Call reference number	(2023-01)
Call name	Postdoctoral IKUR position - Detailed structural investigation of nanoparticles for advanced applications
Application Deadline	2023/02/05

Introduction and main 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 and experienced scientist to fill a two-year POST-DOCTORAL position in Neutron Science, for the structural characterization of nanoparticles by small-angle scattering and reflectometry techniques; and also theoretical description of aggregation processes in such systems. Namely, the project aims at developing enhanced structural nanodiagnostics of magnetic colloids (particularly the study of structural instability and phase separation) and so-called multi-disciplinary approach (combining different complementary methods such as dynamic light scattering, magnetometry, electron microscopy, Atomic-Force Microscopy and X-ray diffraction) will be used within the project to solve the problems on the control of physics-chemical properties of promising magnetic and related active nanoparticle colloids. This posdoctoral position is funded by the IKUR strategy. IKUR is the strategic program promoted by the Education Department of the Basque Government to boost Scientific Research in specific strategical areas.

For the successful candidate, the position represents an excellent opportunity to develop both collaborative and personal scientific research career, exploiting the capabilities of neutron scattering technique for nanodiagnostic of complex multicomponent systems. The postdoctoral position is framed within the research areas of Neutrons science at BCMaterials and Group of Magnetism and Magnetic Materials at UPV/EHU. The research topic for this project targets the development of advanced colloidal solutions of magnetic nanoparticles for advanced applications.

Skills and Requirements

PhD in Physics, Chemistry, Materials Science or related areas.
Demonstrated experience in the field, particularly in neutron scattering for structural investigations at nanoscale.
Strong background in theoretical modelling.
Experience in the use of different large-scale facilities and data treatment.
A team player who can collaborate with other research groups and lines.

Skills and Requirements
Proficiency in speaking and writing in English. Self-motivation and willingness to lead independent research. Presentation skills and ability to meet the deadline are also required.

Work Program / Duties / Responsibilities
The main task of the job is devoted to the development and characterization of smart and multifucntioanl nanoparticles for applications purpose. Posdoctoral research fellow will be responsible for the development of smart nanoparticles and macromolecules and its structure diagnostic, especially by small-angle neutron/X-ray scattering and Neutron Reflectometry. Large-scale facilities in Europe and worldwide will be used to perform structure and dynamics investigation of the materials.

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 furher contact too.

Other Relevant Information
Interview will be conducted soon after the deadline. The starting date to join is as soon as possible.