**Publish Date:**

**N. Ref.:**

**Area Advanced Materials for Energy**

**Group:** Nanoionics and Fuel Cells

**Head of Group:** Albert Tarancón

**Position:** Tenure Track- Advanced Manufacturing for Energy devices

**Description of the job position**

The Nanoionics and Fuel Cell Group announces a tenure track position of a PostDoctoral experienced researcher (R2) in the field of energy chemical storage using solid oxide cells (SOC) technology. The research will be embedded in the development of Solid Oxide Electrolysis Cells towards the knowledge on materials science and engineering. The work also includes the study of the SOC integration with several catalytic processes for synthetic fuel generation by the development of ceramic reactors and technology coupling. This work will be in the frame of different national and european projects where research centers and industries join the efforts to develop new energy technology solutions focus on Power To Gas routes. 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 energy and catalytic devices. 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 on related topics
* Have a number of publications in indexed scientific journals and/or books indexed with ISBN, related to the work of the project.

- Master in Advanced Materials

- PhD degree in Chemistry/ Physics or Chemical Engineering with special focus on Hydrogen Technologies

-Knowledgement on advanced manufacturing technologies for ceramic materials (3D Printing, UHS, etc..)

- More than 4 years of experience Solid Oxide Electrolysis Cells technology, operation of the devices from cell to stack level.

- 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 SOC.

-Experience in heterogeneous catalysis using ceramics

- 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](mailto:irecjobs@irec.cat); [atarancon@irec.cat](mailto: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 (R2.1) starting on December of 2024 at the Nanoionics Group at IREC.

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