

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Mapping the spin states of surface deposited Fe(II) SCO Compounds by STM M. STOCKER, M.S. ALAM, A. VOLKOV, U. MITRA, K. GIEB, V. DREMOV, P. MÜLLER, Department of Physics and Interdisciplinary Center for Molecular Materials (ICMM), Universität Erlangen-Nürnberg, 91058 Erlangen, Germany, M. HARYONO, K. STUDENT, A. GROHMANN, Institut für Chemie, Technische Universität Berlin, 10623 Berlin, Germany — We describe a novel method for analyzing the spin states of surface deposited Fe(II) spin crossover (SCO) compounds. The talk focuses on the investigation of $[FeII(L)_2](BF_4)_2$ (L=2,6-di(1H-pyrazol-1-yl)-4-(thiocyanatomethyl)pyridine)¹ and the comparison to a high spin compound with a similar coordination motif. Single molecules and small clusters were investigated on HOPG. We were able to show a strong current contrast for the different spin states using the CITS technique. Changes of the spin state from high- to low-spin state and vice versa were observed at room temperature. Switching was statistically distributed, indicating a widening of the spin transition compared to the bulk state.²

¹ M. Haryono, et al., Eur. J. Inorg. Chem. 2009, 2136.

² M.S. Alam, et al., Angew. Chem. (2009) (accepted).

M. Stocker
Dept of Physics and Interdisciplinary Center for Molecular Materials
(ICMM), Universität Erlangen-Nürnberg, 91058 Erlangen, Germany

Date submitted: 01 Dec 2009

Electronic form version 1.4