

## Position for Research Project on Emerging Organic Contaminants in the Water Cycle

### The role

We offer a 3-year PhD position for working in the **"UPWATER" European H2020 project**. This thesis will be supervised by Dr. Sandra Perez (Environmental Chemistry Dept.) and Dr. Marc Teixidó (Geosciences Dept.). Our research aims at investigating the fate, removal, and occurrence of trace organic groundwater contaminants and their transformation products to understand **groundwater pollution** and to protect and enhance **water quality**. The work will mainly consist in developing LC-MS/MS methodology at high and low resolution, some field work (monitoring and sampling piezometers in the Area Metropolitana de Barcelona) and communicating the results (write scientific papers and participating in international and national conferences).

### What do we look for?

- **Qualifications**

MSc degree in Chemistry, Chemical Engineering, Environmental Engineering, Chemistry, Geology, Geological Engineering, or any related field.

- **Professional experience**

Previous laboratory and analytical methodology experience is not required but highly valued.

- **Competences**

Strong interest in emerging organic micropollutant occurrence, fate, and removal/treatment processes. Advanced spoken and written English is required.

### Working conditions

- **Contract duration: 3 year.**
- Estimated annual gross salary: 22400 euros
- Target start date: March 2023

### The Research groups

The mission of **ONHEALTH group** (Environmental Chemistry Dept.) is to enhance the understanding of the sources, occurrence, fate and behavior of pollutants of anthropogenic and biogenic origin and their impact on the environment and human health. The major focus is on engineered systems, aquatic environments, terrestrial habitats, and the exposure to living organisms. To achieve these goals, we employ four main research lines: 1) Chemical and biological analysis to reliably detection and measurement at ultra-trace levels of contaminants in different matrices; 2) Conduct controlled conditions experiments at our research facilities; 3) Assess the impact of complex mixtures in environment and humans; 4) Assess the biota and human exposure through different routes (dietary, inhalation, dermal).

The **Groundwater and Hydrogeochemistry group** (Geosciences Dept.) studies the hydraulic, chemical, thermal, and mechanical processes that take place in porous media from pore to regional scale. The group employs mathematical, numerical, and analytical 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). Applications include the assessment and management of groundwater resources, groundwater and soil remediation, the management of urban aquifers, the study of emerging inorganic and organic 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.

## 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.

IDÆA 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.

IDÆA 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 may email their **CV** and short **motivation letter** to Dr. Sandra Pérez [spsgam@idaea.csic.es](mailto:spsgam@idaea.csic.es) and Marc Teixidó at [marc.teixido@idaea.csic.es](mailto:marc.teixido@idaea.csic.es), adding “UPWATER position” to the email subject.

**Deadline: 01/03/2023**