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Area Advanced Materials for Energy

Group: Nanoionics and Fuel Cells

Head of Group: Albert Tarancón

Position: Tenure Track- EffiSOEC

Dead Line: 21st April 2023

Starting date: 5th May 2023

Experienced researcher (R2) in the field of energy chemical storage using solid oxide electrolysis (SOEC) technology

Description of the job position

The Nanoionics and Fuel Cell Group announces tenure track position of an experienced researcher (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. This work will be in the frame of the EffiSOEC project where research centers and industries join the efforts to develop a new SOEC technology. The aim is to investigate new materials, architectures and microstructures that allows the improvement of the efficiency and to scale up the technology at stack and system level. The proposed technology and operation conditions will be also rationalized by the use of modeling to ensure the predicted improvements.

The candidate will be involved in tasks such as managing related projects, supervising students and 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 researcher's 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.
- More than 4 years of experience Solid Oxide Electrolysis Cells technology, operation of the devices from cell to stack level, reversibility SOFC-SOEC, high pressure operation, co-electrolysis.
- 4-year experience in research projects, with active roles in the coordination of WPs (Eu and national).
- Experience on industrial projects of technology transfer.
- Scientific publication as a first author with considerable impact on the field.
- Participation on international conference on the field.
- Fluent English

Preferred:

- Experience in modeling for SOEC.
- Experience in transferring research results to industry.
- Scientific publications and Public technical reports.
- Initiative in Research and Innovation.
- Experience in testing methods and monitoring.
- Experience in Prototyping.
- Experience and knowledge in modeling.

Applicants must submit the following documents by email to irecjobs@irec.cat; atarancon@irec.cat and mtorrell@irec.cat.

Reference:

- Curriculum Vitae, specifying the completed degree and any relevant professional experience.
- Motivation letter.

Offer of job position:

We offer a Tenure Track position for 30 months on the frame of EffiSOEC project.

Salaries will be paid in accordance with the IREC's salary policy, depending on the candidate's qualification and professional experience.