

PhD POSITION OFFER

Instituto de Nanociencia y Materiales de Aragón (INMA)

Pre-announcement, official announcement pending

RESEARCH FIELD: Materials Science, Materials for Energy

RESEARCHER PROFILE: PhD candidate

DEADLINE (CV preselection): 18th September 2022

LOCATION: Spain › Zaragoza

TYPE OF CONTRACT: Temporary (up to 48 months)

JOB STATUS: full-time

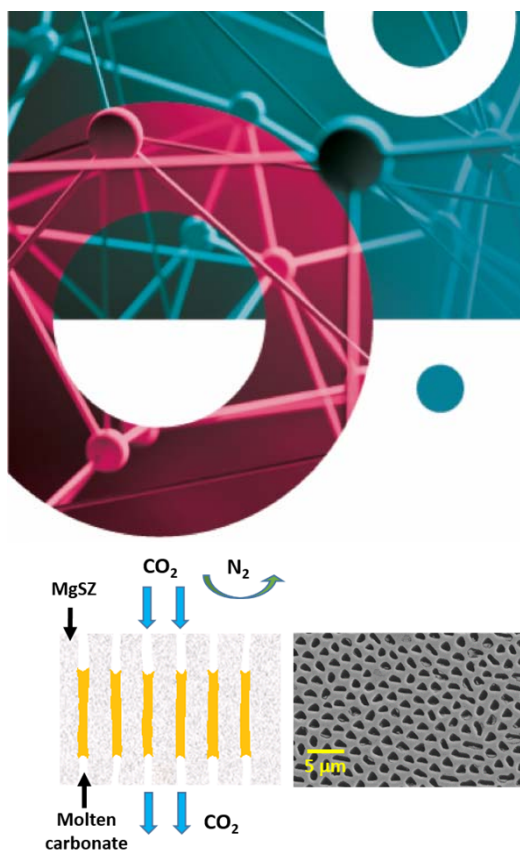
Funding: AGENCIA ESTATAL DE INVESTIGACIÓN (AEI), Call:

Proyectos de Generación de Conocimiento 2021

Proposal Nr. PID2021-124863OB-I00

Title: Molten Salt CO₂ separation membranes based on oxide eutectics: Mechanisms and Fabrication Technology. **EUMEM**

Research [group](#):



➤ **Project Description:** Within the **EUMEM** project we will advance on the understanding and develop membranes for CO₂ separation consisting of molten carbonates supported on oxide ceramics. The operating mechanisms will be investigated; new and better materials and support microstructures and scalable manufacturing processes will be developed. The PhD candidate will address aspects of this research, doing inter-dependent research.

➤ **Main Tasks:** Porous ceramic development: Processing (ceramic and laser assisted) and characterization (structural, microstructural and transport properties characterization). Membrane characterization: permeation performance, durability and degradation mechanisms. The tasks include a large amount of experimental work, so the candidate's ability to work in the laboratory, assembly and handling of equipment will be especially valued.

- Elaboration of periodic scientific reports, deliverables and presentations in the framework of the EUMEM Project.
- Writing of scientific papers for international journals, scientific contributions to conferences.

➤ Requirements

- **Graduate plus Master or equivalent** in Physics, Materials Science, Chemistry, Engineering or related areas. Formal specific requirements will be announced in the future call of the AEI, expected in October 2022. The PhD will be included into the [doctoral program in Physics](#).
- **Skills/Qualifications:** We are looking for talented candidates with training and/or interest in materials science and highly motivated for research.
- **Practical experience and knowledge** in the following will be valued: Laser processing of materials, especially ceramics; Characterization of gas separation membranes; Electrochemistry.

➤ **How to apply for:** Send your CV and your bionote including your main achievements and academic records, before 18th September 2022, to Rosa I. Merino (rmerino@unizar.es). Add names and contact details of professionals who can provide references for the candidate.

➤ **Official announcement of the PhD position:** pending, expected October 2022. Start aprox. July 2023. Contract offer until the outcome of the official call is being considered.