



CALL FOR APPLICATIONS - December 2022

Post-doctoral Position

Donostia International Physics Center (DIPC) is currently accepting applications for Post-doctoral positions. This is a unique opportunity for junior researchers with a recent PhD degree in Physics or related fields to join one of DIPC's high-profile research teams. A description of each of the available openings, contact information and deadlines can be found on the following pages.

Although candidates are welcome to contact the project supervisors to know further details about the proposed research activity, please be aware that the application will be evaluated only if it is submitted directly to the email address listed as "application email".

Applications received by the deadline will be evaluated by a Committee designed by the DIPC board on the basis of the following criteria:

- CV of the candidate (40%)
- Adequacy of the candidate's scientific background to the project (40%)
- Reference letters (10%)
- Other: Diversity in gender, race, nationality, etc. (10%)

Evaluation results will be communicated to the candidates soon after. Positions will only be filled if qualified candidates are found.

The DIPC may revoke its decision if the candidate fails to join by the appointed time, in which case the position will be awarded to the candidate with the next highest score, provided it is above 50 (out of 100).

However, the selected candidate may keep the position if, in the opinion of the Selection Committee, the candidate duly justifies the reasons why he or she cannot join before the specified deadline, and as long as the project allows it.

Ref. 2022/83

Computational design of spin-quantum systems in graphene nanostructures

Supervisor(s):

Aran Garcia-Lekue (wmbgalea@ehu.eus)

Daniel Sánchez-Portal (daniel.sanchez@ehu.eus)

Duration*: 2 years

Application Deadline: 15/12/2022

Application Email: jobs.research@dipc.org

The recent discovery of stable spin-polarised states in graphene nanostructures has paved the way for their potential use as spin qubit elements for quantum computation. Importantly, graphene nanostructures can now be fabricated with atomic precision using bottom-up on-surface synthesis, which opens the door to fabricating 0D, 1D and 2D carbon based materials with precise shape, composition and spin arrangement.

The main goal of this project is to unravel the basic mechanisms giving rise to spin polarised states in selected graphene nanostructures, with a special focus on 2D nanoporous graphene networks. The results of this project are expected to be very useful towards developing spin-qubits in carbon-based 2D materials, and could guide future experiments in this direction.

We are looking for a postdoctoral researcher with expertise in theoretical and computational electronic structure methods, in particular DFT (Density Functional Theory). A strong background in modelling the electronic and magnetic properties of graphene nanostructures is also desirable.

Interested candidates should submit an updated CV and a brief statement of interest to the application email listed above. Reference letters are welcome but not indispensable. The reference of the specific opening to which the candidate is applying should also be stated in the subject line.

This project has received funding from the Basque Government's grant program "IKUR"



***Openings with a duration of more than one year are for a 1-year contract, renewable based on performance and availability of funding.**