CENTRE D'INVESTIGACIÓ
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CAMPUS UAB. BELLATERRA. BARCELONA

SEMINAR

EFFECTS OF MAGNETISM ON TRANSPORT PROPERTIES OF SINGLE MOLECULES

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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. Bernand-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

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