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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: Recognised Researcher (R2) – Energy Storage

Description of the job position

The Nanoionics and Fuel Cell Group announces a position of recognized researcher pre-consolidated (R2) in the field of energy chemical storage using solid oxide electrolysis (SOEC) technology. The research will be embedded in the development of Solid Oxide Electrolysis Cells towards the knowledge on materials science and engineering, as well as the electrochemical characterization of the developed devices. The group's vision is to investigate new materials, architectures and microstructures that allows the improvement of the efficiency through the use of complex geometries and its operation under pressure. The research will include the use of additive manufacturing technologies as a new fabrication tool to achieve innovative and complex devices that promotes the commented targets on efficiency and durability. The proposed geometries and operation conditions will be first rationalized by the use of modeling to ensure the predicted improvements.

The candidate will be involved in tasks such as managing related projects, supervising master and PhD students and leading projects as well as performing laboratory research in the activities of SOEC development projects. The aim of the group is to cover different levels of TRL for the described technology, covering from the innovation in materials and fabrication processes to the prototyping.

Integrated in a multi-disciplinary team, it is also expected that the candidate 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 present consolidated knowledge on the energy storage and solid oxide cells field.

Requirements

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

Essential:

- The candidate has to fulfill all the requirements of R2 researchers level of the internal IREC evaluation:
 - Title of Doctor
 - Have a number of publications in indexed scientific journals and/or books indexed with ISBN, related to the work of the thesis.
- Master in Energy storage or energy technologies
- PhD degree in Chemistry/ Physics or Chemical Engineering with special focus on energy storage technologies.
- International stage on a different country of the one where the PhD was hold for at least 24 months.
- More than 5 years of hands-on experience Solid Oxide Electrolysis Cells technology, operation of the devices from cell to stack level, reversibility SOFC-SOEC, high pressure operation and/or co-electrolysis.
- 5-years experience in international research projects, with active roles in the coordination of WPs.
- Proven experience on industrial projects of technology transfer (on SOC technologies).
- Scientific publications as first author in papers published in journals of the energy field.

- Contributions to international conferences on the field of SOC technologies.
- Master and PhD student supervision and management.
- Fluent English, Catalan and Spanish are essential

Preferred:

- Experience and knowledge in modeling device- and stack-level performance of SOC technologies.
- Proven experience in developing testing methods and monitoring.
- Proven experience in prototyping.
- Invited contributions to conferences and/or other international recognitions (prizes, editorial, associations and platforms, etc).
- Clear view in “Research and innovation funding attraction” (regional, national and international levels).
- Proven experience and motivation for outreach and dissemination activities.

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