

Company Description

BCMaterials, Basque Center for Materials, Applications and Nanostructures, is an autonomous research center launched in June 2012 by Ikerbasque, the Basque Foundation for Science and the University of the Basque Country (UPV/EHU) as a research center for Materials, Applications and Nanostructures. The center is included in the BERC's (Basque Excellence Research Centers) network and its mission is to generate knowledge on the new generation of materials, turning this knowledge into (multi)functional solutions and devices for the benefit of society. The design of materials able to immobilize metal ions in a selective and precise manner is a challenge with deep technological implications in a variety of areas: highly selective adsorbents, single-atom bioinspired catalysts, or ionic conductors, among others. Today, Metal-Organic Framework (MOF) porous materials are placed in a forefront position to face this challenge because of their chemical and structural versatility. Starting from porous MOFs with known porosity metrics and functionalization possibilities, we will explore the possibility to encode natural and synthetic amino acids, peptides and bio-radicals like functions within their structure. This strategy of the MOF's pore space functionalization will open the perspective not only to develop highly selective sorbents to capture specific metal ions from complex mixtures (i.e. polluted waters, acid leachates...), but to

Information

 Deadline: 2023-03-19
 Category: Academia
 Province: Bizkaia
 Country: Basque Country
 City: Leioa

Company

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Main functions, requisites & benefits

Main functions

The main task of the project is devoted to the chemical encoding of Metal-Organic Frameworks with natural and synthetic amino acids, peptides and bio-radicals, and their posterior application as sorbents and catalysts. The PhD student will face synthesis, structural characterization and then application of the MOF materials in close collaboration with the Engineering School of Bilbao.

Requisites

The candidate must have Master's degree or equivalent in Materials Science, Chemistry, Physics or related areas. Proficiency in speaking and writing in English. Capacity for teamwork in an interdisciplinary and international environment. Self-motivation and willingness to perform excellence research. Creativity in problem solving. Ability and eagerness to learn new skills outside own discipline. Presentation skills and ability to meet the deadline are also required.

