JOB OFFER

PhD RESEARCHER

Position: PhD researcher in low temperature electrolysis
Offer date: CIIAE web
Project: CIIAE – Ref. PD- ELECTROLISIS
Department: Hydrogen and Power-to-X
Estimated starting date: 2023

Workplace:	University of Extremadura. Cáceres campus	
Tasks to be develped:	Electrochemistry is crucial for studying hydrogen production behaviour and electrochemical reactions, especially in low-temperature electrolysis. This technique allows for a detailed understanding of membrane and catalyst materials structures, which can be fully characterized through traditional and new experimental methods. Researchers can gain insights into fundamental electrolysis processes and explore uncharted territories. Developing new and optimizing existing materials to improve low-temperature electrolysis efficiency is a primary objective. Electrochemical and chemical techniques play a critical role in advancing energy production and storage development. The selected candidate is expected to perform the following tasks: – Performing polymer synthesis, membrane preparation. – Catalyst synthesis that increases hydrogen generation efficiency. – Chemical and electrochemical characterization of the new materials. – Collaborations with experimental researchers from CIIAE and beyond. – Provide recommendations to decision makers based on results. – Writing 1 paper per year as first author or co-author in high-ranked journals – Good time management with respect to tasks. Challenges: To achieve a complete understanding of the electrochemical properties of new materials designed to replace commercial materials in order to improve the efficiency of electrolyzers.	
Duration of the contract and salary:	Temporary Contract Initial duration: September 2025, with the possibility of extension	Gross Salary + S.S. Fees Set by law
Academic background required:	Master's degree in materials science, electrochemistry, organic or inorganic chemistry, chemistry engineering, or related disciplines	
Other education:		
Professional experience:		
Job requirements (have to be fulfilled):	**Specific techniques (analytical, software, calculations, prototyping, etc.)**	– Some first learning or working experience on polymer synthesis or catalysis synthesis materials. – Experimental laboratory skills, for example, design an experimental protocol. – Knowledge of electrolysis, hydrogen generation and power-to-X

	Participation and/or collaboration in R&D&I/business projects	
	Languages	Excellent oral and written skills in English
	Cross-cutting competences	– Commitment to open science in terms of research methods, data and publications – Ability to work in a diverse and flexible academic environment in a team-oriented, but independent way. – Strong interest in new energies and self-motivation. – High level of frustration tolerance.
	Willingness to travel and stay abroad	The candidate is expected to travel, both nationally and internationally, in the context of projects and conferences
	Publications: scientific articles (in journals indexed in Web of Science and/or Scopus), theses (PhD and/or Master's), presentations at conferences, reports, technical reports, technical guides, etc.	A successfully completed master thesis on a relevant topic (completed or as-advanced-as-possible thesis to be included in the job application. The final, successful thesis will be required for starting with the position)

To be evaluated (adds points to the final evaluation):

- Some first apprenticeship or work experience in organic chemistry and organic products.
- Some first working or learning experience in nanoparticles synthesis.
- Knowledge of Spanish and/or Portuguese.
- Experience with industrial collaborations and/or previous experience working on industry.
- Knowledge of and/or experience in collaborating with modelling and simulation, e.g., atomistic simulations and/or CFD.
- Experience is scaling up from lab to prototypes.
- Grades in master's and bachelor's degrees (documents to be included in the job aapplication).
- Motivation letter (maximum 1 page) included in the application.
- Evaluation provided by 2 referees via telephone conversation. The contact details of the referees (e-mail and telephone) are provided by the candidates in their application.

Selection process details:

Technical test: NO

Language (English): yes **(will be evaluated during the interview)**

Job interview: yes

Interested candidates:

Please, send all the documents requested by the terms and conditions of the call for the proposal, with the deadline being 15 calendar days from the day following the publication in the CIIAE web indicating the following reference: **Ref. PD- ELECTROLISIS (HIDRÓGENO Y POWER-TO-X)**

JOB OFFER

FUNDECYT-PCTEX (Edificio Parque Científico Tecnológico), Avda. de la Investigación, s/n, Edificio PCTEX, Campus de la Universidad de Extremadura – 06006 Badajoz (España)

Email: ciiae.personal@fundecyt-pctex.es Phone number: +34 924 014 594

www.fundecyt-pctex.es

www.ciiae.org