



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.

BCMaterials is looking for a motivated PhD student to work in the area of FePd nanoparticle and continuous films that can be used in multifunctional sensors working in both contact and wireless modes, and whose properties can be reprogrammed by externally applied magnetic fields. This work is in the frame of Materials for Digitalization and Emerging Technologies, a key strategic area of BCMaterials.

The aim of this PhD project is to develop novel multifunctional sensors that can simultaneously work in a number of different modes, including the detection of gases, mechanical strain, biological molecules, and magnetic fields, both using electrical contacts and by remote magnetic-based sensing. The detector element will consist of Pd-rich ferromagnetic FePd alloy films, either produced

Information

 Deadline: 2023-03-20
 Category: Academia
 Province: Bizkaia

 Country: Basque Country
 City: Leioa

Company

BCMaterials



Main functions, requisites & benefits

Main functions

The research activity that the pre-doctoral researcher will perform consists in the investigation, from the materials growth to their performance evaluation, of FePd-based nanoparticle and continuous films, with a variety of techniques ranging from sputtering, x-ray diffraction, EDX, VSM, etc., to neutron diffraction.

Requisites

Master in materials science, physics or related areas. Bachelor degree obtained with an average mark above 7.5/10. Fluent oral and written English is mandatory. Experience in metallurgy, thin films, magnetic and electric characterization techniques is an asset.

