

JOB OFFER

SENIOR RESEARCHER

Position: Senior researcher in solid oxide technology
Offer date: DOE publication
Project: CIIAE - Ref^a IS-ÓXIDO (HIDRÓGENO Y POWER-TO-X)
Department: Hydrogen and Power-to-X
Estimated starting date: January 2023

Workplace:	University of Extremadura. Cáceres campus	
Tasks to be developed:	<p>Green hydrogen is a key energy vector for the energy transition. The production of low cost and efficient green hydrogen with electrolysis is therefore must needed. The candidate is expected to research on solid oxide electrolysis (SOE) and solid oxide fuel cells (SOFC).</p> <p>The selected candidate is expected to perform the following tasks:</p> <ul style="list-style-type: none"> – Developing an attractive research agenda in the field of solid oxide electrolysis and fuel cells – Acquisition of competitive funding, both private and/or public, e.g., PhD students and postdocs. – Successful Collaboration with universities, research institutes and companies at national and international level. – Successful guidance of PhD, postdocs and master students, i.e. they meet their own requirements – Writing papers as first authors (e.g., 1 paper p.a.) in a high-ranked journal – Project management and project administration (internal and external), also towards the department and CIIAE <p><u>Challenges:</u> Increasing the efficiency, reducing the cost, improving the lifetime and reducing the environmental impacts of hydrogen generation. Work towards reversibility of SOE technology.</p>	
Duration of the contract and salary:	Temporary Contract Initial duration: November 2024, with the possibility of extension	Gross Salary + S.S. Fees Gross Salary Range: 41 000 € - 45 000 €
Academic background required:	A PhD in material sciences, electrochemistry, chemistry, chemical engineering, or similar.	
Other education:		
Professional experience:	<ul style="list-style-type: none"> – At least 2 years of post-doctoral experience – Proven experience in acquiring and/or writing competitive project proposal, for example, project or career funding – Proven experience in supervising PhD and/or master students (for example, as daily supervisor) 	

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Job requirements (have to be fulfilled):	Specific techniques (analytical, software, calculations, prototyping, etc.)	<ul style="list-style-type: none"> – Excellent lab and analytical skills including synthesis of ceramic components (e.g., solid-state reaction and wet chemistry methods) – Experience with some diffraction, microscopic and spectroscopic characterization techniques for structural and microstructural characterization such as X-ray diffraction (XRD), scanning electron microscopy (SEM), transmission electron microscopy (TEM), atomic force microscopy (AFM), energy-dispersive analysis (EDS), X-Ray photoelectron spectrometry (XPS) – Experience with some thermal analysis methods such as thermogravimetry analysis (TGA), differential thermal analysis (DTA), differential scanning calorimetry (DSC), dilatometry/thermomechanical expansion measurements – Demonstrated experience of fabrication and testing of solid oxide electrochemical cells, e.g., DC methods and AC impedance spectroscopy, Seebeck measurements, potentiostatic/galvanostatic polarization methods.
	Participation and/or collaboration in R&D&I/business projects	Proven participation on at least 3 R&D projects
	Languages	Excellent oral and written skills in English
	Cross-cutting competences	<ul style="list-style-type: none"> – Ability to lead a team towards financing and objectives – Commitment to open science in terms of research methods, data and publications – Proven experience with industrial collaborations and/or previous experience working on industry – Experience on collaborating with other colleagues from the same department and beyond
	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.	Strong track-record of academic publications as first author and co-author as the candidate is expected to publish in top journals in the field. At least 10 publications in Scopus indexed journals.
To be evaluated (adds points to the final evaluation):		
<ul style="list-style-type: none"> – Knowledge of defect chemistry principles and theoretical calculations in oxides would be an advantage – Knowledge of modelling and simulation directly or by collaborations, e.g., atomistic simulations and/or CFD – Experience in ceramic processing and electrochemistry is highly desired – Experience is scaling up from lab to prototypes – More than 2 years of post-doc experience – Being the principal investigator of at least 1 project – Publications as last author – Knowledge of Spanish and or Portuguese – Motivation letter (maximum 2 pages) included in the application. – Evaluation provided by 2 references via telephone conversation. The contact details of the references (e-mail and telephone) are provided by the candidates in their application. 		

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Selection process details:

Technical test: NO

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

Job interview: yes

Interested candidates:

Please, send the curriculum vitae, with the deadline being 15 calendar days from the day following the publication in the DOE (Official Journal of Extremadura) indicating the following reference: **Ref^a IS-ÓXIDO (HIDRÓGENO Y POWER-TO-X)**

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

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