

## POST-DOCTORAL RESEARCH POSITION IN THE MATERIALS FOR QUANTUM TECHNOLOGIES LAB OF THE NANOPHYSICS LAB GROUP

### Materials Physics Center (Donostia / San Sebastián)

The **Nanophysics Lab** group at CFM is offering a postdoctoral position (1 year) starting in 01/01/2024 to work with Prof. C. Rogero, in collaboration with Dr. S. Bergeret and Dr. M. Ilyn, in the experimental investigation of magnetic 2D materials and heterostructures ferromagnet/superconductor in the Materials for Quantum Technologies Lab.

The positions will be funded by MCIN and by the European Union NextGenerationEU/PRTR-C17.I1, as well as by IKUR Strategy under the collaboration agreement between Ikerbasque Foundation and DIPC on behalf of the Department of Education of the Basque Government.

The selected candidate will be hired by the Research Association MPC - Materials Physics Center. The salary will be of 35.650,44 euros (postdoc) during the first year before taxes.

In this project the postdoctoral candidate will study a new class of 2DM, the magnetic semiconductors 2D Transition Metal di-Halides (TMH<sub>2</sub>) that exhibit a readiness procedure compatible with actual silicon microfabrication processes. Moreover, their magnetic properties make these materials very appealing for their implementation in devices of different topologies. Thus, the postdoctoral candidate will experimentally investigate the growth, the morphology and the electronic and magnetic properties of different types of TMH<sub>2</sub> with or without molecules on top using the most powerful ultra-high vacuum techniques (including STM, LEED, XPS)

The Nanophysics Lab group at the Center of Materials Physics addresses broad range of topics in surface science, magnetic and superconductor materials and devices. Current research topics in the group include development of new magnetic 2D materials and heterostructures magnet/superconductor for sensor and qubit applications. For more information, visit our web: [https://cfm.ehu.es/nanophysicslab/research\\_QT\\_lab.html](https://cfm.ehu.es/nanophysicslab/research_QT_lab.html).

Candidates must hold or be close to obtain a PhD degree in Physics or Materials Science, preferably in the field of experimental surface science, magnetism or superconductivity. Expertise in ultra-high vacuum, photoemission spectroscopy will be highly appreciated for this particular position, as well as background in synchrotron techniques.

Suitable candidates can apply for this position sending by email to [jobs.cfm@ehu.eus](mailto:jobs.cfm@ehu.eus) the following information **before 23<sup>th</sup> of November** with the subject label "**Postdoc CFM-QuantMat**":

- 1- An updated Curriculum Vitae, including a list of publications. ([75]%)
- 2- A presentation letter with declaration of interests (max. 1 page). ([20]%)
- 3- Two reference letters and/or contact email of two potential referees. ([5]%)

General enquiries or questions about this position should be submitted by email to: [jobs.cfm@ehu.eus](mailto:jobs.cfm@ehu.eus) with the subject label "**Postdoc CFM-QuantMat**".

ASOCIACION DE INVESTIGACION MPC, as the data controller, informs you that your data is collected for the following purposes: Management of the employees and of the data of the candidates for the positions offered by the centre and publication of the data of the names and surnames selected and of the persons on the waiting list on the Association's website. The legal basis for the processing is the consent of the data subject. Your data will not be passed on to third parties unless legally obliged to do so. Any person has the right to request access, rectification, deletion, limitation of processing, opposition or the right to portability of their personal data by writing to us at our office address, or by sending an e-mail to [mpc@ehu.eus](mailto:mpc@ehu.eus), indicating the right they wish to exercise. You can obtain further information on our website: <https://www.bercmpc.org/index.php/en/privacy-policy>