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Area Advanced Materials for Energy

Area leader: Prof. Joan Ramon Morante

Group: Nanoionics and Fuel Cells

Head of Group: ICREA Prof. Albert Tarancón Rubio

Position: Established Researcher (R3) – Energy Storage

Description

The Nanoionics and Fuel Cell Group announces a position of Established Researcher (R3) in the field of hydrogen technologies and Solid Oxide Cells technology development. The research will be embedded in the Nanoionics and Fuel Cell Group which main research subject is the development and testing of solid oxide cells technology on fuel cell and electrolysis mode. The group's vision is to investigate in new materials, architectures and microstructures as well as new solutions and strategies of fabrication technologies to accelerate the maturity of the SOC technology and its scalability. The vision of the group is to develop own SOC technologies and process and at the same time participate in top level EU projects on the field in collaboration with the main research and industrial actors.

The candidate will be involved in tasks such as writing, managing, supervising and leading projects as well of performing research in projects related to the SOC development and testing. Integrated in a multi-disciplinary team, the candidate is expected to lead research activities as part of international projects or projects with industrial partners, including multi-partners project. The candidate should be used to plan resources and ensure deadlines as well of reporting and communication of technical / research results and supervise a team of PhDs and PostDoc researchers involved on different research projects on the field.

The main specific research lines targeted by the group that the candidate will have to cover are:

- Testing and development of innovative SOC devices as fuel cell, electrolyser or reversible operation.
- Use of innovative ceramic fabrication techniques applied on the field (PLD, Sputtering, Additive Manufacturing).
- Microstructural and Electrochemical characterization of SOC devices.
- Development of stacks (cells and interconnects) and BoP.
- Dissemination and technology transfer of the scientific achieved results.

Requirements

We are looking for a methodical, excellent team-player and results-oriented candidate with high communication skills.

Essential:

-The candidate has to fulfill the minimum requirements for the R3 researchers at IREC under scientific career:

- Have a high number of publications in indexed scientific journals and / or books indexed with ISBN
- As a result of the work developed in the previous stage, it must have participated as a researcher, in R & D projects that total an amount of 1,500,000 euros or more
- As a result of the work carried out during the previous stage, it must have led R + D + i projects as the principal investigator of an aggregate budget of work packages of 500,000 euros.
- Have participated, at least as a member of the research team, in 3 projects to provide value-added services to companies, or to be an inventor of a patent application.

- Have participated in R + D + i projects in cooperation with other international institutions with funding obtained from the European Commission.
- Have conducted at least 3 doctoral theses.

- PhD degree in Chemistry/Chemical engineering or Materials Science & Engineering with specific focus on the energy applications.
- International stage on a different country of the one where the PhD was hold for at least 24 months.
- More than 15 years of experience on scientific research focused on materials for energy applications.
- Experience and knowledge in Solid Oxide Cells research on different applications such as fuel cell, electrolysis and co-electrolysis and different configurations (Planar, tubular or other configurations)
- More than 10 years' experience in EU and international research projects, with active roles in the coordination of WPs.
- Proven results in activating / managing funded projects as Principal Researcher. At least 2.5M€ in the last 5 years both from competitive calls and private companies.
- Experience on supervising PhD and Master thesis (supervisor of at least 5 PhD thesis and 5 masters).
- International recognition in the field of SOC (invited conferences, journal edition, active participation in international associations and platforms, etc).
- Knowledge of Energy Policies at EU, Spanish and Catalan level.
- Author of patents or other Intellectual property rights related with the energy technology sector.
- High activity on dissemination and outreach activities on the Hydrogen technologies field.
- 5 years' experience as an independent researcher with proven team management
- Fluent English, Catalan and Spanish are essential

Valuable:

- Proven experience in transferring research results to industry.
- Awards due scientific or professional activity.
- Experience in consulting services on the energy transition and hydrogen technology.
- Experience in organizing training capabilities courses for professionals.
- Technical reports and technology white papers in hydrogen.
- Proven product-driven research.
- Initiative in Research and Innovation.
- Reviewer of international scientific publications and/or jury of international PhD thesis and masters.

Proposed Jury:

Presidència	Titular	Albert Tarancón
Vocal 1	Titular	Pere Lluís Cabot
Vocal 2	Titular	Joan Ramon Morante

More information about the selection process in:

CALL AND REGULATORY BASES OF THE SELECTION PROCESS BY COMPETITION FOR THE RECRUITMENT OF LABOR PERSONNEL 2021/ CONVOCATÒRIA I BASES REGULADORES DEL PROCÉS DE SELECCIÓ PER A LA CONTRACTACIÓ DE PERSONAL LABORAL 2021