

GDCh- und Chemisches Kolloquium

Der GDCh-Ortsverband Oldenburg und das Institut für Reine und Angewandte Chemie der Carl von Ossietzky Universität Oldenburg laden zu einem Vortrag

von Prof. Dr. Gérald Dujardin, Université Paris-Sud

zum Thema Electronic Control of Individual Nano-Objects

herzlich ein.

Termin: **Donnerstag, den 30.11.2006 17 Uhr c.t.**
Hörsaal W3-1-156 (***Raumänderung beachten***)
Carl-von-Ossietzky-Straße 9-11

Einladender Prof. Dr. Katharina Al-Shamery

The use of a single molecule as a functionalized nano-machine requires being able to activate and to control numerous dynamical processes at the atomic-scale. Tunneling electrons from a low temperature (5 K) scanning tunneling microscope (STM) are used to activate, through electronic excitation, various reversible movements of a single molecule on a Si(100) surface. Several methods, based on the precise spatial localisation (50 pm) of the electronic excitation with the STM, are tested to control the molecular dynamics. These include the excitation of localised electronic states inside the molecule or delocalised electronic surface states outside the molecule. These studies have important applications for designing proper electrical interconnections of single molecules. Further research directions for the electronic control of single functionalized molecules involving combined laser and STM or AFM (atomic force microscope) will be also discussed.

GDCh-Ortsverband Oldenburg
Der Vorsitzende

Institut für Reine und Angewandte Chemie
Der Direktor



GESELLSCHAFT DEUTSCHER CHEMIKER E. V.
Ortsverband Oldenburg