POSTDOCTORAL RESEARCHER - NOVEL ENERGY-ORIENTED MATERIALS GROUP

The mission of the Catalan Institute of Nanoscience and Nanotechnology (ICN2) is to achieve the highest level of scientific and technological excellence in Nanoscience and Nanotechnology. Its research lines focus on the newly-discovered physical and chemical properties that arise from the behaviour of matter at the nanoscale. ICN2 has been awarded with the Severo Ochoa Center of Excellence distinction for two consecutive periods (2014-2018 and 2018-2022). ICN2 comprises 17 Research Groups, 7 Technical Development and Support Units and Facilities, and 2 Research Platforms, covering different areas of nanoscience and nanotechnology.

Job Title: Postdoctoral Researcher

Research area or group: Novel Energy-Oriented Materials Group

Description of Group/Project: Novel Energy-Oriented Materials Group works in **materials science and electrochemistry** for energy-related applications. It leads several research projects and industrial contracts in energy storage and conversion. We design and synthesise new materials, including graphene and other nanocarbons, nanostructured conducting polymers and hybrid nanocomposite materials for their use in energy storage devices, such as rechargeable lithium batteries or other non-lithium technologies (i.e. sodium and zinc), supercapacitors and hybrid devices.

Este contrato es parte del proyecto TED2021-130205B-C21, financiado por MCIN/AEI/10.13039/501100011033 y por la Unión Europea "NextGenerationEU"/PRTR

Main Tasks and responsibilities: Development of a Zn-air battery based on near-neutral electrolytes assisted by polyoxometalates. The main task and responsibilities will be:

- Electroactive nanomaterials synthesis and their characterization (CV, FTIR, TEM, SEM...)
- Preparation of nanocarbons for air cathode development and their characterization (BET, FTIR, SEM, TEM, CV)
- Electrocatalysis characterization for ORR and OER reactions.
- Near neutral electrolytes development
- Assembling of devices and electrochemical measurements (CV, GCD, Impedance)
- Writing scientific reports and publications

Requirements:

- **Education:** Ph.D. in Chemistry, Chemical Engineering, Electrochemical Engineering and Nanoscience and Nanotechnology.
- **Experience and Knowledge:**
  - Synthesis of nanomaterials (inorganic and/or organic)
  - Characterization techniques for nanomaterials (electrochemical, electronic microscopy, chemical analysis)
  - Supercapacitors and batteries (metal-ion, metal-air...)
- **Personal Competences:**
  - Resilience and proactivity
  - Collaborative working person
  - Good communication and writing skills in English will be required (Spanish and Catalan desirable).

Summary of conditions:

- Full time work (37,5h/week)
- Contract Length: 2 years
- Location: Bellaterra (Barcelona)
- Salary will depend on qualifications and demonstrated experience.
- Support to the relocation issues.
- Life Insurance.

Estimated Incorporation date: December

How to apply:
All applications must be made via the ICN2 website and include the following:

1. A cover letter.
2. A full CV including contact details.
3. 2 Reference letters or referee contacts.

Deadline extended for applications: December 9

Equal opportunities:
ICN2 is an equal opportunity employer committed to diversity and inclusion of people with disabilities.

ICN2 is following the procedure for contract of people with disabilities according with article 59 of the Royal Decree 1/2015, of 30 of October.