

## DIPC POST-DOCTORAL POSITIONS

The Donostia International Physics Center DIPC is currently accepting applications for post-doctoral appointments. This is a unique opportunity for highly motivated junior researchers with a recent PhD degree in physics or related fields to join some of the DIPC high-profile research teams.

Interested candidates please send an updated CV, a brief statement of interest, and contact information to [postdoc@dipc.org](mailto:postdoc@dipc.org). Reference letters are welcome but not indispensable. The particular position(s) to which the candidate is applying should be stated as well. Although candidates are encouraged 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 mentioned above ([postdoc@dipc.org](mailto:postdoc@dipc.org)).

Next review of applications is scheduled for April 4<sup>th</sup> 2014. Applications must be received before this date and will be evaluated by a Committee designed by the DIPC board on the basis of the following criteria (with point weights indicated in parentheses):

- CV of the candidate (40%)
- Adequacy of the candidate's scientific background to the project (40%)
- Reference letters (10%)
- Others: 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 duration of the appointment will be 1 year. The appointment could be renewed for a second year, subject to performance and to the availability of funding.

The salary will be 32000 euros per year before taxes.

## JOB OPENINGS

### - *Physical Chemistry of Curved Surfaces*

Contact person: E. Ortega ([enrique.ortega@ehu.es](mailto:enrique.ortega@ehu.es)). Reference: 2014/4.

The research topic of this post-doctoral position is the “Physics and Chemistry of Curved Crystal Surfaces”, an extremely exotic and novel idea originated at the NanophysicsLab in San Sebastian, which aims at characterizing (electronic states, chemical activity and epitaxial growth) a wide variety of single crystal surfaces at unexplored symmetry directions. The work combines the fabrication of curved surfaces from bare single crystals (in collaboration with a Lab spin-off Bihurcrystal) and the use of a full battery of refined Surface Techniques, encompassing LEED, STM/STS, and laterally-resolved electron spectroscopies, such as XPS and ARPES.

The successful candidate should have a good background on solid-state physics. A preferential prerequisite is the proven ability/experience in Ultra High Vacuum Techniques, plus either STM/STS or XPS/ARPES experience. We are looking for a highly motivated candidate, able to work in a dynamic environment and to contribute his/her ideas to the group.

- ***Physical Chemical Reactions at Surfaces: physico-chemical aspects***

*Contact persons: C. Rogero (celia\_rogero@ehu.es). Reference: 2014/5.*

The work will consist on exploring and designing new molecular complexes directly synthesized on surfaces in order to provide ground ideas for functional devices of various nature, such as nanoscale molecular heterojunctions, molecular magnets, efficient solar cells, molecular superconductors,... The aim is to characterize and understand the basics of the functional phenomenology of molecular materials that will be key components of future technological devices, such as electronics, magnetic storage or optoelectronic devices.

Since most of the work will be performed in ultra high vacuum (UHV) conditions, the candidate should have proven experience in ultra high vacuum and in some of the surface science characterization techniques (STM, LEED, XPS, synchrotron radiation...). Previous experience with organic molecules on surfaces will be desirable. We are looking for highly motivated candidates, able to work in a dynamic environment and to contribute with his/her own ideas to the group.

- ***Plasmon-enhanced infrared spectroscopies for molecular characterization***

*Contact person: J. Aizpurua (aizpurua@ehu.es). Reference: 2014/6.*

This postdoctoral position will target theoretical and numerical research on nanoscale photonics. In particular, the main target will be to study the complex interactions between photons, electrons and phonons in scanning probe microscopies, such as in s-SNOM and in STM to obtain vibrational information of different samples.

The position is opened in the framework of the ETORTEK projects of the Department of Industry of the Basque Government, and will target the optical characterization of nanoscale environments in systems exposed to corrosion such as in polymer coatings, special cements, and iron oxides, among other nanoscale systems that will be studied.

Experience in numerical methods to solve Maxwell equations, and use of DFT codes to calculate Raman signals of different molecular species is required for this position. A strong theoretical background in photonics and in condensed matter is also a prerequisite. Doctoral candidates as well as PhD students who are about to graduate (maximum in 6 months time from the application deadline) will be equally considered. A record of previous experience in treating Raman configurations and infrared spectroscopy will be also valued. An interacting attitude towards group working is also highly desirable.