

Postdoctoral Open Position

SPIN AND CHARGE TRANSPORT IN EARLY-TRANSITION METAL OXIDE THIN FILMS

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Position offered

We offer a position for a postdoctoral researcher in the framework of the project “Heavy Element-Free Green Electronics (HEGEL)” to be developed at the Laboratory of Multifunctional Oxides and Complex Structures within ICMAB.

Main Tasks and Responsibilities

Perform conventional characterization experiments (transport, XRD, ellipsometry, etc.) on thin films grown at ICMAB by PLD. Design and lithography of suitable devices for characterization at CIRCE and BOREAS beamlines in the ALBA Synchrotron light source by XPEEM and XAS-XMCD, respectively.

Requirements

- PhD degree in Physics or Materials Science or related disciplines.
- A good knowledge of English is required.
- Documented skills of communicating science

Conditions

- The contract will be full time.
- Duration of 24 months with the possibility of extension.
- The starting date will be from December 2022/Early 2023

How to apply

The selection process will be continuous until a good candidate is found. Interested persons should send an email to Josep Fontcuberta (fontcuberta@icmab.es) attaching:

- CV
- Letter of motivation
- Contact details of a reference persons.

ICMAB is an equal opportunity employer committed to diversity and inclusion of people with disabilities.

About the MULFOX group

The Laboratory of Multifunctional Thin Films and Complex Structures (MULFOX) focuses on developing new oxide-based materials and oxide-based thin film devices to be applied in the field of next generation green and sustainable electronics. Oxides offer an extremely broad range of properties of major interest for science and technology.

At MULFOX, we are interested on developing new oxide-based materials with enhanced or emerging properties with special focus on their electric, magnetic and optical properties, and to establish the links between their structure, morphology and functional properties. Current activities are focused on photoresponsive oxides and transparent metal oxides for photoconversion applications, ferroelectric materials for data storage, new concepts and materials for spin-charge conversion and 2D systems with emerging properties.

About ICMAB

ICMAB is one of the world's leading institutes in Materials Science research, located at Campus UAB, very close to Barcelona. One of the main ICMAB's strategic objectives and missions is to make an impact in the field of new materials for applications in energy, electronics and health.

ICMAB provides facilities, state-of-the-art equipment and most importantly, excellent scientists and professionals, to assure you a rewarding environment. In the last years, we have grown up to build up a team devoted to project managing, technology transfer, innovation, communication, maintenance, technical services and administration, to team up with the researchers for the advancement of science.

The diversity of our people and the interdisciplinary research fields related to Materials Science ensures an enriching and inspiring working environment. If you are an enthusiastic and highly motivated person and would like to work in a multidisciplinary and multicultural environment, join us!

About ALBA Synchrotron and CIRCE & BOREAS beamlines

ALBA is the Spanish national synchrotron light source, a large research infrastructure operating ten beamlines - among which BL24-CIRCE and BL29-BOREAS -, complementary facilities, and hosting an Electron Microscopy Center, all summing up a wide range of infrastructures geared toward finding solutions to societal challenges. Located in Cerdanyola del Vallès (Barcelona, Spain), it is funded by the Spanish and Catalan Governments.

The synchrotron light produced by 3 GeV electrons is used by thousands of researchers to analyse and understand the properties and functionality of matter, spanning a wide variety of fields, such as catalytic research, health, energy production/storage, environmental research, communication technologies, or cultural heritage. Facing an upgrade to ALBA II, a 4th generation facility, which will increase dramatically brightness and coherent flux, ALBA is in a phase of growth and dynamics. Being a part of the ALBA team will promote your career and will give you the opportunities to explore new territories