

Towards Molecular Spintronics, Symposium of the DPG Division Thin films Berlin, February 25-29, 2008

The combination of spintronics and organic electronics is likely to lead to versatile spin based devices, which may open a broad range of exciting and yet unknown application fields and products in organic spintronics. A further step will be to integrate the spintronic functionality into one single magnetic molecule, i.e. to switch the spin transfer through magnetic molecules by changing the alignment of the molecular spins. The great potential of molecular materials for spintronic applications resides in their weak spin-orbit coupling and hyperfine interactions. This leads to spin-coherence over times and distances much longer than in conventional metals and semiconductors, making them perfect building blocks for tunnelling barriers or transport layers in spin-based hybrid devices. In addition, the molecules can be easily functionalized, which allows their deposition on inorganic substrates as well as versatile engineering of their electronic and magnetic properties. While in organic spintronics and molecular magnetism great progress has been made during the past years, efforts directed towards molecular spintronics based on magnetic molecules are still scarce. This symposium aims to bring together experts in thin molecular films and their interfaces, in organic spintronics, and in molecular magnetism to stimulate interdisciplinary knowledge exchange and to start an intense dialog on the topic of magnetic molecule based spintronics.

The symposium consists of invited talks and poster contributions. The deadline for the submission of abstracts is **15 November 2007**.

Invited speakers:

Prof. Carlo Taliani, Institute for nanostructured materials, Bologna

Prof. Stefano Sanvito, Trinity College Dublin

Prof. Achim Müller, University of Bielefeld

Prof. Paul Müller, Friedrich-Alexander University, Erlangen-Nürnberg

Dr. Vladislav Kataev, Leibniz Institute for Solid State and Materials Research Dresden

Prof. Maarten Wegewijs, RWTH Aachen

Prof. Heiko Wende, Duisburg-Essen University

Poster contributions describing experimental and theoretical progress in the following topics are welcome:

- synthesis of magnetic molecules for spintronic applications
- molecular magnetism
- deposition of single magnetic molecules or thin films on surfaces
- thin molecular films and their interfaces
- (spin-polarized) injection and transport in single molecules and thin films
- molecule based spintronic devices

The Organizing Committee is looking forward to meeting you in Berlin.

Prof. G. Salvan, Technische Universität Chemnitz

Prof. B. Büchner, Leibniz Institut für Festkörper- und Werkstofforschung Dresden, Technische Universität Dresden