

PhD Position in Single Molecule Magnetism

The Research Team “Nanoscale Chemistry” at the Institute for Solid State Research in the Leibniz Institute for Solid State and Materials Research Dresden – in short IFW Dresden – is currently looking for an excellent student to fill a Doctoral Research Position. This position is offered in the framework of ERC project “GraM3” dedicated to the study of molecular magnetism in endohedral metallofullerenes in bulk and especially in thin films. The position will remain open until filled.

IFW Dresden is a non-university research institute and a member of the Leibniz Association. It is concerned with modern materials science and combines explorative research in physics, chemistry and materials science with technological development of new materials and products. Further information at: <http://www.ifw-dresden.de>.

Endohedral metallofullerenes (EMFs) are the molecules comprising one to four metal atoms encapsulated inside the carbon cage. When lanthanide metals with unfilled f-shell are encapsulated, EMF molecules inherit magnetic properties from the lanthanide ions. Besides, fullerene cage protects the internal species from the environment. Altogether it results in fascinating magnetic properties of such EMFs. Each single EMF molecule can act as a small magnet (hence the term single molecule magnetism). The Fullerene group in IFW Dresden is active in the synthesis of these molecule, their chemical derivatives, and the studies of their magnetic properties by various physical techniques.

The aim of the doctoral research will be the study of EMFs produced in IFW Dresden by in-house SQUID magnetometry as well as by various techniques available with synchrotron radiation (such as X-ray magnetic circular dichroism). For the latter, occasional trips to Berlin Electron Storage Ring (BESSY, Germany), European Synchrotron Radiation Facility (Grenoble, France) or Paul Scherrer Institute (Villigen, Switzerland) are expected. Magnetic properties will be studied for the bulk samples (powders, single crystals) as well as for monolayers.

The successful candidate should have a Master's degree or Diploma in chemistry, material science, or physics, preferably with a background in magnetism, as well as high motivation and good English skills.

The institute is keen to foster the professional equality of woman and men, and thus welcomes applications from qualified women.

Application (in English) including a CV, a motivation letter describing the research career goals, skills and experience, as well names and contact details of two references should be sent citing the reference number (DM1006-2/17) as a single pdf file to: bewerbung@ifw-dresden.de.

For further information please contact: Dr. Alexey Popov a.popov@ifw-dresden.de.