

Research offer in catalysis and electrochemistry for pre-doctoral candidate in Valencia

Motivation: *Closing the loop from CO₂ to fuel*

CO₂ is one of the primary greenhouse gases in Earth's atmosphere. Its excess is responsible of altering the natural balance causing enhanced warming of our planet. As more CO₂ is produced, the effects of climate change become more undeniable. A promising alternative is the development of materials and technologies for conversion of CO₂, to carbon neutral synthetic fuels.

Description of the work / Tasks:

Development and optimization of novel co-ionic materials and characterization of membrane reactors:

- Synthesis and fabrication of materials (electrolyte, electrodes)
- (Micro-)structural characterization of materials (XRD, SEM)
- Electrochemical characterization of materials i.e. impedance spectroscopy
- Catalytic tests

We offer you excellent support and the opportunity to work in an interdisciplinary team on a cutting-edge topic. Independent work and motivation to familiarize oneself with new topics is required.

Area of research: electrolysis, electrochemistry, catalysis.

Direction: experimental work, material structural analysis, electrochemical characterization, literature and research.

Study program: physics, chemical engineering, material science.

Starting date: from now.

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