

## JOB OFFER

# PhD RESEARCHER

**Position:** PhD Researcher in electrochemical CO<sub>2</sub> reduction

**Offer date:** CIIAE web

**Project:** CIIAE – Ref. PD-REDUCCIÓN CO<sub>2</sub> (HIDRÓGENO Y POWER-TO-X)

**Department:** Hydrogen and Power-to-X

**Estimated starting date:** 2023

<b>Workplace:</b>	University of Extremadura. Cáceres campus	
<b>Tasks to be developed:</b>	<p>The electrochemical conversion of CO<sub>2</sub> to fuels and chemicals via renewable electricity is an attractive and sustainable alternative to the mass utilization of fossil resources.</p> <p>The successful candidate is expected to perform the following tasks:</p> <ul style="list-style-type: none"> <li>– Develop research activities in the field of electrochemical CO<sub>2</sub> reduction and in the synthesis of synthetic fuels, prioritizing laboratory work</li> <li>– Guidance of final-year bachelor's degree students</li> <li>– Participate in the development of research projects within the group</li> <li>– Participate in group meetings and write research progress reports</li> <li>– Work in the analysis and data processing of results obtained in the development of the laboratory work</li> <li>– Actively participate in the writing of original scientific articles and/or review articles/protocols or methods for publication in high impact journals.</li> </ul> <p>Challenges: Increasing the efficiency, reducing the cost, improving the lifetime and reducing the environmental impacts of green and synthetic fuels through the electrochemical conversion.</p>	
<b>Duration of the contract and salary:</b>	Temporary Contract Initial duration: November 2024	Gross Salary + S.S. Fees Gross Salary Range: Set by law
<b>Academic background required:</b>	Master's degree in material sciences, electrochemistry, chemistry, chemical engineering, or similar.	
<b>Job requirements (have to be fulfilled):</b>	<b>Specific techniques (analytical, software, calculations, prototyping, etc.)</b>	<ul style="list-style-type: none"> <li>– Commitment with full transparency in research methods, data, and publications</li> <li>– Previous work or experience in electrochemical or related techniques</li> <li>– Knowledge of laboratory work</li> <li>– Knowledge of energy technologies, including renewables, storage, hydrogen and conversion of energy into synthetic fuels</li> <li>– Ability to work in a diverse and flexible academic environment with a high degree of independence</li> <li>– Teamwork skills</li> <li>– Commitment to open science in terms of research methods, data and publications</li> </ul>

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	<b>Languages</b>	Excellent oral and written skills in English
	<b>Cross-cutting competences</b>	<ul style="list-style-type: none"> <li>– Participation in research initiation grants during the development of the degree program</li> <li>– Previous work experience at the industry</li> </ul>
	<b>Willingness to travel and stay abroad</b>	The candidate is expected to travel, both nationally and internationally, in the context of projects and conferences
	<b>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.</b>	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)
<b>To be evaluated (adds points to the final evaluation):</b> <ul style="list-style-type: none"> <li>– Knowledge in reactions related to photocatalysis, and/or thermal CO<sub>2</sub> hydrogenation.</li> <li>– Knowledge of general electrochemical characterization methods for electrolyzers and fuel cells</li> <li>– Previous experience with different diffraction, microscopy and spectroscopy techniques for structural and microstructural characterization, such as X-ray diffraction, SEM, TEM, EDS, AFM, Raman, UV-Vis, FT-IR, NMR, among others, will be highly valued</li> <li>– Academic publications as first author and co-author in Scopus indexed journals will be highly valued.</li> <li>– Knowledge of Spanish and/or Portuguese.</li> <li>– Grades in bachelor and master studies (documents to be included in the job application)</li> <li>– Motivation letter (maximum 1 page) included in the application.</li> <li>– 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.</li> </ul>		
<b>Selection process details:</b>  <b>Technical test:</b> NO  <b>Language (English):</b> yes (will be evaluated during the interview)  <b>Job interview:</b> 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-REDUCCIÓN CO<sub>2</sub> (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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