Expression of interest

Experienced researcher

Are you a researcher in water related topics looking forward to joining a research institute leading in **wastewater treatment, nature-based solutions, membrane technologies, bioelectrochemical technologies, water reuse, water quality, economic and institutional analysis, ecotoxicology, antibiotic resistance, algae and cyanobacteria identification and monitoring, cyanotoxin bioremediation or microbial ecology?**

IMDEA Water Institute is looking for an experienced researcher. The candidate selected in this process will have the opportunity to be presented as a further candidate for the call "Talent César Nombela (regional Call for the attraction of research talent to be incorporated into research organizations of the Community of Madrid, Spain)

The "Talent César Nombela" call will fund the salary and the costs associated to the research activity for a period of 5 years.

The candidate must meet the following requirements:
- hold a PhD on the date between January 1, 2013 and December 31, 2020. (justified interruptions will be taken into account)
- had a paid professional relationship with foreign research entities for at least two years within the last five years.

IMDEA Water Institute works in a multidisciplinary environment in the following areas:

- Sustainable management of water resources
- Water quality and pollution

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- Water treatment and reuse
- Economic and institutional analysis

IMDEA Water Institute is equipped with high-tech infrastructures:

- **Chemical analysis lab:**
    - Micronanoplastics unit (e.g., Pyrolysis system coupled to Gas Chromatography-Mass Spectrometry – Py-GC-MS; FT-IR Microscopic based imaging system coupled to Raman - µFTIR-Raman; field-flow fractionation system coupled to ultraviolet/refractive index detector with dynamic light scattering – CF3-UV/IR-MALS)
    - Chromatography unit (e.g., High Performance Liquid Chromatography coupled to Ultraviolet detector – HLPC-UV, ion chromatography)
    - Inductively Coupled Plasma Mass Spectrometry Unit (e.g., ICP-MS)
    - Mass spectrometry unit (e.g. Bidimensional Gas Chromatography/MS – GCxGC/TOF; Gas Chromatography/Triple Quadrupole – GC-MS/MS(QqQ); Liquid Chromatography/Triple TOF – LC-QTOF; Liquid Chromatography/MS – LC-TOF; Liquid Chromatography/Triple Quadrupole - LC-MS/MS(QqQ); Liquid Chromatography coupled to Mass Spectrometry with a Triple Quadrupole analyzer – LC-MS/MS(QqQ)).
- **Soils lab:**
    - Sand box and pressures plates for water retention curve
    - Microwave/Oven for digestion and extraction
    - Smart greenhouse with climate control system designed to withstand the demanding conditions of outstanding research)
- **Biology and microbiology lab:**
    - Microscopy unit (e.g., ligh and stereo microscopes)
    - Cyanobacteria and Cyanotoxin unit (e.g., incubators; rotary evaporator; solid phase extraction equipment)

- Molecular Biology unit (e.g., electrophoresis systems, gels documentation system; PCR and Real-time PCR, Nano-photometer; homogenizer for DNA extraction, Nanopore sequencer MinION)
- Ecotoxicology unit (e.g., incubators; bathtubs with automatic temperature and light regulation; equipment for microcosm and standard tests),

- **Geomatic lab** with Geographical Information System (GIS) software; statistical and geostatistical software among others.
- Pilot plants:
  - **Outdoor mesocosms** (e.g., artificial ponds and channels; biodiversity lagoon)
  - **Land application systems** (2x50 m^2 vegetated plots)
  - **Membrane technologies** (e.g., hollow fiber filtration system; lab-scale cross flow for flat membrane of 25 and 300 L; spiral wound ultrafiltration pilot plant)
  - **Microbial electrochemical technologies** (e.g., gradostat; lab-scale microbial electrochemical reactor; electrocoagulation reactor; pre-industrial microbial desalination stack)

Additionally, IMDEA Water Institute offers a unique opportunity to carry out outbreaking research in the field of wastewater treatment and reuse due to its brand-new infrastructure that provide real wastewater and groundwater from the nearby campus to the experimental pilot plants. Researchers that will join IMDEA Water Institute will have the chance to implement their knowledge and widen their expertise conducting research under real scenarios.

WHAT DO YOU HAVE TO SEND US NOW?

If you are an experienced researcher and develop your research activity in any of the areas of interest of IMDEA Water, please submit your **CV** and a **brief project outline** to

empleo.agua@imdea.org, indicating “Talent César Nombela expression of interest" in the subject of the email.

DEADLINE to submit your expression of interest: September 3, 2023