

Call reference number	(2014-15)
Call name	Postdoctoral researcher for self-powered sensors development
Application Deadline	2024/11/30

Introduction and main description

The HERMES project (Harnessing Energy thRough new Materials, procEsses, and architectureS in Self-powered Biosensing) focuses on advancing self-powered sensor technology by developing innovative semiconductor materials, particularly metal oxides. These materials aim to support sustainable manufacturing and enhance energy generation capabilities. This project is funded by the Spanish Ministry of Science within the 2023 call for supporting knowledge generation projects (PID2023-148218OB-C21).

We seek a Postdoctoral Fellow with significant experience in fabrication processes and electrical characterization. This position also involves project management, student supervision, technical documentation.

We offer a full-time position for 20 months.

Skills and Requirements

PhD in Physics or a related field.

- Minimum 5 years of postdoctoral experience.
- Strong background in clean room processes for electronic device fabrication, with an emphasis on printed or flexible sensors and electronics.
- Proficiency in electrical characterization of semiconductor materials, including carrier mobility, redox potentials and RF.
- Experience in Structural and Mecahnical Characterization Techniques: Scanning Electron Microscopy (SEM) , Atomic Force Microscopy (AFM) and tensile stress.
- Experience in project management and supervision of PhD and Master's students.
- Demonstrated ability in technical writing for technical reports, scientific publications, and presentations.
- Excellent communication skills in English.

Work Program / Duties / Responsibilities

- Develop and Characterize Semiconductor Materials, focusing on metal oxide semiconductors, and bandgap engineering for energy-harvesting and biosensing applications.
- Fabricate Self-Powered Sensor Devices: Lead the fabrication of self-powered sensors relying on fabrication methods like photo-lithography
- Develop experimental setups to evaluate and charaterize the response under mechanical stress.

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.