

Scanning Probe Methods Group, Prof. Dr. Roland Wiesendanger

Publications: Original Articles

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Subgroup: MFM at Low Temperatures

Visualizing the flux distribution of superconductors in external magnetic fields by magnetic force microscopy*U. H. Pi, Z. G. Khim, D. H. Kim, A. Schwarz, M. Liebmann, and R. Wiesendanger, Phys. Rev. B* **73** 144505 (2006)**Observation of the flux-antiflux boundary propagation during magnetization reversal in Bi₂Sr₂CaCu₂O₈+ δ crystal with single vortex resolution***A. Schwarz, M. Liebmann, R. Wiesendanger, U. H. Pi, Z. G. Khim, and D. H. Kim, Appl. Phys. Lett.* **88** 012507 (2006)**Magnetization reversal of a structurally disordered manganite thin film with perpendicular anisotropy***M. Liebmann, A. Schwarz, U. Kaiser, R. Wiesendanger, D.-W. Kim, and T. W. Noh, Phys. Rev. B* **71** 104431 (2005)**Growth and Magnetism of Fe on Cr(001): A Spin-Polarized Scanning Tunneling Spectroscopy and Magnetic Force Microscopy Study***M. Bode, R. Ravlic, M. Kleiber, and R. Wiesendanger, Appl. Phys. A* **80** 907 (2005)**Barkhausen noise visualized in real space***A. Schwarz and M. Liebmann, Proceedings of SPIE* **5843** 52 (2005)**Dynamic force spectroscopy across an individual strongly pinned Vortex in a Bi₂Sr₂CaCu₂O₈+ δ single crystal.***U. H. Pi, Z. G. Khim, D. H. Kim, A. Schwarz, M. Liebmann, and R. Wiesendanger, Appl. Phys. Lett.* **85** 5307 (2004)**Direct observation of the vortices trapped in stacking fault dislocations of Bi₂Sr₂CaCu₂O₈ by a low-temperature magnetic force microscope.***U. H. Pi, Z. G. Khim, D. H. Kim, A. Schwarz, M. Liebmann, and R. Wiesendanger, Phys. Rev. B* **69** 94518 (2004)**Visualization of the Barkhausen Effect by Magnetic Force Microscopy.***A. Schwarz, M. Liebmann, U. Kaiser, R. Wiesendanger, T. W. Noh, and D. W. Kim, Phys. Rev. Lett.* **92** 77206 (2004)**Tilted magnetization of a La_{0.7}Sr_{0.3}MnO₃/LaAlO₃ (001) thin film***M. Liebmann, U. Kaiser, A. Schwarz, R. Wiesendanger, U. H. Pi, T. W. Noh, Z. G. Khim, and D. W. Kim, J. Magn. Magn. Mater.* **280** 51 (2004)**Vortex dynamics in Bi₂Sr₂CaCu₂O₈ single crystals with low density columnar defects studied by magnetic force microscopy.***U. H. Pi, D. H. Kim, Z. G. Khim, U. Kaiser, M. Liebmann, A. Schwarz, and R. Wiesendanger, Proc. Int. Conf. Physics and Chemistry of Molecular and Oxide Superconductors, J. Low Temp. Phys.* **131** 993 (2003)**Domain nucleation and growth of La_{0.7}Ca_{0.3}Mn_{0.3}- δ /LaAlO₃ films studied by low temperature MFM.***M. Liebmann, U. Kaiser, A. Schwarz, R. Wiesendanger, U. H. Pi, T. W. Noh, Z. G. Khim and D.-W. Kim, J. Appl. Phys.* **93** 8319 (2003)**A low-temperature ultrahigh vacuum scanning force microscope with a split-coil magnet.***M. Liebmann, A. Schwarz, S. M. Langkat, and R. Wiesendanger, Rev. Sci. Instr.* **73** 3508 (2002)**Investigation of the swelling of human skin cells in liquid media by tapping mode scanning force microscopy.***T. Richter, J. Müller, U. D. Schwarz, R. Wepf, and R. Wiesendanger, Appl. Phys. A* **72** 125 (2001)**Simulation of Non-contact atomic force microscopy images of Xenon(111)***H. Hölscher, W. Allers, U. D. Schwarz, A. Schwarz, and R. Wiesendanger, Appl. Phys. A* **72** S35 (2001)**Simultaneous observation of atomic step and domain wall structure of ultrathin Co films by magnetic force microscopy***M. Dreyer, M. Kleiber and R. Wiesendanger, Appl. Phys. A* **69** 359 (1999)**Composition driven change of magnetic anisotropy of ultrathin Co/Au (111) films studied by magnetic force microscopy under ultrahigh vacuum***M. Dreyer, M. Kleiber, A. Wadas, and R. Wiesendanger, Phys. Rev. B* **59** 4273 (1999)**Magnetization switching of submicrometer Co dots induced by a magnetic force microscope tip***M. Kleiber, F. Kümmerlen, M. Löhdorf, A. Wadas, D. Weiss, R. Wiesendanger, Phys. Rev. B* **58** 5563 (1998)

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