

SEMINAR

EFFECTS OF MAGNETISM ON TRANSPORT
PROPERTIES OF SINGLE MOLECULES**FERDINAND EVERS**

Institut fuer Theorie der Kondensierten Materie und Institute of Nanotechnology, Karlsruhe
Institute of Technology.

The talk will report theoretical analyses of the transport properties of three molecules: BDC60, a H₂-phtalocyanine (H₂Pc) complex, and an organo-metallic Fe(II)-complex.

The first study is motivated by an experiment by Chr. Martin, Th. Bjoernholm, H. v. d. Zant, et al. (JACS 2008) and investigates the properties of C₆₀ Fullerenes as anchor groups for Molecular Electronics.

The second study explains how a molecule, H₂Pc, that by itself is not magnetic, can induce a huge (65%) magnetoresistance effect. Our conclusion agrees quantitatively with a recent experiment (Schmaus, Wulfhekel et al. to be published).

Finally, we explore the consequences of molecular instabilities on their transport properties. Our example will be a spin transition complex Fe(II)L₂. The possible relation to recent experiments (A. Bernard-Mantel, H. v. d. Zant, M. Ruben et al.) will be discussed.

REMEMBER**FERDINAND EVERS**

Specific Seminar: Effects of magnetism on transport properties of single molecules

DATE: March 19, 2010

TIME: 12:00

PLACE: ICMAB