

Scanning Probe Methods Group, Prof. Dr. Roland Wiesendanger

Publications: Original Articles

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Orbital selective coupling between Ni adatoms and graphene Dirac electrons

M. Gyamfi, T. Eelbo, M. Wasniowska, T. O. Wehling, S. Forti, U. Starke, A. I. Lichtenstein, M. I. Katsnelson, and R. Wiesendanger, Phys. Rev. B **85** 161406(R) (2012)

Micromagnetic description of the spin spiral in Fe double-layer stripes on W(110)

S. Meckler, O. Pietzsch, N. Mikuszeit, and R. Wiesendanger, Phys. Rev. B **85** 024420 (2012)

Atom-specific spin mapping and buried topological states in a homologous series of topological insulators

S. V. Eremeev, G. Landolt, T. V. Menshchikova, B. Slomski, Y. M. Koroteev, Z. S. Aliev, M. B. Babanly, J. Henk, A. Ernst, L. Patthey, A. Eich, A. A. Khajetoorians, J. Hagemeister, O. Pietzsch, J. Wiebe, R. Wiesendanger, P. M. Echenique, S. S. Tsirkin, I. R. Amiraslanov, J. H. Dil, and E. V. Chulkov, Nat. Commun. **3** 635 (2012)

Manipulation of domain walls using a spin-polarized STM

R. Wieser, T. Stapelfeldt, E. Y. Vedmedenko, and R. Wiesendanger, Europhys. Lett. **97** 17009 (2012)

Anomalously large g factor of single atoms adsorbed on a metal substrate

B. Chilian, A. A. Khajetoorians, S. Lounis, A. T. Costa, D. L. Mills, J. Wiebe, and R. Wiesendanger, Phys. Rev. B **84** 212401 (2011)

Multiscale magnetic study of Ni(111) and graphene on Ni(111)

L.V. Dzemiantsova, M. Karolak, F. Lofink, A. Kubetzka, B. Sachs, K. von Bergmann, S. Hankemeier, T.O. Wehling, R. Frömter, H.P. Oepen, A.I. Lichtenstein, and R. Wiesendanger, Phys. Rev. B **84** 205431 (2011)

Joule heating and spin-transfer torque investigated on the atomic scale using a spin-polarized scanning tunneling microscope

S. Krause, G. Herzog, A. Schlenhoff, A. Sonntag, and R. Wiesendanger, Phys. Rev. Lett. **107** 186601 (2011)

Fe adatoms on graphene/Ru(0001): Adsorption site and local electronic properties

M. Gyamfi, T. Eelbo, M. Wasniowska, and R. Wiesendanger, Phys. Rev. B **84** 113403 (2011)

Magnetic properties of monolayer Co islands on Ir(111) probed by spin-resolved scanning tunneling microscopy

J. E. Bickel, F. Meier, J. Brede, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Phys. Rev. B **84** 054454 (2011)

Role of quadratic terms in the Heisenberg model for quantum spin dynamics

R. Wieser, Phys. Rev. B **84** 054411 (2011)

Magnetostatics and the rotational sense of cycloidal spin spirals

N. Mikuszeit, S. Meckler, R. Wiesendanger, and R. Miranda, Phys. Rev. B **84** 054404 (2011)

Spontaneous atomic-scale magnetic skyrmion lattice in two dimensions

S. Heinze, K. von Bergmann, M. Menzel, J. Brede, A. Kubetzka, R. Wiesendanger, G. Bihlmayer, S. and Blügel, Nature Physics **7** 713 -- 718 (2011)

Domain Wall Manipulation with a Magnetic Tip

T. Stapelfeldt, R. Wieser, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. Lett. **107** 027203 (2011)

Logik aus atomaren Spins

J. Wiebe, A. A. Khajetoorians, B. Chilian, and R. Wiesendanger, Physik in unserer Zeit **42** 162 (2011)

Quantitative Measurement of the Magnetic Exchange Interaction across a Vacuum Gap

R. Schmidt, C. Lazo, U. Kaiser, A. Schwarz, S. Heinze, and R. Wiesendanger, Phys. Rev. Lett. **106** 257202 (2011)

Chemical Resolution at Ionic Crystal Surfaces Using Dynamic Atomic Force Microscopy with Metallic Tips

G. Teobaldi, K. Lämmle, T. Trevethan, M. Watkins, A. Schwarz, R. Wiesendanger, and A. Shluger, Phys. Rev. Lett. **106** 216102 (2011)

Experimental variation and theoretical analysis of the inelastic contribution to atomic spin excitation spectroscopy

B. Chilian, A. A. Khajetoorians, J. Wiebe, and R. Wiesendanger, Phys. Rev. B **83** 195431 (2011)

Realizing All-Spin–Based Logic Operations Atom by Atom

A. A. Khajetoorians, J. Wiebe, B. Chilian, and R. Wiesendanger, *Science* **332** 1062 (2011)

Inhomogeneous electronic properties of monolayer graphene on Ru(0001)

M. Gyamfi, T. Eelbo, M. Wałowska, and R. Wiesendanger, *Phys. Rev. B* **83** 153418 (2011)

Spin-spin correlations in ferromagnetic nanosystems

E. Y. Vedmedenko, N. Mikuszeit, T. Stapelfeldt, R. Wieser, M. Potthoff, A. I. Lichtenstein and R. Wiesendanger, *Eur. Phys. J. B* **80** 331 (2011)

A multi-scale model of domain wall velocities based on ab initio parameters

P. Weinberger, E. Y. Vedmedenko, R. Wieser, and R. Wiesendanger, *Philosophical Magazine* **91** 2248 (2011)

Indirect Control of Antiferromagnetic Domain Walls with Spin Current

R. Wieser, E. Y. Vedmedenko, and R. Wiesendanger, *Phys. Rev. Lett.* **106** 067204 (2011)

Spin-polarization of platinum (111) induced by the proximity to cobalt nanostripes

F. Meier, S. Lounis, J. Wiebe, L. Zhou, S. Heers, P. Mavropoulos, P. H. Dederichs, S. Blügel, and R. Wiesendanger, *Phys. Rev. B* **83** 075407 (2011)

Single-atom magnetometry

R. Wiesendanger, *Current Opinion in Solid State and Materials Science* **15** 1 (2011)

Itinerant Nature of Atom-Magnetization Excitation by Tunneling Electrons

A. A. Khajetoorians, S. Lounis, B. Chilian, A. T. Costa, L. Zhou, D. L. Mills, J. Wiebe, and R. Wiesendanger, *Phys. Rev. Lett.* **106** 037205 (2011)

Real-space mapping of a two-dimensional disordered system in the quantum Hall regime

K. Hashimoto, J. Wiebe, T. Inaoka, Y. Hirayama, R. Wiesendanger, and M. Morgenstern, *J. Phys.: Conf. Series* **334** 012008 (2010)

Magnetoelastic effects in nanostructures

J. I. Arnaudas, A. Badia-Majós, L. Berbil-Bautista, M. Bode, F. J. Castano, M. Ciria, C. de la Fuente, J. L. Diez-Ferrer, S. Krause, B. G. Ng, R. C. O’Handley, C. A. Ross, and R. Wiesendanger, *The Physics of Metals and Metallography* **168** 177 (2010)

Detecting excitation and magnetization of individual dopants in a semiconductor

A. A. Khajetoorians, B. Chilian, J. Wiebe, S. Schuwalow, F. Lechermann, and R. Wiesendanger, *Nature* **467** 1084 (2010)

Current driven domain wall motion in cylindrical nanowires

R. Wieser, E. Y. Vedmedenko, P. Weinberger, and R. Wiesendanger, *Phys. Rev. B* **82** 144430 (2010)

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)

Bulk Cr tips with full spatial magnetic sensitivity for spin-polarized scanning tunneling microscopy

A. Schlenhoff, S. Krause, G. Herzog, and R. Wiesendanger, *Appl. Phys. Lett.* **97** 083104 (2010)

An approach for automated scale invariant STM-scan matching using SIFT

H. Bistry, B. Wolter, B. Schütz, R. Wiesendanger, and J. Zhang, *Proc. IEEE Nano 2010* **2** 897 (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)

Inversion of spin polarization above individual magnetic adatoms

L. Zhou, F. Meier, J. Wiebe, and R. Wiesendanger, *Phys. Rev. B* **82** 012409 (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)

Unambiguous Determination of the Adsorption Geometry of a Metal–Organic Complex on a Bulk Insulator

K. Lämmle, T. Trevethan, A. Schwarz, M. Watkins, A. Shluger, and R. Wiesendanger, *Nano Letters* (2010)

Miniaturized transportable evaporator for molecule deposition inside cryogenic scanning probe microscopes

K. Lämmle, A. Schwarz, and R. Wiesendanger, *Rev. Sci. Instr.* **81** 053902 (2010)

Three-electrode self-actuating self-sensing quartz cantilever: design, analysis, and experimental verification

C. J. Chen, A. Schwarz, R. Wiesendanger, O. Horn, and J. Müller, Rev. Sci. Instr. 81 053702 (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)

Imaging and Manipulating the Spin Direction of Individual Atoms

D. Serrate, P. Ferriani, Y. Yoshida, S.-W. Hla, M. Menzel, K. von Bergmann, S. Heinze, A. Kubetzka and R. Wiesendanger, Nature Nanotechnology 5 350 (2010)

Real space visualization of thermal fluctuations in a triangular flux line lattice

A. Schwarz, M. Liebmann, U. H. Pi, and R. Wiesendanger, New J. Phys. 12 033022 (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)

Heat assisted spin torque switching of quasistable nanomagnets across a vacuum gap

G. Herzog, S. Krause, and R. Wiesendanger, Appl. Phys. Lett. 96 102505 (2010)

Strength and directionality of surface Ruderman–Kittel–Kasuya–Yosida interaction mapped on the atomic scale

L. Zhou, J. Wiebe, S. Lounis, E. Vedmedenko, F. Meier, S. Blügel, P. H. Dederichs, and R. Wiesendanger, Nature Physics 6 187 (2010)

Domain wall motion damped by the emission of spin waves

R. Wieser, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. B 81 024405 (2010)

Nanoscale spin structures dominated by magnetoelastic interactions around dislocation cores as seen via spin-polarized STM

L. Berbil-Bautista, S. Krause, M. Bode, A. Badía-Majós, C. de la Fuente, R. Wiesendanger, and J. I. Arnaudas, Phys. Rev. B 80 241408(R) (2009)

Real-Space Observation of a Right-Rotating Inhomogeneous Cycloidal Spin Spiral by Spin-Polarized Scanning Tunneling Microscopy in a Triple Axes Vector Magnet

S. Meckler, N. Mikuszeit, A. Preßler, E. Y. Vedmedenko, O. Pietzsch, and R. Wiesendanger, Phys. Rev. Lett. 103 157201 (2009)

Magnetic Ground State of Single and Coupled Permalloy Rectangles

S. Hankemeier, R. Frömter, N. Mikuszeit, D. Stickler, H. Stillrich, S. Pütter, E. Y. Vedmedenko, and H. P. Oepen, Phys. Rev. Lett. 103 147204 (2009)

Atomic-Level Control of the Domain Wall Velocity in Ultrathin Magnets by Tuning of Exchange Interactions

A. Stupakiewicz, E. Y. Vedmedenko, A. Fleurence, T. Maroutian, P. Beauvillain, A. Maziewski, and R. Wiesendanger, Phys. Rev. Lett. 103 137202 (2009)

Correction of systematic errors in scanning tunneling spectra on semiconductor surfaces: The energy gap of Si(111)-7x7 at 0.3 K

S. Modesti, H. Gutzmann, J. Wiebe, and R. Wiesendanger, Phys. Rev. B 80 125326 (2009)

The monomer-to-dimer transition and bimodal growth of Co-Salen on NaCl(001): a high resolution atomic force microscopy study

S. Fremy, A. Schwarz, K. Lämmle, M. Prosenc, and R. Wiesendanger, Nanotechnology 20 405608 (2009)

Magnetization Reversal of Nanoscale Islands: How Size and Shape Affect the Arrhenius Prefactor

S. Krause, G. Herzog, T. Stapelfeldt, L. Berbil-Bautista, M. Bode, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. Lett. 103 127202 (2009)

The effect of tilted edges on the shape anisotropy and stray field coupling of uniformly magnetized rectangular elements

S. Pütter, N. Mikuszeit, E. Y. Vedmedenko, and H. P. Oepen, J. Appl. Phys. 106 043916 (2009)

Quasiantiferromagnetic 120° Néel state in two-dimensional clusters of dipole-quadrupole-interacting particles on a hexagonal lattice

N. Mikuszeit, L. Baraban, E. Y. Vedmedenko, A. Erbe, P. Leiderer, and R. Wiesendanger, Phys. Rev. B 80 (2009)

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)

Atomic-resolution three-dimensional force and damping maps of carbon nanotube peapods

M. Ashino, D. Oberfell, M. Haluska, S. Yang, A. N. Khlobystov, S. Roth, and R. Wiesendanger, Nanotechnology **20** 264001 (2009)

Hydrogen-related contrast in atomic force microscopy

R. Schmidt, A. Schwarz, and R. Wiesendanger, Nanotechnology **20** 264007 (2009)

Towards an understanding of the atomic scale magnetic contrast formation in NC-AFM: a tip material dependent MExFM study on Ni

A. Schwarz, U. Kaiser, and R. Wiesendanger, Nanotechnology **20** 264017 (2009)

Magnetismus im Nanokosmos

H. Fuchs and R. Wiesendanger, nanoTECHNOLOGIE aktuell **2** 10-18 (2009)

Revealing Subsurface Vibrational Modes by Atom-Resolved Damping Force Spectroscopy

M. Ashino, R. Wiesendanger, A. N. Khlobystov, S. Berber, and D. Tománek, Phys. Rev. Lett. **102** 195503 (2009)

Quantized spin waves in ferromagnetic and antiferromagnetic structures with domain walls

R. Wieser, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. B **79** 144412 (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)

A low-temperature spin-polarized scanning tunneling microscope operating in a fully rotatable magnetic field

S. Meckler, M. Gyamfi, O. Pietzsch, R. Wiesendanger, Rev. Sci. Instr. **80** 023708 (2009)

Wavefunction Mapping of Immobilized InP Semiconductor Nanocrystals

G. Maruccio, Chr. Meyer, T. Matsui, D. V. Talapin, S. G. Hickey, H. Weller, and R. Wiesendanger, Small **5** 808 (2009)

Probing the Magnetic Exchange Forces of Iron on the Atomic Scale

R. Schmidt, C. Lazo, H. Hölscher, U. H. Pi, V. Caciuc, A. Schwarz, R. Wiesendanger, and S. Heinze, Nano Letters **9** 200 (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)

Quantum Hall Transition in Real Space: From Localized to Extended States

K. Hashimoto, C. Sohrmann, J. Wiebe, T. Inaoka, F. Meier, Y. Hirayama, R. A. Römer, R. Wiesendanger, and M. Morgenstern, Phys. Rev. Lett. **101** 256802 (2008)

Quantized Spin Waves in Antiferromagnetic Heisenberg Chains

R. Wieser, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. Lett. **101** 177202 (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. Fechtler, M. Funk, and R. Wiesendanger, J. Am. Chem. Soc. **130** 14072 (2008)

Evaluating local properties of magnetic tips utilizing an antiferromagnetic surface

U. Kaiser, A. Schwarz, and R. Wiesendanger, Phys. Rev. B **78** 104418 (2008)

Anisotropic superexchange in one-dimensional Fe-chains on InAs(110)

L. Sacharow, R. Wiesendanger, G. Bihlmayer, S. Blügel and M. Morgenstern, Surf. Sci. **602** 3297 (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)

Atomic-Scale Spin Spiral with a Unique Rotational Sense: Mn Monolayer on W(001)

P. Ferriani, K. von Bergmann, E. Y. Vedmedenko, S. Heinze, M. Bode, M. Heide, G. Bihlmayer, S. Blügel, and R. Wiesendanger, Phys. Rev. Lett. **101** 027201 (2008)

In search of multipolar order on the Penrose tiling

E. Y. Vedmedenko, S. Even-Dar Mandel, R. Lifshitz, Phil. Mag. **88** 2197 (2008)

Complex magnetic order on the atomic scale revealed by spin-polarized scanning tunnelling microscopy

K. von Bergmann, M. Bode, A. Kubetzka, O. Pietzsch, E. Y. Vedmedenko, R. Wiesendanger, Phil. Mag. **88** 2627 (2008)

Atomically resolved mechanical response of individual metallofullerene molecules confined inside carbon nanotubes

M. Ashino, D. Oberfell, M. Haluška, S. Yang, A. N. Khlobystov, S. Roth, and R. Wiesendanger, Nature Nanotechnology 3 337 (2008)

Magnetic properties of single atoms of Fe and Co on Ir(111) and Pt(111)

C. Etz, J. Zabloudil, P. Weinberger, E. Y. Vedmedenko, Phys. Rev. B 77 184425 (2008)

Magnetization reversal of microstructured kagome lattices

A. Westphalen, A. Schumann, A. Remhof, H. Zabel, M. Karolak, B. Baxevanis, E. Y. Vedmedenko, T. Last, U. Kunze, T. Eimüller, Phys. Rev. B 77 174407 (2008)

Modulated multipolar structures in magnetic arrays

E. Y. Vedmedenko, R. Wiesendanger, Phil. Mag. 88 2683 (2008)

Revealing Magnetic Interactions from Single-Atom Magnetization Curves

F. Meier, L. Zhou, J. Wiebe, and R. Wiesendanger, Science 320 82 (2008)

Magnetostatic interactions on a square lattice

A. Remhof, A. Schumann, A. Westphalen, H. Zabel, N. Mikuszeit, E. Y. Vedmedenko, T. Last, and U. Kunze, Phys. Rev. B 77 134409 (2008)

Effect of charge manipulation on scanning tunneling spectra of single Mn acceptors in InAs

F. Marczinowski, J. Wiebe, F. Meier, K. Hashimoto, and R. Wiesendanger, Phys. Rev. B 77 115318 (2008)

Entropy driven phase transition in itinerant antiferromagnetic monolayers

R. Wieser, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. B 77 064410 (2008)

Metal–Insulator Transition in Graphite: A Comparison to Heterostructures with High Carrier Mobility

E. V. Konenkova, D. Grundler, M. Morgenstern, and R. Wiesendanger, Techn. Phys. Lett. 34 30 (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)

Structure and magnetism of ultra-thin chromium layers on W(110)

B. Santos, J. M. Puerta, J. I. Cerda, R. Stumpf, K. von Bergmann, R. Wiesendanger, M. Bode, K. F. McCarty, and J. de la Figuera, New J. Phys. 10 13005 (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"

M. Bode, O. Pietzsch, A. Kubetzka, W. Wulfhekel, D. McGrouther, S. McVitie, and J. N. Chapman, Phys. Rev. Lett. 100 029703 (2008)

Magnetismus mit Dreh

K. von Bergmann, M. Bode, R. Wiesendanger, Phys. Unserer Zeit 39 93 (2008)

Complex magnetism of the Fe monolayer on Ir(111)

K. von Bergmann, S. Heinze, M. Bode, G. Bihlmayer, S. Blügel, and R. Wiesendanger, New Journ. Phys. 9 396 (2007)

Chiral magnetic ordering in two-dimensional ferromagnets with competing Dzyaloshinsky-Moriya interactions

E. Y. Vedmedenko, L. Udvardi, P. Weinberger, R. Wiesendanger, Phys. Rev. B 75 104431 (2007)

Multipole moments of general ellipsoids with two polarized domains

M. Schult, N. Mikuszeit, E. Y. Vedmedenko and R. Wiesendanger, J. Phys. A 40 14791 (2007)

Local Electronic Structure near Mn Acceptors in InAs: Surface-Induced Symmetry Breaking and Coupling to Host States

F. Marczinowski, J. Wiebe, J.-M. Tang, M. E. Flatte, F. Meier, M. Morgenstern, and R. Wiesendanger, Phys. Rev. Lett. 99 157202 (2007)

Current-Induced Magnetization Switching with a Spin-Polarized Scanning Tunneling Microscope

S. Krause, L. Berbil-Bautista, G. Herzog, M. Bode, and R. Wiesendanger, Science 317 1537 (2007)

Spin-polarized scanning tunneling microscopy and spectroscopy of ferromagnetic Dy(0001)/W(110) films

L. Berbil-Bautista, S. Krause, M. Bode, and R. Wiesendanger, Phys. Rev. B 76 064411 (2007)

Correlation Effects in Wave Function Mapping of Molecular Beam Epitaxy Grown Quantum Dots

G. Maruccio, M. Janson, A. Schramm, C. Meyer, T. Matsui, C. Heyn, W. Hansen, R. Wiesendanger, M. Rontani, E. Molinari, Nano Letters 7 2701 (2007)

Spin-polarized scanning tunneling microscopy in field emission mode

A. Kubetzka, M. Bode, and R. Wiesendanger, Appl. Phys. Lett. 91 012508 (2007)

On the preparation and electronic properties of clean W(110) surfaces

M. Bode, S. Krause, L. Berbil-Bautista, S. Heinze and R. Wiesendanger, Surf. Sci. 601 3308 (2007)

Lorentz covariance and the crossover of two-dimensional antiferromagnets

P. Crompton, Phys. Rev. B 75 174520 (2007)

Chiral magnetic order at surfaces driven by inversion asymmetry

M. Bode, M. Heide, K. von Bergmann, P. Ferriani, S. Heinze, G. Bihlmayer, A. Kubetzka, O. Pietzsch, S. Blügel, and R. Wiesendanger, Nature 447 190 (2007)

Imaging correlated wave functions of few-electron quantum dots: Theory and scanning tunneling spectroscopy experiments

M. Rontani, E. Molinari, G. Maruccio, M. Janson, A. Schramm, Chr. Meyer, T. Matsui, Chr. Heyn, W. Hansen, and R. Wiesendanger, J. Appl. Phys. 101 081714 (2007)

Electronic states of Fe atoms and chains on InAs(110) from scanning tunneling spectroscopy

T. Matsui, Chr. Meyer, L. Sacharow, J. Wiebe, and R. Wiesendanger, Phys. Rev. B 75 165405 (2007)

Influence of the lattice discreteness on magnetic ordering in nanostructures and nanoarrays

E. Y. Vedmedenko, phys. stat. sol. (b) 244 1133 (2007)

Magnetic exchange force microscopy with atomic resolution

U. Kaiser, A. Schwarz, and R. Wiesendanger, Nature 446 522 (2007)

Local electronic signatures of impurity states in graphene

T. Wehling, A. V. Balatsky, M. I. Katsnelson, A. I. Lichtenstein, K. Scharnberg, and R. Wiesendanger, Phys. Rev. B 75 125425 (2007)

Mapping spin structures on the atomic scale

R. Wiesendanger, Europhysics News 38 16 (2007)

Pros and cons: cryo-electron microscopic evaluation of block faces versus cryo-sections from frozen-hydrated skin specimens prepared by different techniques

T. Richter, S. S. Biel, M. Sattler, H. Wenck, K.-P. Wittern, R. Wiesendanger, and R. Wepf, J. Microsc. 225 201 (2007)

Co double-layer nanostructures on Pt(111) studied by spin-polarized scanning tunnelling microscopy

F. Meier, K. von Bergmann, J. Wiebe, M. Bode, and R. Wiesendanger, J. Phys. D 40 1306 (2007)

ME_xFM - A New Force Microscopy Based Technique to Study Atomic Scale Magnetism

A. Schwarz, Conference Proceedings EAST 2007 1 32 (2007)

Spin-dependent electronic and magnetic properties of Co nanostructures on Pt(111) studied by spin-resolved scanning tunneling spectroscopy

F. Meier, K. von Bergmann, P. Ferriani, J. Wiebe, M. Bode, K. Hashimoto, S. Heinze, and R. Wiesendanger, Phys. Rev. B 74 195411 (2006)

Leading corrections to finite-size scaling for mixed-spin chains

R. Bischof and P. R. Crompton, JETP Letters 84 613 (2006)

Consequences of line defects on the magnetic structure of high anisotropy films: Pinning centers on Dy/W(110)

S. Krause, L. Berbil-Bautista, T. Hänke, F. Vonau, M. Bode, and R. Wiesendanger, Europhys. Lett. 76 637 (2006)

A perturbation theory of exchange interaction

C. J. Chen and R. Wiesendanger, Phys. Rev. B 74 113102 (2006)

Vortex fluctuations and ordering of dipolar-coupled granular moments in thin ferromagnetic films

J. Kötzler, D. Görlitz, M. Kurlifß, L. von Sawilski, and E. Y. Vedmedenko, Phys. Rev. B 73 224425 (2006)

Spin-Resolved Electronic Structure of Nanoscale Cobalt Islands on Cu(111)

O. Pietzsch, S. Okatov, A. Kubetzka, M. Bode, S. Heinze, A. Lichtenstein, and R. Wiesendanger, Phys. Rev. Lett. 96 237203 (2006)

Atomic spin structure of antiferromagnetic domain walls

M. Bode, E. Y. Vedmedenko, K. von Bergmann, A. Kubetzka, P. Ferriani, S. Heinze, and R. Wiesendanger, Nature Materials **5** 477 (2006)

Observation of a complex nanoscale magnetic structure in a hexagonal Fe monolayer

K. von Bergmann, S. Heinze, M. Bode, E. Y. Vedmedenko, G. Bihlmayer, S. Blügel, and R. Wiesendanger, Phys. Rev. Lett. **96** 167203 (2006)

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)

Atomic-Resolution Dynamic Force Microscopy and Spectroscopy of an Individual Single-Walled Carbon Nanotube

M. Ashino and R. Wiesendanger, Jpn. J. Appl. Phys. **45** (3B) 2286 (2006)

Possibility of imaging lateral profiles of individual tetrahedral hybrid orbitals in real space

C. J. Chen, Nanotechnology **17** S195 (2006)

Spin-polarized scanning tunneling spectroscopy of dislocation lines in Fe films on W(110)

M. Bode, K. von Bergmann, A. Kubetzka, O. Pietzsch, and R. Wiesendanger, J. Magn. Magn. Mater. **304** 1 (2006)

Comment on "Signature of a Chemical Bond in the Conductance between Two Metal Surfaces"

C. J. Chen, Phys. Rev. Lett. **96** 069701 (2006)

Coverage-dependent spin reorientation transition temperature of the Fe double-layer on W(110) observed by scanning tunneling microscopy

K. von Bergmann, M. Bode, and R. Wiesendanger, J. Magn. Magn. Mater. **305** 279 (2006)

Spin-polarized scanning tunneling microscopy through an adsorbate layer: Sulfur-covered Fe/W(110)

L. Berbil-Bautista, S. Krause, T. Hänke, M. Bode, and R. Wiesendanger, Surf. Sci. Lett. **600** L20 (2006)

Growth of Cr on Ir(111) studied by scanning tunneling microscopy

F. Marczinowski, K. von Bergmann, M. Bode, and R. Wiesendanger, Surf. Sci. **600** 1034 (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)

Interplay between magnetic and spatial order in Quasicrystals

E. Y. Vedmedenko, U. Grimm, and R. Wiesendanger, Philosophical Magazine **86** 733-739 (2006)

Unoccupied surface state on Pt(111) revealed by scanning tunneling spectroscopy

J. Wiebe, F. Meier, K. Hashimoto, G. Bihlmayer, S. Blügel, P. Ferriani, S. Heinze, and R. Wiesendanger, Phys. Rev. B **72** 193406 (2005)

Multipolar Ordering and Magnetization Reversal in Two-Dimensional Nanomagnet Arrays

E. Y. Vedmedenko, N. Mikuszeit, H. P. Oepen, and R. Wiesendanger, Phys. Rev. Lett. **95** 207202 (2005)

Temperature-dependent scanning tunneling spectroscopy of Cr(001): Orbital Kondo resonance versus surface state

T. Hänke, M. Bode, S. Krause, L. Berbil-Bautista, and R. Wiesendanger, Phys. Rev. B **72** 085453 (2005)

Absence of spin-flip transition at the Cr(001) surface: A combined spin-polarized scanning tunneling microscopy and neutron scattering study

T. Hänke, S. Krause, L. Berbil-Bautista, M. Bode, R. Wiesendanger, V. Wagner, D. Lott, and A. Schreyer, Phys. Rev. B **71** 184407 (2005)

Multipole moments of the in-plane magnetized nanodiscs

N. Mikuszeit, E. Y. Vedmedenko, R. Wiesendanger, and H. P. Oepen, J. Appl. Phys. **97** 10J502 (2005)

Imaging the Switching Behavior of Superparamagnetic Nanoislands by Spin-Polarized Scanning Tunneling Microscopy

M. Bode, A. Kubetzka, K. von Bergmann, O. Pietzsch, and R. Wiesendanger, J. Microsc. Res. & Techn. **66** 117 (2005)

Fifteen Years of Spin-Polarized Scanning Tunneling Microscopy

R. Wiesendanger, J. Microsc. Res. & Techn. **66** 59 (2005)

Spin-polarized scanning tunneling microscopy: Insight into magnetism from nanostructures to atomic scale spin structures

K. von Bergmann, M. Bode, A. Kubetzka, O. Pietzsch, and R. Wiesendanger, J. Microsc. Res. & Techn. **66** 61 (2005)

Lattice-dependent anisotropy in the orientation of magnetic domain walls

E. Y. Vedmedenko, K. von Bergmann, H. P. Oepen, and R. Wiesendanger, J. Magn. Magn. Mater. **290-291** 746 (2005)

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)

Revealing Antiferromagnetic Order of the Fe Monolayer on W(001): Spin-Polarized Scanning Tunneling Microscopy and First-Principles Calculations

A. Kubetzka, P. Ferriani, M. Bode, S. Heinze, G. Bihlmayer, K. von Bergmann, O. Pietzsch, S. Blügel, and R. Wiesendanger, Phys. Rev. Lett. **94** 87204 (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)

A universal relation in NC-AFM, STM, and atom manipulation

C. J. Chen, Nanotechnology **16** S27 (2005)

Die Festplatte von Übermorgen

H. Fuchs and R. Wiesendanger, Industrie Management **21 (6)** 17 (2005)

Interpretation of the atomic scale contrast obtained on graphite and single-walled carbon nanotubes in the dynamic mode of atomic force microscopy

M. Ashino, A. Schwarz, H. Hölscher, U.D. Schwarz, and R. Wiesendanger, Nanotechnology **16** 134 (2005)

Spin-polarized scanning tunneling microscopy of antiferromagnetic surfaces

M. Bode, R. Ravlic, M. Kleiber, and R. Wiesendanger, Nova Acta Leopoldina **340** 61 (2005)

Barkhausen noise visualized in real space

A. Schwarz and M. Liebmann, Proceedings of SPIE **5843** 52 (2005)

Magnetism of iron on tungsten(001) studied by spin-resolved scanning tunneling microscopy and spectroscopy.

K. von Bergmann, M. Bode, and R. Wiesendanger, Phys. Rev. B **70** 174455 (2004)

Dynamic force spectroscopy across an individual strongly pinned Vortex in a BiSr₂CaCu₂O_{8+delta} single crystal.

U. H. Pi, Z. G. Khim, D. H. Kim, A. Schwarz, M. Liebmann, and R. Wiesendanger, Appl. Phys. Lett. **85** 5307 (2004)

Multipole interaction of polarized single-domain particles

N. Mikuszeit, E. Y. Vedmedenko, and H. P. Oepen, J. Phys. C **16** 9037 (2004)

The Environment Matters - Even on the Atomic Scale

M. Bode, Science **306** 234 (2004)

Atomic-resolution dynamic force microscopy and spectroscopy of a single walled carbon nanotube: characterization of interatomic van der Waals forces.

M. Ashino, A. Schwarz, T. Behnke, and R. Wiesendanger, Phys. Rev. Lett. **93** 136101 (2004)

Controlled preparation of a magnetic thin film alloy: GdFe₂ and GdFe₃

M. Getzlaff, R. Pascal, and R. Wiesendanger, Surf. Sci. **566** 236 (2004)

Observation of 5f-states on U/W(110) films by means of scanning tunneling spectroscopy

L. Berbil-Bautista, T. Hänke, M. Getzlaff, R. Wiesendanger, I. Opahle, K. Koepferitz, and M. Richter, Phys. Rev. B **70** 113401 (2004)

Contributions of escape depth to photoelectron intensity of a well defined initial state

M. Morgenstern, T. Strasser, R. Adelung, M. Getzlaff, L. Kipp, W. Schattke, M. Skibowski, and R. Wiesendanger, Phys. Rev. B **70** 81305 (2004)

Noncollinear magnetic order in quasicrystals.

E. Y. Vedmedenko, U. Grimm, and R. Wiesendanger, Phys. Rev. Lett. **93** 76407 (2004)

Scanning tunneling spectroscopy on cobalt(0001): spectroscopic signature of stacking faults and dislocation lines.

J. Wiebe, L. Sacharow, A. Wachowiak, G. Bihlmayer, S. Heinze, S. Blügel, M. Morgenstern, and R. Wiesendanger, Phys. Rev. B **70** 35404 (2004)

A 300 mK ultra-high vacuum scanning tunneling microscope for spin-resolved spectroscopy at high energy resolution

J. Wiebe, A. Wachowiak, F. Meier, D. Haude, T. Foster, M. Morgenstern, and R. Wiesendanger, Review of Scientific Instruments **75** 4871 (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)

Spin-polarized electron scattering at single oxygen adsorbates on a magnetic surface

K. von Bergmann, M. Bode, A. Kubetzka, M. Heide, S. Blügel, and R. Wiesendanger, Phys. Rev. Lett. **92** 46801 (2004)

High spin polarization at the Fe/InAs(110) interface.

L. Sacharow, G. Bihlmayer, S. Blügel, and M. Morgenstern, Phys. Rev. B **69** 85317 (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)

Domain Wall Orientation in Magnetic Nanowires

E. Y. Vedmedenko, A. Kubetzka, K. von Bergmann, O. Pietzsch, M. Bode, J. Kirschner, H. P. Oepen, and R. Wiesendanger, Phys. Rev. Lett. **92** 77207 (2004)

Shape dependent Thermal Switching Behavior of Superparamagnetic Nanoislands.

M. Bode, O. Pietzsch, A. Kubetzka and R. Wiesendanger, Phys. Rev. Lett. **92** 67201 (2004)

Thickness dependent magnetization states of Fe islands on W(110): From single domain to vortex and diamond patterns.

M. Bode, A. Wachowiak, J. Wiebe, A. Kubetzka, M. Morgenstern, and R. Wiesendanger, Appl. Phys. Lett. **84** 948 (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)

Spin-polarized scanning tunneling spectroscopy of nano-scale cobalt islands on Cu(111)

O. Pietzsch, A. Kubetzka, M. Bode, and R. Wiesendanger, Phys. Rev. Lett. **92** 57202 (2004)

Fundamental studies of magnetism down to the atomic scale: present status and future perspectives of spin-polarized scanning tunneling microscopy.

R. Wiesendanger, M. Bode, A. Kubetzka, O. Pietzsch, M. Morgenstern, A. Wachowiak, and J. Wiebe, J. Magn. Magn. Mater. **272-276** 2115 (2004)

Assessing the performance of two-dimensional dopant profiling techniques

N. Duhayon, P. Eyben, M. Fouchier, T. Clarysse, W. Vandervorst, D. Alvarez, S. Schoemann, M. Ciappa, M. Stangoni, W. Fichtner, P. Formanek, M. Kittler, V. Raineri, F. Giannazzo, D. Goghero, Y. Rosenwaks, R. Shikler, S. Saraf, S. Sadewasser, N. Barreau, T. Glatzel, M. Verheijen, S. A. M. Mentink, M. von Sprekelsen, T. Maltezopoulos, R. Wiesendanger, and L. Hellemans, J. Vac. Sci. & Tech. B **22** 385 (2004)

Recent Advances in Spin-Polarized Scanning Tunneling Microscopy.

O. Pietzsch, A. Kubetzka, M. Bode, and R. Wiesendanger, Appl. Phys. A **78** 781 (2004)

Dead but highly dynamic - the stratum corneum is divided into three hydration zones.

T. Richter, C. Peuckert, M. Sattler, K. König, I. Riemann, U. Hintze, K.-P. Wittern, R. Wiesendanger, and R. Wepf, Skin Pharmacol Physiol **17** 246 (2004)

Quasiperiodic magnetic Order and geometrical Frustration on the Penrose Tiling

E. Y. Vedmedenko, Ferroelectrics **305** 129 (2004)

Visualizing the influence of interactions on the nanoscale: simpleelectron systems.

M. Morgenstern, J. Klijn, C. Meyer, D. Haude, and R. Wiesendanger, Proc. STM'03 Conference, Eindhoven, NL (eds. P. M. Koenraad and M. Kemerink), AIP Conf. Proc. **696** 11 (2003)

Three-dimensional force field spectroscopy.

A. Schwarz, H. Hölscher, S. M. Langkat, and R. Wiesendanger, Proc. STM'03 Conference, Eindhoven, NL (eds. P. M. Koenraad and M. Kemerink), AIP Conf. Proc. **696** 68 (2003)

STM measurements on the InAs(110) surface directly compared with surface electronic structure calculations.

J. Klijn, L. Sacharow, C. Meyer, S. Blügel, M. Morgenstern, and R. Wiesendanger, Phys. Rev. B **68** 205327 (2003)

Wave function mapping of InAs quantum dots by scanning tunneling spectroscopy.

Th. Maltezopoulos, A. Bolz, Chr. Meyer, Ch. Heyn, W. Hansen, M. Morgenstern, and R. Wiesendanger, Phys. Rev. Lett. 91 196804 (2003)

Correlation of structural, local electronic and magnetic properties of Fe on Cr(001) studied by spin-polarized scanning tunneling spectroscopy.

R. Ravlic, M. Bode, and R. Wiesendanger, J. Phys.: Condens. Matter 15 S2513 (2003)

Direct measurement of the local density of states of a disordered one-dimensional conductor.

C. Meyer, J. Klijn, M. Morgenstern, and R. Wiesendanger, Phys. Rev. Lett. 91 76803 (2003)

Low density two-dimensional electron systems studied by scanning tunneling spectroscopy.

M. Morgenstern, J. Klijn, Chr. Meyer, M. Getzlaff, R. L. Johnson, R. Adelung, L. Kipp, R. A. Römer, and R. Wiesendanger, Jpn. J. Appl. Phys. 42 4809 (2003)

From quantized states to percolation: Scanning tunneling spectroscopy of a strongly disordered two-dimensional electron system.

J. Wiebe, Chr. Meyer, J. Klijn, M. Morgenstern, and R. Wiesendanger, Phys. Rev. B 68 41402 (2003)

Frozen hydrated bloc-face investigation of tissue for Cryo-SEM.

T. Richter, M. Sattler, R. Wiesendanger, K.-P. Wittern, and R. Wepf, Microscopy and Microanalysis 9 1546 (2003)

Spin-polarized STM investigation of magnetic domain walls.

A. Kubetzka, O. Pietzsch, M. Bode, R. Ravlic, and R. Wiesendanger, Acta Physica Polonica A 104 259 (2003)

Surface electronic properties of Fe nanoparticles on c(2x2)-N/Cu(001)

M. Getzlaff, M. Bode, and R. Wiesendanger, Acta Physica Polonica A 104 327 (2003)

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)

Direct observation of confined states in individual metallic single wall carbon nanotubes.

Th. Maltezopoulos, A. Kubetzka, M. Morgenstern, R. Wiesendanger, S. G. Lemay, and C. Dekker, Appl. Phys. Lett. 83 1011 (2003)

Probing the Local Density of States of Dilute Electron Systems in Different Dimensions.

M. Morgenstern, Surface Review and Letters 10 933-962 (2003)

Evidence of a topological antiferromagnetic order on ultrathin Cr(001) film surface studied by spin-polarized scanning tunneling spectroscopy

T. Kawagoe, Y. Suzuki, M. Bode, and K. Koike, J. Appl. Phys. 93 6575 (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)

Correlation of dislocation and domain structure of Cr(001) investigated by spin-polarized scanning tunneling microscopy.

R. Ravlic, M. Bode, A. Kubetzka, and R. Wiesendanger, Phys. Rev. B 67 174411 (2003)

Determining the spin-polarization of surfaces by spin-polarized scanning tunneling spectroscopy.

A. Kubetzka, O. Pietzsch, M. Bode, and R. Wiesendanger, Appl. Phys. A 76 873 (2003)

A cryogenic scanning force microscope for the characterization of frozen biological samples

J.H. Müller, U.D. Schwarz, R. Wepf, and R. Wiesendanger, Appl. Phys. A 76 893 (2003)

Determination of site specific interatomic forces between an iron coated tip and the NiO(001) surface by force field spectroscopy.

S. M. Langkat, H. Hölscher, A. Schwarz, and R. Wiesendanger, Surf. Sci. 527 12 (2003)

Real-space observation of drift states in a two-dimensional electron system at high magnetic fields.

M. Morgenstern, J. Klijn, Chr. Meyer, and R. Wiesendanger, Phys. Rev. Lett. 90 56804 (2003)

Impurity-induced resistivity of ferroelastic domain walls in doped lead phosphate.

M. Bartels, V. Hagen, M. Burianek, M. Getzlaff, U. Bismayer, and R. Wiesendanger, J. Phys.: Condens. Matter 15 957 (2003)

Spin-orbit induced local band structure variations revealed by scanning tunneling spectroscopy.

M. Bode, A. Kubetzka, S. Heinze, O. Pietzsch, R. Wiesendanger, M. Heide, X. Nie, G. Bihlmayer, and S. Blügel, J. Phys.: Condens. Matter **15** S679 (2003)

Spin-polarized scanning tunneling microscopy study of 360° walls in an external magnetic field.

A. Kubetzka, O. Pietzsch, M. Bode, and R. Wiesendanger, Phys. Rev. B **67** 20401 (2003)

Comparing the local density of states of three- and two-dimensional electron systems by low-temperature scanning tunneling spectroscopy.

M. Morgenstern, D. Haude, J. Klijn, Chr. Meyer, L. Sacharow, S. Heinze, S. Blügel, and R. Wiesendanger, Physica E **16** 121 (2003)

Comparative study of MeV C⁺ and C⁺⁺ ions implantation in GaAs(100): surface roughness and evaluation of lattice strain.

G. Kuri, G. Materlik, V. Hagen, and R. Wiesendanger, J. Vac. Sci. & Tech. B **21** 1134 (2003)

Comparing measured and calculated local density of states in a disordered two-dimensional electron system

M. Morgenstern, J. Klijn, Chr. Meyer, R. A. Römer, and R. Wiesendanger, Physica B **329-333** 1536 (2003)

Magnetization-direction dependent local electronic structure probed by scanning tunneling spectroscopy.

M. Bode, S. Heinze, A. Kubetzka, O. Pietzsch, X. Nie, G. Bihlmayer, S. Blügel, and R. Wiesendanger, Phys. Rev. Lett. **89** 237205 (2002)

Coulomb pseudogap caused by partial localization of a three dimensional electron system in the extreme quantum limit.

M. Morgenstern, D. Haude, J. Klijn, and R. Wiesendanger, Phys. Rev. B **66** 121102(R) (2002)

Direct comparison of potential landscape and resulting local density of states of a disordered two-dimensional electron system.

M. Morgenstern, J. Klijn, Chr. Meyer, M. Getzlaff, R. Adelung, K. Roßnagel, L. Kipp, M. Skibowski, and R. Wiesendanger, Phys. Rev. Lett. **89** 136806 (2002)

Spin-resolved spectro-microscopy of magnetic nanowire arrays.

M. Bode, A. Kubetzka, O. Pietzsch, and R. Wiesendanger, Surf. Sci. **514** 135 (2002)

Measurement of three-dimensional force fields with atomic resolution using dynamic force spectroscopy.

H. Hölscher, S. M. Langkat, A. Schwarz, and R. Wiesendanger, Appl. Phys. Lett. **81** 4428 (2002)

Structural, electronic, and magnetic properties of a Mn monolayer on W(110).

M. Bode, S. Heinze, A. Kubetzka, O. Pietzsch, M. Hennefarth, M. Getzlaff, R. Wiesendanger, X. Nie, G. Bihlmayer, and S. Blügel, Phys. Rev. B **66** 014425 (2002)

Nano-scale studies of quantum phenomena by scanning probe spectroscopy.

Wiesendanger, Vacuum **65** 235 (2002)

Co on p-InAs(110): An island induced two-dimensional electron system consisting of electron droplets.

M. Morgenstern, J. Wiebe, A. Wachowiak, M. Getzlaff, J. Klijn, L. Plucinks, R. L. Johnson, and R. Wiesendanger, Phys. Rev. B **65** 155325 (2002)

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)

Dynamic force microscopy with atomic resolution at low temperatures.

A. Schwarz, U. D. Schwarz, S. Langkat, H. Hölscher, W. Allers, and R. Wiesendanger, Applied Surface Science **188** 245 (2002)

Magnetic properties of the Cr(001) surface studied by spin-polarized scanning tunneling spectroscopy.

M. Kleiber, M. Bode, R. Ravlic, N. Tezuka, and R. Wiesendanger, J. Magn. Magn. Mater. **240** 64 (2002)

Spin-Polarized Scanning Tunneling Microscopy with Antiferromagnetic Probe Tips.

A. Kubetzka, M. Bode, O. Pietzsch, and R. Wiesendanger, Phys. Rev. Lett. **88** 057201 (2002)

Subsurface interstitials as promoters of three-dimensional growth on Ti on Si(111): An X-ray standing wave, X-ray photoelectron spectroscopy, and atomic force microscopy investigation.

G. Kuri, Th. Schmidt, V. Hagen, G. Materlik, R. Wiesendanger, and J. Falta, J. Vac. Sci. & Tech. A **20** 1997 (2002)

The influence of potential fluctuations on Landau quantization and spin splitting studied by Low Temperature Scanning Tunneling Spectroscopy on InAs(110).

M. Morgenstern, V. Gudmundsson, Chr. Wittneven, R. Dombrowski, and R. Wiesendanger, J. Vac. Sci. & Tech. A **20** 2032 (2002)

Direct Observation of Internal Spin-Structure of Magnetic Vortex Cores.

A. Wachowiak, J. Wiebe, M. Bode, O. Pietzsch, M. Morgenstern, and R. Wiesendanger, Science **298** 577 (2002)

Comment on "Damping mechanism in dynamic force microscopy"

H. Hölscher, B. Gotsmann, W. Allers, U. D. Schwarz, H. Fuchs, and R. Wiesendanger, Phys. Rev. Lett. **88** 019601 (2001)

Experimental evidence for edge-like states in three-dimensional electron systems.

M. Morgenstern, D. Haude, Chr. Meyer, and R. Wiesendanger, Phys. Rev. B **64** 205104 (2001)

Atomic-scale magnetic domain walls in quasi-one-dimensional Fe nanostripes.

M. Pratzer, H. J. Elmers, M. Bode, O. Pietzsch, A. Kubetzka, and R. Wiesendanger, Phys. Rev. Lett. **87** 127201 (2001)

Surface morphology of MgO(100) crystals implanted with MeV.

G. Kuri, G. Materlik, V. Hagen, and R. Wiesendanger, Appl. Phys. A **73** 265 (2001)

Measurement of conservative and dissipative tip-sample interaction forces with a dynamic force microscope using the frequency modulation technique.

H. Hölscher, B. Gotsmann, W. Allers, U. D. Schwarz, H. Fuchs, and R. Wiesendanger, Phys. Rev. B **64** 075402 (2001)

Observation of Magnetic Hysteresis at the Nano-Scale by Spin Polarized Scanning Tunneling Spectroscopy.

O. Pietzsch, A. Kubetzka, M. Bode, and R. Wiesendanger, Science **292** 2053 (2001)

Nonlocality of the exchange interaction probed by scanning tunneling spectroscopy.

M. Morgenstern, V. Gudmundsson, R. Dombrowski, Chr. Wittneven, and R. Wiesendanger, Phys. Rev. B **63** 201301 (2001)

Nb-induced two-dimensional electron gas on n-InAs (100): Anomalous coverage dependence.

M. Getzlaff, M. Morgenstern, Chr. Meyer, R. Brochier, R.L. Johnson, and R. Wiesendanger, Phys. Rev. B **63** 205305 (2001)

Magnetism of nanoscale Fe islands studied by spin-polarized scanning tunneling spectroscopy.

A. Kubetzka, O. Pietzsch, M. Bode, and R. Wiesendanger, Phys. Rev. B **63** 140407 (2001)

Spin-polarized scanning tunneling spectroscopy on Fe-nanowires.

M. Bode, O. Pietzsch, A. Kubetzka, and R. Wiesendanger, Appl. Phys. A **72** 149 (2001)

Physical Principles of Scanning Capacitance Microscopy.

J. Isenbart, A. Born, and R. Wiesendanger, Appl. Phys. A **72** 243 (2001)

Low-temperature dynamic force microscopy on nickel oxide(001)

W. Allers, S. Langkat, and R. Wiesendanger, Appl. Phys. A **72** 27 (2001)

Experimental Evidence for Intra-Atomic Non-Collinear Magnetism at Thin Film Probe Tips.

M. Bode, O. Pietzsch, A. Kubetzka, S. Heinze, and R. Wiesendanger, Phys. Rev. Lett. **86** 2142 (2001)

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)

Local Density of States of a Three-Dimensional Conductor in the Extreme Quantum Limit.

D. Haude, M. Morgenstern, I. Meinel, and R. Wiesendanger, Phys. Rev. Lett. **86** 1582 (2001)

Erratum: Origin of Landau Oscillations observed in Scanning Tunneling Spectroscopy on n-InAs(110)

M. Morgenstern, D. Haude, V. Gudmundson, Chr. Wittneven, R. Dombrowski, and R. Wiesendanger, Phys. Rev. B **63** 079901 (2001)

Spin-dependent tunneling effects on magnetic nanostructures

M. Getzlaff, M. Bode, A. Kubetzka, O. Pietzsch, and R. Wiesendanger, Chin. Phys. **10** S186 (2001)

Imaging Magnetic Nanostructures by Spin-Polarized Scanning Tunneling Spectroscopy

M. Bode, O. Pietzsch, A. Kubetzka, and R. Wiesendanger, J. Electr. Spectr. Relat. Phenom. **114** 1055 (2001)

Topology-induced spin frustrations at the Cr(001) surface studied by spin-polarized scanning tunneling spectroscopy.

M. Kleiber, M. Bode, R. Ravlic, and R. Wiesendanger, Phys. Rev. Lett. 85 4606 (2000)

Coverage dependence of the Fe-induced Fermi level shift and the two dimensional electron gas on InAs(110)

M. Morgenstern, M. Getzlaff, D. Haude, R.L. Johnson, and R. Wiesendanger, Phys. Rev. B 61 13805 (2000)

Atomic resolution in scanning force microscopy: Concepts, requirements, contrast mechanisms, and image interpretation.

U.D. Schwarz, H. Hölscher, and R. Wiesendanger, Phys. Rev. B 62 13089 (2000)

Detection of doping atom distributions and individual dopants in InAs(110) by dynamic mode scanning force microscopy in ultrahigh vacuum

A. Schwarz, W. Allers, U. D. Schwarz, and R. Wiesendanger, Phys. Rev. B 62 13617 (2000)

Lattice relaxation of Gd on W(110)

S.A.Nepijko, M.Getzlaff, R.Pascal, Ch.Zarnitz, M.Bode and R.Wiesendanger, Surf. Sci. 466 89 (2000)

Interpretation of 'true atomic resolution' images of graphite(0001) in non-contact atomic force microscopy.

H. Hölscher, W. Allers, A. Schwarz, U. Schwarz, and R. Wiesendanger, Phys. Rev. B 62 13617 (2000)

Origin of Landau oscillations observed in scanning tunneling spectroscopy on n-InAs(110).

M. Morgenstern, D. Haude, V. Gudmundsson, Chr. Wittneven, R. Dombrowski, and R. Wiesendanger, Phys. Rev. B 62 7257 (2000)

Chalcogen adsorption and surface magnetism.

M. Getzlaff, C. Westphal, J. Bansmann, and G. Schönhense, J. Electr. Spectr. Relat. Phen., J. Electr. Spectr. Relat. Phenom. 107 293 (2000)

Spatial fluctuations of the density of states in magnetic fields observed with scanning tunneling spectroscopy.

M. Morgenstern, Chr. Wittneven, R. Dombrowski, and R. Wiesendanger, Phys. Rev. Lett. 84 5588 (2000)

Real-Space Imaging of Two- Dimensional Antiferromagnetism on the Atomic Scale.

S. Heinze, M. Bode, A. Kubetzka, O. Pietzsch, X. Nie, S. Blügel, and R. Wiesendanger, Science 288 1805 (2000)

Epitaxial cobalt films on W(110) an experimental and theoretical photoemission study with polarized synchrotron radiation.

J. Bansmann, L. Lu, M. Getzlaff, M. Fluchtmann, and J. Braun, Surf. Sci. 454 686 (2000)

Real-Space Observation of Dipolar Antiferromagnetism in Magnetic Nanowires by Spin-Polarized Scanning Tunneling Spectroscopy.

O. Pietzsch, A. Kubetzka, M. Bode, and R. Wiesendanger, Phys. Rev. Lett. 84 5212 (2000)

Scanning tunneling spectra of impurities in the Fe(001) surface.

N. Papanikolaou, B. Nonas, S. Heinze, R. Zeller, and P. H. Dederichs, Phys. Rev. B 62 11118 (2000)

Quantitative Analysis of Dynamic-Force-Spectroscopy Data on Graphite (0001) in the Contact and Noncontact Regimes.

H. Hölscher, A. Schwarz, W. Allers, U. D. Schwarz, and R. Wiesendanger, Phys. Rev. B 61 12678 (2000)

H-induced plastic deformation of Gd thin films studied by STM.

A. Pundt, M. Getzlaff, M. Bode, R. Kirchheim, and R. Wiesendanger, Phys. Rev. B 61 9964 (2000)

A Low-Temperature UHV Scanning Tunneling Microscope with a Split-Coil Magnet and a Rotary Motion Stepper Motor for High Spatial Resolution Studies of Surface Magnetism.

O. Pietzsch, A. Kubetzka, D. Haude, M. Bode, and R. Wiesendanger, Rev. Sci. Instr. 71 424 (2000)

Interpreting STM-Images of the MnCu/Cu(100) Surface Alloy.

D. Wortmann, S. Heinze, G. Bihlmayer, and S. Blügel, Phys. Rev. B 62 2862 (2000)

Dynamic mode scanning force microscopy study of n-InAs(110)-(1x1) at low temperatures.

A. Schwarz, W. Allers, U.D. Schwarz, and R. Wiesendanger, Phys. Rev. B 61 2837 (2000)

STM Study of Hydrogen on and in Gadolinium Films.

M. Getzlaff and R. Wiesendanger, European Microscopy and Analysis 68 7 (2000)

Photoemission on two-dimensional electron systems.

M. Morgenstern, M. Getzlaff, J. Klijn, Ch. Meyer, A. Wachowiak, J. Wiebe, L. Plucinski, R.L. Johnson, R. Adelung, K. Roßnagel, and R. Wiesendanger, HASYLAB annual report 2000 297 (2000)

Low temperature scanning tunneling spectroscopy on InAs(110)

M. Morgenstern, D. Haude, V. Gudmundsson, Chr. Wittneven, R. Dombrowski, Chr. Steinebach, and R. Wiesendanger, J. Electr. Spectr. Relat. Phenom. **109** 127 (2000)

Penetration pathways of uorescent dyes in human hairfibres investigated by scanning near-field optical microscopy.

A. Kelch, S. Wessel, T. Will, U. Hintze, R. Wepf, and R. Wiesendanger, Journal Microsc. **200** 179 (2000)

Dynamic scanning force microscopy at low temperatures

W. Allers, A. Schwarz, H. Hölscher, U. D. Schwarz, and R. Wiesendanger, Jpn. J. Appl. Phys. **39** 3701 (2000)

Guidelines for two-dimensional dopant profiling using SCM

A. Born and R. Wiesendanger, Proc. ISTFA 2000, Bellevue/Washington 521 (2000)

Hydrogen induced plastic deformation of thin films.

A. Pundt, U. Laudahn, U. v. Hülsen, U. Geyer, T. Wagner, M. Getzlaff, M. Bode, R. Wiesendanger, and R. Kirchheim, Mat. Res. Soc. Symp. Proc. **594** 75 (1999)

GdFe₂ alloy formation studied on the atomic scale by scanning tunneling microscopy

R. Pascal, M. Getzlaff, H. Tödter, M. Bode, and R. Wiesendanger, Phys. Rev. B **60** 16109 (1999)

Recent advances in spin-polarized scanning tunneling spectroscopy for imaging of magnetic domains

R. Wiesendanger, M. Bode, and M. Getzlaff, J. Magn. Soc. Jpn. **23** 195 (1999)

First-principles theory of ultra-thin magnetic films

T. Asada, G. Bihlmayer, S. Handschuh, S. Heinze, Ph. Kurz, and S. Blügel, J. Phys.: Condens. Matter **11** 9347 (1999)

Determination of tip-sample interaction potentials by dynamic force spectroscopy

H. Hölscher, W. Allers, U. D. Schwarz, A. Schwarz, and R. Wiesendanger, Phys. Rev. Lett. **83** 4780 (1999)

Structure and magnetism of self-organized Co islands

J. Bansmann, L. Lu, V. Senz, A. Bettac, M. Getzlaff, and K.H. Meiwes-Broer, Eur. Phys. J. D. **9** 461 (1999)

Temperature-dependent exchange splitting of a surface state on a local-moment magnet: Tb(0001)

M. Bode, M. Getzlaff, A. Kubetzka, R. Pascal, O. Pietzsch, and R. Wiesendanger, Phys. Rev. Lett. **83** 3017 (1999)

Dynamic scanning force microscopy at low temperatures on a noble gas crystal: Atomic resolution on the xenon(111) surface

W. Allers, A. Schwarz, U. D. Schwarz, and R. Wiesendanger, Europhys. Lett. **48** 276 (1999)

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)

Growth of thin Mn-films on W(110) studied by means of in-situ scanning tunneling microscopy

M. Bode, M. Hennefarth, D. Haude, M. Getzlaff, and R. Wiesendanger, Surf. Sci. **432** 8 (1999)

Vacuum-tunneling magnetoresistance: the role of spin-polarized surface states

R. Wiesendanger, M. Bode, and M. Getzlaff, Appl. Phys. Lett. **75** 124 (1999)

Quantitative aspects of spin-polarized scanning tunneling spectroscopy of Gd(0001)

M. Bode, M. Getzlaff, and R. Wiesendanger, J. Vac. Sci. & Tech. A **17** 2228 (1999)

Coadsorption of H and CO on Gd (0001)

M. Getzlaff, M. Bode, and R. Wiesendanger, Appl. Surf. Sci. **142** 428 (1999)

GdFe₂ alloy formation observed by STM

M. Getzlaff, R. Pascal, H. Tödter, M. Bode, and R. Wiesendanger, Appl. Surf. Sci. **142** 543 (1999)

New insight into the surface magnetic properties of Gd(0001)

M. Getzlaff, M. Bode, S. Heinze, and R. Wiesendanger, Appl. Surf. Sci. **142** 558 (1999)

The adsorption process of hydrogen on Gd (0001)

M. Getzlaff, M. Bode, R. Pascal, and R. Wiesendanger, Appl. Surf. Sci. **142** 63 (1999)

Tip-induced band bending by scanning tunneling spectroscopy of the states of the tip-induced quantum dot on InAs(110)

R. Dombrowski, Chr. Steinebach, Chr. Wittneven, M. Morgenstern, and R. Wiesendanger, Phys. Rev. B **59** 8043 (1999)

Adsorbates on Gd (0001): A combined scanning tunneling microscopy and photoemission study

M. Getzlaff, M. Bode, R. Pascal, and R. Wiesendanger, Phys. Rev. B **59** 8195 (1999)

STM-Images of transition-metal structures buried below noble-metal surfaces

S. Heinze, R. Abt, S. Blügel, G. Gilarowski, and H. Niehus, Phys. Rev. Lett. **83** 4808 (1999)

Dynamic scanning force microscopy at low temperatures on a van der Waals surface: graphite(0001)

W. Allers, A. Schwarz, U. D. Schwarz, and R. Wiesendanger, Appl. Surf. Sci. **140** 247 (1999)

Simultaneous imaging of the In and As sublattice on InAs(110)-(1x1) with dynamic scanning force microscopy

A. Schwarz, W. Allers, U. D. Schwarz, and R. Wiesendanger, Appl. Surf. Sci. **140** 293 (1999)

Calculation of the frequency shift in dynamic scanning force microscopy

H. Hölscher, U. D. Schwarz, and R. Wiesendanger, Appl. Surf. Sci. **140** 344 (1999)

Oxygen on Fe(110): Magnetic properties of the adsorbate system

M. Getzlaff, J. Bansmann, and G. Schönhense, J. Magn. Magn. Mater. **192** 458 (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)

Imaging of sub-unit-cell structures in the contact mode of the scanning force microscope

H. Hölscher, W. Raberg, U. D. Schwarz, A. Hasbach, K. Wandelt, and R. Wiesendanger, Phys. Rev. B **59** 1661 (1999)

Electric-field induced changes in STM images of metal surfaces

S. Heinze, X. Nie, S. Blügel, and M. Weinert, Chem. Phys. Lett. **315** 167 (1999)

Dispersion behavior of a two-dimensional electron gas

M. Getzlaff, M. Morgenstern, R.L. Johnson, and R. Wiesendanger, HASYLAB annual report **1999** 251 (1999)

Size dependence of magnetic characteristics measured on separate nickel particles

S. A. Nepijko and R. Wiesendanger, Semiconductor Physics (Quantum Electronics and Optoelectronics) **2** 5 (1999)

Spin polarized vacuum tunneling: correlation of electronic and magnetic properties on the nanometer scale

M. Getzlaff, M. Bode, and R. Wiesendanger, Surf. Rev. Lett. **6** 591 (1999)

Preparation of highly ordered GdFe₂ alloys

M. Getzlaff, R. Pascal, H. Tödter, M. Bode, and R. Wiesendanger, Surf. Rev. Lett. **6** 741 (1999)

Scattering States of Ionized Dopants probed by Low Temperature Scanning Tunneling Spectroscopy.

Ch. Wittneven, R. Dombrowski, M. Morgenstern, and R. Wiesendanger, Phys. Rev. Lett. **81** 5616 (1998)

Prediction of bias-voltage dependent corrugation reversal for STM images of bcc-(110)-surfaces: W(110), Ta(110) and Fe(110)

S. Heinze, S. Blügel, R. Pascal, M. Bode, and R. Wiesendanger, Phys. Rev. B **58** 16432 (1998)

Spin-Polarized Vacuum Tunneling into the Exchange-split Surface State of Gd(0001)

M. Bode, M. Getzlaff, and R. Wiesendanger, Phys. Rev. Lett. **81** 4256 (1998)

Determination of radial matrix elements and phase shifts in the photoemission process using a rotatable electric field vector

M. Getzlaff, M. Bode, and R. Wiesendanger, Phys. Rev. B **58** 9681 (1998)

Magnetization switching of submicrometer Co dots induced by a magnetic force microscope tip

M. Kleiber, F. Kümmerlen, M. Löhndorf, A. Wadas, D. Weiss, R. Wiesendanger, Phys. Rev. B **58** 5563 (1998)

Local magnetization switching of submicrometer Co dots induced by a magnetic force microscope tip

M. Kleiber, F. Kümmerlen, M. Löhndorf, A. Wadas, D. Weiss, and R. Wiesendanger, Phys. Rev. B **58** 5563 (1998)

Hydrogen adsorption on Gd(0001)

M. Getzlaff, M. Bode, and R. Wiesendanger, Surf. Sci. 410 189 (1998)

Investigation of micromagnetism and magnetization reversal of Ni nanoparticles using a magnetic force microscope

A.A. Bukharaev, D.V. Ovchinnikov, N.I. Nurgazizov, E.F. Kukovitskii, M. Kleiber, and R. Wiesendanger, Physics of the Solid State 40 1163 (1998)

Local electronic properties in the presence of internal and external magnetic fields studied by variable-temperature scanning tunneling spectroscopy

R. Wiesendanger, M. Bode, R. Dombrowski, M. Getzlaff, M. Morgenstern, and C. Wittneven, Jpn. J. Appl. Phys. 37 3769 (1998)

Vertical polarization of quantum magnets in high density arrays of nickel dots with small height-to-diameter ratio

G. Meier, M. Kleiber, D. Grundler, D. Heitmann and R. Wiesendanger, Appl. Phys. Lett. 72 2168 (1998)

Temperature-dependent exchange-splitting of the magnetic Gd(0001) surface state

M. Getzlaff, M. Bode, S. Heinze, R. Pascal, and R. Wiesendanger, J. Magn. Magn. Mater. 184 155 (1998)

Analysis of electrical breakdown failures by means of SFM-based methods

A. Born, A. Olbrich, M. Maywald, and R. Wiesendanger, Appl. Phys. A 66 1063 (1998)

Electronic structure of Gd and Tb on W(110) in the submonolayer coverage regime studied by STM and STS

R. Pascal, Ch. Zarnitz, H. Tödter, M. Bode, M. Getzlaff, and R. Wiesendanger, Appl. Phys. A 66 1121 (1998)

Ultrahigh vacuum magnetic force microscopy of the domain structure of ultrathin Co films

M. Dreyer, M. Löhndorf, A. Wadas, and R. Wiesendanger, Appl. Phys. A 66 1209 (1998)

Magnetic exchange splitting of the Gd(0001) surface state studied by variable-temperature scanning tunneling spectroscopy

M. Bode, M. Getzlaff, S. Heinze, R. Pascal, and R. Wiesendanger, Appl. Phys. A 66 121 (1998)

Scanning Tunneling Spectroscopy on n-InAs(110): Landau Level Quantization and Scattering of Electron Waves at Dopant Atoms

R. Dombrowski, Ch. Wittneven, M. Morgenstern, and R. Wiesendanger, Appl. Phys. A 66 203 (1998)

The velocity dependence of frictional forces in point contact friction

O. Zwörner, H. Hölscher, U.D. Schwarz, and R. Wiesendanger, Appl. Phys. A 66 263 (1998)

Scanning capacitance microscope as a tool for the characterization of integrated circuits

A. Born and R. Wiesendanger, Appl. Phys. A 66 421 (1998)

Thickness-dependent magnetic domain structures of ultrathin Co/Au(111) films studied by means of magnetic force microscopy in ultrahigh vacuum

A. Wadas, M. Dreyer, M. Kleiber, and R. Wiesendanger, Appl. Phys. A 66 465 (1998)

Consequences of the stick-slip movement for the scanning force microscopy imaging of graphite

H. Hölscher, O. Zwörner, U.D. Schwarz, and R. Wiesendanger, Phys. Rev. B 57 2477 (1998)

Origin of the ferroelectric domain contrast observed in lateral force microscopy

H. Bluhm, U.D. Schwarz, and R. Wiesendanger, Phys. Rev. B 57 161 (1998)

A scanning force microscope with atomic resolution in ultrahigh vacuum and at low temperatures

W. Allers, A. Schwarz, U. D. Schwarz, and R. Wiesendanger, Rev. Sci. Instr. 69 221 (1998)

Surface state of Gd(0001) films on W(110): Scanning tunneling spectroscopy study

M. Bode, R. Pascal, M. Getzlaff, and R. Wiesendanger, Acta Phys. Pol 93 273 (1998)

Recent advances in spin-polarized scanning tunneling spectroscopy for imaging of magnetic domains

R. Wiesendanger, M. Bode, and M. Getzlaff, J. Magn. Soc. Jpn. (1998)

Reibung auf der Nanometerskala - Nanotribologie mit dem Rasterkraftmikroskop

U. D. Schwarz and H. Hölscher, Phys. Bl. 54 1127 (1998)

Reibung auf der Nanometerskala - Nanotribologie mit dem Rasterkraftmikroskop

U. D. Schwarz and H. Hölscher, Phys. Bl. 54 1127 (1998)

Neue Perspektiven

R. Wiesendanger, Phys. Bl. 54 417 (1998)

Tiefemperatur-Rastertunnelspektroskopie an InAs(110): Streuung von Elektronenwellen an Dotieratomen und Spektroskopie an Landauniveaus

M. Morgenstern, R. Dombrowski, Ch. Wittneven, and R. Wiesendanger, Phys. Bl. 54 423 (1998)

Landau Level Quantization measured by Scanning Tunneling Spectroscopy on n-InAs(110)

M. Morgenstern, R. Dombrowski, Ch. Wittneven, and R. Wiesendanger, Phys. Stat. Sol. 210 845 (1998)

Micromagnetic properties and magnetization reversal of Ni nanoparticles studied by magnetic force microscopy

A.A. Bukharaev, D.V. Ovchinnikov, N.I. Nurgazizov, E.F. Kukovitskii, M. Kleiber, and R. Wiesendanger, Proc. 6th Int. Symp. Nanostructures: Physics and Technology, St. Petersburg, Russia 428 (1998)

Recent developments in scanning probe microscopy and spectroscopy for imaging of magnetic domains

M. Getzlaff, M. Bode, A. Wadas, and R. Wiesendanger, Proc. ICEM-14, Cancun (Mexico), Electron Microscopy (1998)

Adsorption of hydrogen on structured gadolinium

M. Getzlaff, M. Bode, R. Pascal, and R. Wiesendanger, Proc. ICEM14, Cancun (Mexico), Electron Microscopy 3 171 (1998)

Visualization of heterogeneously catalytic processes

M. Getzlaff, M. Bode, and R. Wiesendanger, Proc. ICEM14, Cancun (Mexico), Electron Microscopy 3 173 (1998)

Magnetic force microscopy of Ni nanoparticles formed by coalescence method

A.A. Bukharaev, D.V. Ovchinnikov, N.I. Nurgazizov, E.F. Kukovitskii, M. Kleiber, and R. Wiesendanger, Scanning 20 3 (1998)

Surface electronic structure of Gd(0001) films on W(110)

R. Pascal, C. Zarnitz, M. Bode, M. Getzlaff, and R. Wiesendanger, Appl. Phys. A 65 603 (1997)

Studies of Magnetic Properties of Small Particles by Electron Holography

S.A. Nepijko and R. Wiesendanger, Appl. Phys. A 65 361 (1997)

Investigation of cross-tie walls and ripple structures of thin polycrystalline Co films by magnetic force microscopy

M. Löhndorf, A. Wadas, and R. Wiesendanger, Appl. Phys. A 65 511 (1997)

A low-temperature ultrahigh-vacuum STM/STS-system with rotatable magnetic field

Ch. Wittneven, R. Dombrowski, S.H. Pan, and R. Wiesendanger, Rev. Sci. Instr. 68 3806 (1997)

Quantitative analysis of the frictional properties of carbon compounds at low loads using friction force spectroscopy

U.D. Schwarz, O. Zwörner, P. Köster, and R. Wiesendanger, Phys. Rev. B 56 6987 (1997)

The frictional properties of mica and germanium sulfide investigated by means of friction force spectroscopy

U.D. Schwarz, O. Zwörner, P. Köster, and R. Wiesendanger, Phys. Rev. B 56 6997 (1997)

Stick-slip movement of a scanned tip on a graphite surface in scanning force microscopy

H. Hölscher, U.D. Schwarz, O. Zwörner, and R. Wiesendanger, Z. Phys. B. 104 295 (1997)

Atomic and local electronic structure of Gd thin films studied by STM and STS

R. Pascal, Ch. Zarnitz, M. Bode, and R. Wiesendanger, Phys. Rev. B 56 3636 (1997)

STM-study of the growth of Gd/W(110) at submonolayer coverages

R. Pascal, C. Zarnitz, M. Bode, and R. Wiesendanger, Surf. Sci. 385 L990 (1997)

Imaging of domain-inverted gratings in LiNbO₃ by Electrostatic force microscopy.

H. Bluhm, A. Wadas, R. Wiesendanger, A. Roshko, J.A. Aust, and D. Nam, Appl. Phys. Lett. 71 146 (1997)

Fabrication of atomic gratings based on self-organization of adsorbates with repulsive interaction

R. Pascal, Ch. Zarnitz, M. Bode, and R. Wiesendanger, Appl. Phys. A 65 81 (1997)

Magnetic nanostructures studied by scanning probe microscopy and spectroscopy

R. Wiesendanger, M. Bode, M. Kleiber, M. Löhndorf, R. Pascal, A. Wadas, and D. Weiss, J. Vac. Sci. & Tech. B 15 1330 (1997)

Preparation of probe tips with well-defined spherical apices for scanning force spectroscopy

U.D. Schwarz, O. Zwörner, P. Köster, and R. Wiesendanger, J. Vac. Sci. & Tech. B 15 1527 (1997)

Scanning-probe-based science and technology

R. Wiesendanger, Proc. Natl. Acad. Sci. USA 94 12749 (1997)

Scanning tunneling spectroscopy of Fe/W(110) using iron covered probe tips

M. Bode, R. Pascal, and R. Wiesendanger, J. Vac. Sci. & Tech. A 15 1285 (1997)

Magnetostatic interaction studied by force microscopy in ultrahigh vacuum

A. Wadas, M. Dreyer, M. Löhndorf, and R. Wiesendanger, Appl. Phys. A 64 353 (1997)

Modelling of the scan process in lateral force microscopy

H. Hölscher, U.D. Schwarz, and R. Wiesendanger, Surf. Sci. 375 395 (1997)

An UHV-STM for in-situ studies of thin film growth.

Ch. Witt, U. Mick, M. Bode, and R. Wiesendanger, Rev. Sci. Instr. 68 1455 (1997)

Electrostatic force microscopy on ferroelectric crystals in inert gas atmosphere

H. Bluhm, A. Wadas, R. Wiesendanger, K.-P. Meyer, and L. Szczesniak, Phys. Rev. B 55 4 (1997)

The topographical structure of the domain boundary on the triglycine sulfate (010) surface

H. Bluhm, R. Wiesendanger and K.-P. Meyer, Ferroelectrics 200 327 (1997)

Novel writing using magnetic force microscopy in ultrahigh vacuum

A. Wadas, M. Dreyer, M. Löhndorf, and R. Wiesendanger, IEEE Trans. Magn. 33 4050 (1997)

Correlation between nano-scale structural, electronic and magnetic properties of thin films by scanning probe microscopy and spectroscopy

R. Wiesendanger, MRS Bulletin 22 31 (1997)

Tip-sample interaction in contact force microscopy

U.D. Schwarz, H. Hölscher, H. Bluhm, O. Zwörner, and R. Wiesendanger, PTB-Bericht F 30 1 (1997)

Nanomechanical investigations and modifications of thin films based on scanning force methods

W. Allers, C. Hahn, M. Löhndorf, S. Lukas, S. Pan, U.D. Schwarz, and R. Wiesendanger, Nanotechnology 7 346 (1996)

Application of Scanning Probe Methods for Electronic and Magnetic Device Fabrication, Characterization and Testing.

A. Born, C. Hahn, M. Löhndorf, A. Wadas, Ch. Witt, and R. Wiesendanger, J. Vac. Sci. & Tech. B 14 3625 (1996)

Simulation of a scanned tip on a NaF(001) surface in friction force microscopy

H. Hölscher, U.D. Schwarz, and R. Wiesendanger, Europhys. Lett. 36 16 (1996)

Nanostructural and local electronic properties of Fe/W(110) correlated by scanning tunneling spectroscopy

M. Bode, R. Pascal, and R. Wiesendanger, Phys. Rev. B 54 8385 (1996)

Quantitative analysis of lateral force microscopy experiments

U.D. Schwarz, P. Köster, and R. Wiesendanger, Rev. Sci. Instr. 67 2560 (1996)

Load-dependent topographic and friction studies of individual ion tracks in layered materials by scanning and lateral force microscopy

M. Seider, U.D. Schwarz, and R. Wiesendanger, Phys. Rev. B 53 16180 (1996)

Issues of atomic-resolution structure and chemical analysis by scanning probe microscopy and spectroscopy

M. Bode, R. Pascal, W. Allers, U.D. Schwarz and R. Wiesendanger, J. Vac. Sci. & Tech. A 14 1161 (1996)

Structure of cross-tie wall in thin Co films resolved by magnetic force microscopy

M. Löhndorf, A. Wadas, H.A.M. van den Berg, and R. Wiesendanger, Appl. Phys. Lett. 68 3635 (1996)

Surface structure of ferroelectric domains on the triglycine sulfate (010) surface

H. Bluhm, R. Wiesendanger, and K.-P. Meyer, J. Vac. Sci. & Tech. B 14 1214 (1996)

Domain Structure of Co/Pt Multilayers studied by Magnetic Force Microscopy

M. Löhndorf, A. Wadas, R. Wiesendanger, and H.W. van Kesteren, J. Vac. Sci. & Tech. B 14 1214 (1996)

Nanofabrication of weak links based on scanning force methods

C. Hahn, T. Matsuyama, U. Merkt, and R. Wiesendanger, Appl. Phys. A 62 289 (1996)

Fabrication of atomic wires by self-organization

Ch. Witt, M. Bode, and R. Wiesendanger, Appl. Phys. A 63 303 (1996)

Chemical-specific imaging of multicomponent metal surfaces on the nanometer scale by scanning tunneling spectroscopy

M. Bode, R. Pascal, and R. Wiesendanger, Appl. Phys. A 62 571 (1996)

Fabrication of Nano-Dot- and Nano-Ring-Arrays by Nanosphere Lithography

M. Winzer, N. Dix, M. Kleiber, and R. Wiesendanger, Appl. Phys. A 63 617 (1996)

Correlation between nano-scale structural, electronic and magnetic properties of thin films by scanning probe microscopy and spectroscopy

R. Wiesendanger, MRS Bulletin 22 31 (1996)

Tunnelspektroskopie vom Einzelatom zum Festkörper

M. Bode, R. Pascal, and R. Wiesendanger, Phys. Bl. 52 551 (1996)

Local and Scanning Tunneling Spectroscopy of 0D - 3D Metallic Nanostructures

M. Bode, R. Pascal, and R. Wiesendanger, Proc. 1st Int. Symp. Advanced Physical Fields, ed. K. Yoshihara, National Research Inst. for Metals 1 (1996)

Micromagnetic properties and magnetization switching of single domain Co dots studied by magnetic force microscopy

M. Löhndorf, A. Wadas, G. Lütjering, D. Weiss, and R. Wiesendanger, Z. Phys. B. 101 1 (1996)

Distance-dependent STM study of the lateral resolution on metal surfaces

M. Bode, R. Pascal, and R. Wiesendanger, Z. Phys. B. 101 103 (1996)

Imaging and tunneling spectroscopy of individual iron adsorbates at room temperature

M. Bode, R. Pascal, and R. Wiesendanger, Z. Phys. B. 99 143 (1996)