

PhD contract: organic volatile compounds in urban and natural environments

The role

We offer a 4-year contract for a PhD student from the Spanish Government call “*Ayudas para contratos predoctorales para la formación de doctores 2022*” that should be opened for applications in October 2022.

The student will use online mass spectrometers (PTR–ToF–MS) for measuring the atmospheric concentrations and emissions of volatile organic compounds (VOCs), both biogenic and anthropogenic, at our urban site in Barcelona and in other natural environments. Depending on the ongoing research lines, there may be possibilities to work on biogenic VOC emission data from birch forests in Sweden, model those emissions, as well as work on emissions of other trace gases in the city of Barcelona.

What do we look for?

- **Qualifications**

M.Sc. studies (completed or in course) in environmental sciences/engineering, biology, physics, chemistry, geology, or related fields.

- **Professional experience**

Previous experience is not required but previous work with scientific instrumentation, programming, and handling of long time series datasets will be considered assets.

- **Competences**

The candidate will operate and maintain advanced scientific instrumentation like online mass spectrometers, and will analyse the data generated by these and other related instruments. Thus, experience with scientific instruments, programming, and data handling and analysis —or a strong commitment to learn and master these skills— are essential.

The publication of the results in international scientific journals, as well as communication with international partners, require a good command of the English language, both oral and written.

The position includes the possibility of operating scientific instruments during fieldwork, in urban or remote settings, during several weeks, either locally or abroad.

Personal characteristics such as interpersonal skills, analytical and problem-solving skills and the ability to work independently and as part of a team are required. Also, high motivation, initiative, and independence.

Working conditions

- **Contract duration: 4 years**
- Annual gross salary: according to the Spanish Government call “*Ayudas para contratos predoctorales para la formación de doctores 2022*” (approx. 16,640 € on the first year, progressing to approx. 22,290 € on the fourth year)
- Target start date: Around June–September 2023, following the official resolution of the Government call

The group

The student will work primarily under the supervision of **Dr. Roger Seco** (<https://www.idaea.csic.es/person/roger-seco>) and collaborate with other members of the **EGAR group** (<https://www.idaea.csic.es/egar>).

The Environmental Geochemistry and Atmospheric Research (EGAR) group 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 affecting air quality degradation, which in turn supports the implementation of mitigation strategies. Similarly, EGAR is experienced in health impact assessment to translate air pollution impacts into premature mortality and morbidity outcomes, easier to understand by the general population. This combination of monitoring tools and methodologies provides the ideal framework to assess the effectiveness of innovative air quality monitoring and modelling tools.

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.

How to apply?

Those interested should email their **CV** and **motivation letter** to **Dr. Roger Seco** at roger.seco@idaea.csic.es, adding “PhD position” to the email subject.

Deadline: The government call will probably close at the end of October 2022, so **interested candidates should contact Dr. Roger Seco as soon as possible.**