contractor: Agencia Estatal de Meteorología (AEMET) - Dates: 2015- 2018. Principal investigator: Xavier Querol / Andres Alastuey (IDAEA CSIC). Total amount: 222.222 Euros
8. Name of project/contract: Servicio de análisis y caracterización de la granulometría y de la composición mineral de las partículas en suspensión en diferentes zonas de Cataluña. Type of contract: Contrato con la administración. Apoyo Tecnológico. Funding body / contractor: Departament de Medi Ambient, Direcció General de Qualitat ambiental, Generalitat de Catalunya. Dates: 01/01/2015- 31/12/2017. Principal Investigator: X. Querol (IDAEA CSIC). Type of participation: researcher. Amount: 220.000 euros.
9. Name of project/contract: Estudio y evaluación de la contaminación atmosférica por material particulado y metales en España. Funding body/contractor: Ministerio de Agricultura, Alimentación y Medio Ambiente (MAGRAMA), Expediente N°: '13CAES006/ Encomienda de Gestión. Dates: 10/12/2013- 10/12/2017. Principal investigator: Xavier Querol / Andres Alastuey. Amount: 359.130,57 Euros.

C.4. Patents and other IPR

Amato, F., Moreno, T., Querol X., Alastuey A. Muestreador por aspiración para partículas atmosféricas micrométricas depositadas en vías de tráfico. Solicitud de patente: P201131895. Fecha presentación solicitud 24/11/2011.

C.5. Membership of committees

EMEP Task Force on Measurements and Modelling TFMM.
Advisor on air quality of: Spanish ministry of Environment (MARM; MAGRAMA; MAPAMA); Autonomous Councils (Cataluña, País Vasco, Aragón, Andalucía, Valencia...)

C.6. Editorial Advisory Boards

"Editorial Advisory Board" of "Atmospheric Pollution Research"
(<http://www.atmospolres.com/>);
"Editorial Board" "ISRN Meteorology" (<http://www.hindawi.com/isrn/meteorology>)
Atmosphere <https://www.mdpi.com/journal/atmosphere>

C.7. Tasks of evaluation and management scientific activity

Referee of projects of several national, international agencies (National Evaluation Agency and CICYT, Conservation Biology projects, BBVA Foundation, Generalitat Valenciana, Natural Parks, Junta de Andalucía, Slovenian Research Agency, Natural Sciences and Engineering Research Council of Canada (NSERC), Czech Science Foundation 2012...)

Vicedirector IDAEA since January 30, 2013

Responsible of the CSIC Associated Units: Air Pollution 1 - Center for environmental and technological energetic research (CIEMAT); Atmospheric pollution 2 - Center for environmental studies of the Mediterranean (CEAM); Atmospheric Pollution Group - University of Huelva (UHU);

- Representative of the CSIC in the Board of the Foundation Center for Environmental Studies of the Mediterranean (CEAM).