

Scanning Probe Methods Group, Prof. Dr. Roland Wiesendanger

**Publications: Original Articles**

Date of issue: 2026-06-09

Subgroup: STM/SPSTM on Magnetic Molecules

**Probing Weakly Hybridized Magnetic Molecules by Single-Atom Magnetometry***E. Sierda, M. Elsebach, R. Wiesendanger, and M. Bazarnik, Nano Lett.* **19** 9013-9018 (2019)**Stable bismuth sub-monolayer termination of Bi<sub>2</sub>Se<sub>3</sub>***M. Hermanowicz, W. Koczorowski, M. Bazarnik, M. Kopciuszynski, R. Zdyb, A. Materna, A. Hruban, R. Czajka, and M.W. Radny, App. Surf. Sci.* **476** 701-705 (2019)**Exploring the Relation Between Intramolecular Conjugation and Band Dispersion in One-Dimensional Polymers***C. García-Fernández, E. Sierda, M. Abadía, B. Bugenhagen, M.H. Prosenc, R. Wiesendanger, M. Bazarnik, J.E. Ortega, J. Brede, E. Matito, and A. Arnau, J. Phys. Chem. C* **121** 27118 (2017)**On-Surface Oligomerization of Self-Terminating Molecular Chains for the Design of Spintronic Devices***E. Sierda, M. Abadía, J. Brede, M. Elsebach, B. Bugenhagen, M. H. Prosenc, C. Rogero, M. Bazarnik, and R. Wiesendanger, ACS Nano* **11** 9200 (2017)**Toward Tailored All-Spin Molecular Devices***M. Bazarnik, B. Bugenhagen, M. Elsebach, E. Sierda, A. Frank, M. H. Prosenc, and R. Wiesendanger, Nano Lett.* **16** 577 (2016)**Investigating the differences between Co adatoms states on surfaces of selected bismuth chalcogenides***M. Wałowska, M. Sikora, M. Dobrzańska, T. Eelbo, M. M. Soares, M. Rams, I. Miotkowski, R. Wiesendanger, R. Berndt, Z. Kozłowski, and A. Kozłowski, Phys. Rev. B* **92** 115412 (2015)**Multi-layer and multi-component intercalation at the graphene/Ir(111) interface***M. Bazarnik, R. Decker, J. Brede, and R. Wiesendanger, Surf. Sci.* **639** 70 (2015)**Mechanism of a molecular photo-switch adsorbed on Si(100)***M. Bazarnik, L. Jurczyszyn, R. Czajka, K. Morgenstern, Phys. Chem. Chem. Phys.* **17** 5366 (2015)**Long-range magnetic coupling between nanoscale organic–metal hybrids mediated by a nanoskymion lattice***J. Brede, N. Atodiresei, V. Caciuc, M. Bazarnik, A. Al-Zubi, S. Blügel, and R. Wiesendanger, Nature Nanotechnology* **9** 1018 (2014)**Local tunnel magnetoresistance of an iron intercalated graphene-based heterostructure***R. Decker, M. Bazarnik, N. Atodiresei, V. Caciuc, S. Blügel, and R. Wiesendanger, J. Phys.: Condens. Matter* **26** 394004 (2014)**Spin-resolved imaging and spectroscopy of individual molecules with sub-molecular spatial resolution***J. Brede and R. Wiesendanger, MRS Bulletin* **39** 608 (2014)**Tailoring Molecular Self-Assembly of Magnetic Phthalocyanine Molecules on Fe- and Co-Intercalated Graphene***M. Bazarnik, J. Brede, R. Decker, and R. Wiesendanger, ACS Nano* **7** 11341 (2013)**Atomic-scale magnetism of cobalt-intercalated graphene***R. Decker, J. Brede, N. Atodiresei, V. Caciuc, S. Blügel, and R. Wiesendanger, Phys. Rev. B* **87** 041403 (2013)**Spin-resolved characterization of single cobalt phthalocyanine molecules on a ferromagnetic support***J. Brede and R. Wiesendanger, Phys. Rev. B* **86** 184423 (2012)**Real-space observation of spin-split molecular orbitals of adsorbed single-molecule magnets***J. Schwöbel, Y. Fu, J. Brede, A. Dilullo, G. Hoffmann, S. Klyatskaya, M. Ruben, and R. Wiesendanger, Nature Communications* **3** 953 (2012)**Reversible chiral switching of Bis(phthalocyaninato) Terbiu(III) on a metal surface***Y. Fu, J. Schwöbel, S.-W. Hla, A. Dilullo, G. Hoffmann, S. Klyatskaya, M. Ruben, and R. Wiesendanger, Nano Lett.* **12** 3931 (2012)**Controlled sequential dehydrogenation of single molecules by scanning tunneling microscopy***N. Baadji, S. Kuck, J. Brede, G. Hoffmann, R. Wiesendanger, and S. Sanvito, Phys. Rev. B* **82** 115447 (2010)

**Design of the Local Spin-polarization at the Organic-Ferromagnetic Interface**

*N. Atodiresei, J. Brede, P. Lazic, V. Caciuc, G. Hoffmann, R. Wiesendanger, and S. Blügel, Phys. Rev. Lett. 105 066601 (2010)*

**Spin- and Energy-Dependent Tunneling through a Single Molecule with Intramolecular Spatial Resolution**

*J. Brede, N. Atodiresei, G. Hoffmann, S. Kuck, P. Lazic, V. Caciuc, Y. Morikawa, S. Blügel, and R. Wiesendanger, Phys. Rev. Lett. 105 047204 (2010)*

**Adsorption behavior of asymmetric Pd pincer complexes on a Cu(111) surface**

*S.-H. Chang, A. Scarfato, C. Kleeberg, M. Bröring, G. Hoffmann, and R. Wiesendanger, Langmuir 26 10868 (2010)*

**The disposition of the axial ligand in the physical vapor deposition of organometallic complexes**

*S. Kuck, M. Prostak, M. Funk, M. Bröring, G. Hoffmann, and R. Wiesendanger, J. Vac. Sci. & Tech. A 28 795 (2010)*

**Steering two dimensional molecular growth via dipolar interaction**

*S. Kuck, S.-H. Chang, J.-P. Klöckner, M. H. Prosenc, G. Hoffmann, and R. Wiesendanger, ChemPhysChem 10 2008 (2009)*

**Dynamics of molecular self-ordering in tetraphenyl porphyrin monolayers on metallic substrates**

*J. Brede, S. Kuck, J. Schwöbel, S.-H. Chang, M. Linares, G. Hoffmann, R. Wiesendanger, A. Scarfato, R. Lensen, P. Kouwer, J. Hoogboom, A. Rowan, M. Bröring, M. Funk, S. Stafström, F. Zerbetto, and R. Lazzaroni, Nanotechnology 20 275602 (2009)*

**Adsorption and Conformation of Porphyrins on Metallic Surfaces**

*J. Brede, M. Linares, R. Lensen, A. E. Rowan, M. Funk, M. Bröring, G. Hoffmann, and R. Wiesendanger, J. Vac. Sci. & Tech. B 27(2) 799 (2009)*

**Symmetry reduction of metal phthalocyanines on metals**

*S.-H. Chang, S. Kuck, J. Brede, L. Lichtenstein, G. Hoffmann, and R. Wiesendanger, Phys. Rev. B 78 233409 (2008)*

**"Naked" Iron-5,10,15-triphenylcorrole on Cu(111): Observation of Chirality on a Surface and Manipulation of Multiple Conformational States by STM**

*S. Kuck, G. Hoffmann, M. Bröring, M. Fechtner, M. Funk, and R. Wiesendanger, J. Am. Chem. Soc. 130 14072 (2008)*

**A versatile variable-temperature scanning tunneling microscope for molecular growth**

*S. Kuck, J. Wienhausen, G. Hoffmann, and R. Wiesendanger, Rev. Sci. Instr. 79 083903 (2008)*

**Scanning tunneling microscope study of iron(II) phthalocyanine growth on metal and insulating surfaces**

*A. Scarfato, S.-H. Chang, S. Kuck, J. Brede, G. Hoffmann, and R. Wiesendanger, Surf. Sci. 602 677 (2008)*