

Dr. Matthias Bode

Group Leader

Theme: Electronic and Magnetic
Materials & Devices

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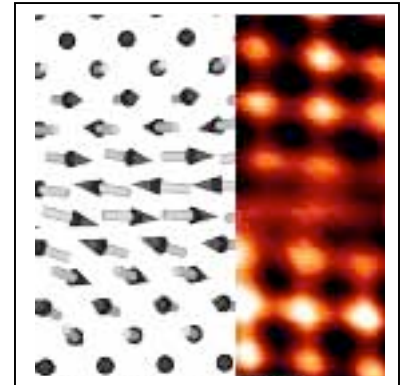
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Research Summary:

Surface Science and Magnetism, investigation of the correlation of structural, electronic and magnetic properties of ultrathin films, development of spin-polarized scanning tunneling spectroscopy, responsibility for numerous diploma and Ph.D. students, several projects. Surface Electronic Structure of Gd(0001): Studies on the Thickness and Temperature Dependence of the Exchange Splitting, Spin-Polarized Scanning Tunneling Spectroscopy & Microscopy, Scanning Probe Techniques: MFM and SP-STM



Selected Recent Publications:

Phys. Rev. Lett. 100, 029703 (2008): Comment on Three-dimensional, spin-resolved structure of magnetic vortex and antivortex states in patterned Co films using scanning ion microscopy with polarization analysis

Phys. Rev. B 77, 233409 (2008): Surface state vs orbital Kondo resonance at Cr(001): Arguments for a surface state interpretation

Science 317, 1537 (2007): Current-Induced Magnetization Switching with a Spin-Polarized Scanning Tunneling Microscope

Nature 447, 190 (2007): Chiral magnetic order at surfaces driven by inversion asymmetry

Nature Materials 5, 477 (2006): Atomic spin structure of antiferromagnetic domain walls

Phys. Rev. Lett. 94, 087204 (2005): Revealing Antiferromagnetic Order of the Fe Monolayer on W(001): Spin-Polarized Scanning Tunneling Microscopy and First-Principles Calculations