

Call reference number	(2026-16)
Call name	Pre-doctoral position for CO ₂ capturing using new porous materials
Application Deadline	2026/09/23

Introduction and main description

CO₂PTURE is a collaborative project involving TECNALIA, ACLIMA, POLYMAT, BCMATERIALS, GAIKER, and EHU, aimed at developing advanced materials and technologies for the efficient capture of CO₂ from real industrial emissions. The project seeks to contribute to the competitive decarbonization of strategic industrial sectors, in line with the Basque Industry Plan 2030.

Strategic industrial sectors in the Basque Country, such as the cement, steel, and chemical industries, will need to significantly reduce their CO₂ emissions in the coming years to remain competitive under increasingly demanding regulatory frameworks. In this context, CO₂PTURE is developing carbon capture and valorization technologies that represent not only a technological challenge but also an industrial opportunity to position the Basque Country within emerging value chains associated with the energy transition.

One of the project's objectives, to which BCMaterials contributes, is the development of more efficient adsorbent materials, particularly for CO₂ capture under high-humidity conditions and even from aqueous media. BCMaterials also provides technical solutions for the measurement and evaluation of CO₂ capture performance under these challenging conditions.

We offer a pre-doctoral position in the framework of this project "KK-2026/000019 – CO₂PTURE" with a finishing date on 31/12/2027.

Skills and Requirements

- Master degree in Materials Science.
- Knowledge and experience in the preparation of porous metal-organic materials (MOFs).
- Chemical characterization techniques such as XRD, BET, SEM/TEM, FTIR, TGA.
- Knowledge and experience in performing adsorption/desorption experiments.
- Knowledge and experience in the characterization of the adsorption in solution through the magnetic sustentation technique.
- Strong scientific writing skill.
- Fluent in english.

Work Program / Duties / Responsibilities

Synthesis, preparation and characterization of MOFs, performing CO₂ capture/release experiments. Verify the stability of MOFs under aqueous environments.

Application Procedure

Apply by submitting a motivation letter and a CV (in English) using the "Contact" button at the corresponding offer, at the "Join Us" area on BCMaterials' portal (<https://www.bcmaterials.net/join-us>).
Your name and email address will be required for further contact too.

Other Relevant Information

We provide a highly stimulating environment with state-of-the-art infrastructures, and unique professional career development opportunities. We offer and promote a diverse and inclusive environment and welcomes applicants regardless of age, disability, gender, nationality, ethnicity, religion, sexual orientation or gender identity.