



PhD fellowship on chemical additives associated with plastics

The institute

The **Institute of Environmental Assessment and Water Research (IDAEA)** is an environmental science institute devoted to the study of the human footprint on the biosphere. Much of the research work at this institute is centred on two of the great environmental challenges of our time: cleanliness and availability of water and quality of air.

Founded in 2008 as a member of the **Spanish National Research Council (CSIC)**, the Institute brings together a wide range of expertise in environmental science. It is organized under two Departments (Environmental Chemistry and Geosciences), established with a strong record of publication in top scientific journals, leading international projects, membership on international committees, and adopting a high-profile contribution to the identification and remediation of environmental problems.

IDAEA has demonstrated 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.

IDAEA has been recently awarded with the distinctive **Centre of Excellence “Severo Ochoa”** (2020-2023), distinction that indicates the high-quality scientific leadership and global impact of the work developed at the centre.

We offer a diverse and inclusive environment where no discrimination against disability, gender, nationality, religion or sexual orientation will occur during the selection process.

The group

The **Environmental Geochemistry and Atmospheric Research (EGAR)** team is specialized in air quality assessment and monitoring, using state of the art air pollutant instrumentation combined with innovative monitoring strategies based on sensor networks. The team has strong expertise in source apportionment to aid in the identification of major sources impacting air quality degradation, supporting the implementation of mitigation strategies. Similarly, the group is experienced in health impact assessment to translate air pollution impacts into premature mortality and morbidity outcomes, easier to understand by the general population.

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EGAR team has a fully equipped and running laboratory for air quality monitoring. Instruments available are high-volume samplers, stationary and portable cascade impactors (ELPI, Berner, PCIS), particle counters and sizers (CPC, NanoScan, SMPS), handheld particle number and black carbon monitors (DiscMini, AE51), nanoparticle aerosol sampler (NAS), portable gaseous monitors, full facilities for particle analysis in the lab (ICP-MS, ICP-AES, ion chromatography), and receptor modelling tools for source apportionment analysis.

The role

PhD student

Field of research: Chemical additives associated with plastics; Air contamination; Human impact.

Research project: HUMAN EXPOSURE ASSESSMENT TO CHEMICAL ADDITIVES ASSOCIATED WITH PLASTICS THROUGH INHALATION.

The primary ambition of this PhD is to devise a fresh approach to characterisation and analysis of chemical additives of plastics via inhalation, and their ecotoxic effects, offering hard science on how to identify where the main environmental impacts are likely to be occurring, and then disseminate our conclusions and recommendations to the widest possible global audience. We will adopt a multidisciplinary approach, integrating atmospheric science, organic chemistry, exposure and statistical analysis. The project includes a PhD stay (2-3 months) abroad, for the development of an analytical methodology for the identification of chemical additives in plastic in airborne particles.

What do we look for?

- **Qualifications**
M.Sc. completed in Chemistry, Earth Sciences, Environmental Sciences or similar
- **Professional experience**
No specific professional experience is required.
- **Competences**
High level of English

Value will be given to candidates with:

- High motivation, initiative and independence
- Good team-working skills
- Programming skills

Working conditions

- **Full-time contract**
- **Target start date:** Flexible
- **Estimated annual gross salary:** FPI grant (Ministry of Science and Innovation) 21.000 euros

How to apply?

Those interested may email their **CV** and **motivation letter** to **Dr. Teresa Moreno** and **Dr. Ethel Eljarrat** at teresa.moreno@idaea.csic.es and ethel.eljarrat@idaea.csic.es, adding “PhD Position” to the email subject.

Deadline: 15th October 2020