

Company Description

NanoGUNE is a research center devoted to conducting world-class nanoscience research for a competitive growth of the Basque Country. NanoGUNE is a member of the Basque Research and Technology Alliance (BRTA) and is recognized by the Spanish Research Agency as a María de Maeztu Unit of Excellence. The Nanodevices group, co-led by Prof. Luis E. Hueso and Prof. Fèlix Casanova, is currently composed of 25 members including senior and junior researchers. The group counts with extensive research facilities for fabrication and characterization of devices and several active research lines spanning from nanofabrication to 2D electronics and spin transport. More information can be found at <http://nanodevices.nanogune.eu>

Information

 **Deadline:** 2021-01-31
 **Category:** Business
 **Province:** Gipuzkoa

 **Country:** Basque Country
 **City:** Donostia-San Sebastián

Company

CIC nanoGUNE



Main functions, requisites & benefits

Main functions

The candidate will work alongside an international consortium on the INTERFAST project (Gated INTERfaces for FAST information processing), which aims to develop a novel technological platform for the realization of spin devices based on the control of the hybridization at the interface between a magnetic material and an organic layer. The research will include the preparation of hybrid samples based on heavy metals and thin organic layers (usually by sputtering and UHV evaporation), their patterning using advanced techniques such as ultraviolet and e-beam lithography, and their electrical characterization to determine the effect of hybridization on the spin transport. In later stages of the project, three-terminal spin transistor nanodevices based on hybrid metal/molecule interfaces will be fabricated and validated.

Requisites

PhD in Physics or similar and experience in the following skills. Nanofabrication (e-beam lithography, materials growth and characterization, etching). Electrical transport measurements. Previous knowledge in molecular electronics and/or spintronics. Proficiency in spoken and written English. Although not compulsory, the following points will be considered: Previous track record in publications at the highest level. Self-motivated and a team player willing to coordinate the research in a particular topic.

Benefits

An international and competitive environment, state-of-the-art equipment, and the possibility to perform research at the highest level. Teamwork in a diverse and inclusive environment and welcome all kinds of applicants regardless of age, disability, gender, nationality, race, religion, or sexual orientation. The position is expected to start on May 1, 2021 and go on for up to 3 years in the Nanodevices group. The contract will be funded by the European Union's Horizon 2020 research and innovation programme.