



PhD position at Nanomol

The candidate will be able to join to a pioneer, dynamic and active group from the Department of NanoScience and Organic Materials (**NANOMOL**, www.icmab.es/nanomol) that belongs to the Materials Science Institute of Barcelona (ICMAB-CSIC) located at the UAB (Universitat Autònoma de Barcelona) research park.

Nanomol is a research group with wide expertise and recognized excellence in the synthesis, processing and study of molecular and polymeric materials with chemical, electronic, magnetic and biomedical properties. We continuously generate new knowledge in our basic and applied research projects regarding the micro and nano structuring of molecular materials. We offer this knowledge to improve the properties of products manufactured in diverse sectors, such as chemicals, pharmaceuticals and electronics, thereby contributing to increasing their added value. As a group, we are actively involved in implementing nanotechnology and sustainable and economically efficient technologies for preparing advanced functional molecular materials.

We offer the possibility to perform the PhD thesis (3 years contract with starting date 1st January 2014) at Nanomol. The work will in the frame of an OPEN-FET European project. The research will be embedded in the emerging scientific discipline of Molecular Spintronics that aims at the complete control and manipulation of the spins and charges in electronic devices constituted by a novel generation of magnetic molecules.

Our research group has abroad expertise on the design, synthesis and characterization of novel electroactive systems based on the use of multifunctional organic molecules (i.e. stable organic radicals, TTF derivatives, etc). We are focused on the electronic properties of these molecules as wires, switches or rectifiers in solution and also when they are immobilised on surfaces through self-assembled monolayers (SAMs). (Chem. Sci., 2012, DOI: 10.1039/C2SC21134C; Nature Chemistry 2011, 3, 359; Nanoletters 2011, 11, 4382; J. Amer. Chem. Soc. 2011, 133, 13556).

The main tasks of the candidate within the project will include:

- a) Design and synthesis of new functional organic molecules for their integration into molecular electronics.
- b) Preparation and characterization of hybrid materials such as self-assembled monolayers.

The fellow must hold a Bachelor degree in Chemistry and hold a recognized Master degree (or equivalent) in Chemistry, Materials Science or Nanotechnology. The successful candidate will work in an international environment and might travel to other European countries to develop the project.

Contact: Interested candidates should send a detailed CV and a list of references with contact details by e-mail to Dr. Núria Crivillers (ncrivillers@icmab.es and nanomol@icmab.es, address: ICMAB - CSIC, Campus Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain).

Closing date for application: 30 November, 2013