Postdoctoral position on the theory of the electronic and transport properties of graphene nanostructures synthesized by on-surface chemistry

We are seeking to fill a two years postdoctoral position at the Centro de Física de Materiales (http://cfm.ehu.es) and Donostia International Physics Center (DIPC, http://dipc.ehu.es) to work in collaboration with Prof. Daniel Sánchez-Portal (http://cfm.ehu.es/team/daniel-sanchez-portal/), Prof. Aran Garcia-Lekue (http://www.ikerbasque.net/es/arantzazu-garcia-lekue) and Dr. Peter Koval (http://www.researchgate.net/profile/Peter_Koval2). We are seeking candidates to fill the position as soon as possible.

The work will focus on the theoretical study and simulation of the electronic, transport, optical and magnetic properties of molecular covalent networks synthesized using on-surface chemistry by our experimental colleagues. The studied systems include functionalized and chemically doped graphene nanoribbons, different nanographenes and porous graphene networks, as well as, assemblies of metal-organic molecules. The main tools for our research will be DFT and TDDFT simulations using the SIESTA code (https://departments.icmab.es/leem/siesta/), of which our group is one of the developers, as well as other well-known DFT software packages.

This position is linked to the coordinated project FunMolDev ("Functional Molecular nanostructures for optoelectronic Devices"), where our theory group works in collaboration with five experimental groups doing on-surface synthesis and characterization (using STM/STS, ARPES, transport measurements and near-field optics) and one chemistry group that synthesizes and engineers the precursors. The project is funded by the Spanish Ministerio de Ciencia, Innovación y Universidades.

Please, send your applications to daniel.sanchez@ehu.eus or wmbgalea@ehu.eus before October 31st .