

Scanning Probe Methods Group, Prof. Dr. Roland Wiesendanger

Publications: Original Articles

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Spin-polarized edge modes between different magnet-superconductor-hybrids*F. Zahner, F. Nickel, R. Lo Conte, T. Drevelow, R. Wiesendanger, S. Heinze, and K. von Bergmann, Nature Commun. 17 3457 (2026)***Effects of interlayer Dzyaloshinskii-Moriya interaction on the shape and dynamics of magnetic twin-skyrmions***T. Matthies, L. Rózsa, R. Wiesendanger, and E. Y. Vedmedenko, npj Spintronics 4 8 (2026)***Non-local detection of coherent Yu–Shiba–Rusinov quantum projections***K. T. Ton, C. Xu, I. Ioannidis, L. Schneider, T. Posske, R. Wiesendanger, D. K. Morr, and J. Wiebe, Nature Physics 22 54-60 (2026)***Strain-driven domain wall network with chiral junctions in an antiferromagnet***V. Saxena, M. Gutzeit, A. Rodriguez-Sota, S. Haldar, F. Zahner, R. Wiesendanger, A. Kubetzka, S. Heinze, and K. von Bergmann, Nature Commun. 16 10808 (2025)***Electronic properties of magnetic salophenes adsorbed on Ag(111)***B. Pieczyrak, M. Elsebach, L. Jurczyszyn, A. Schlenhoff, R. Wiesendanger, and M. Bazarnik, J. Phys. Chem. C 129 19917 (2025)***The non-collinear path to two-dimensional topological superconductivity***R. Brüning, J. Bedow, R. Lo Conte, K. von Bergmann, D. K. Morr, and R. Wiesendanger, ACS Nano 19 36215 (2025)***Symmetry aspects of Yu-Shiba-Rusinov bands in magnetic atomic chains on a superconductor***B. Nyári, Ph. Beck, A. Lászlóffy, L. Schneider, K. Palotás, L. Szunyogh, J. Wiebe, B. Újfalussy, and L. Rózsa, Phys. Rev. B 112 115414 (2025)***Image-potential states on a 2D graphene-ferromagnet hybrid: Enhancing spin and stacking sensing***M. Bazarnik and A. Schlenhoff, ACS Nano 19 25812 (2025)***Anisotropic atom motion on a row-wise antiferromagnetic surface***F. Zahner, S. Haldar, R. Wiesendanger, S. Heinze, K. von Bergmann, and A. Kubetzka, Nature Communications 16 4942 (2025)***Topological meron-antimeron domain walls and skyrmions in a low-symmetry system***R. Brüning, L. Rózsa, R. Lo Conte, A. Kubetzka, R. Wiesendanger, and K. von Bergmann, Phys. Rev. X 15 021041 (2025)***Antiferromagnetic order of topological orbital moments in atomic-scale skyrmion lattices***F. Nickel, A. Kubetzka, M. Gutzeit, R. Wiesendanger, K. von Bergmann, and S. Heinze, npj Spintronics 3 7 (2025)***Growth of an Fe buckled honeycomb lattice on Be(0001)***H. Osterhage, A. H. Khan, K. Oetker, R. Dao, S. Setayandeh, R. Wiesendanger, P. Burr, and S. Krause, Surface Science 752 122609 (2025)***Boundary conditions for and ferromagnetic resonance spectra of magnetic bilayers coupled by interlayer Dzyaloshinskii-Moriya interactions***E. Y. Vedmedenko, and M. Kostylev, Phys. Rev. App. 23 014047 (2025)***Majorana quasiparticles in atomic spin chains on superconductors***S. Rachel and R. Wiesendanger, Physics Reports 1099 1 (2025)***Preparation and readout of Majorana qubits in magnet-superconductor hybrid systems***D. Crawford, R. Wiesendanger, and S. Rachel, Phys. Rev. B 110 L220505 (2024)***Interlayer and interfacial Dzyaloshinskii-Moriya interaction in magnetic trilayers: First-principles calculations***T. Matthies, L. Rózsa, L. Szunyogh, R. Wiesendanger, and E. Y. Vedmedenko, Phys. Rev. Res. 6 043158 (2024)***Magnet-superconductor hybrid quantum systems: a materials platform for topological superconductivity***R. Lo Conte, J. Wiebe, S. Rachel, D.K. Morr, and R. Wiesendanger, La Rivista del Nuovo Cimento 47 (Issue 8 453-554 (2024)***Proximity-Induced Superconductivity in a 2D Kondo Lattice of an f-Electron-Based Surface Alloy***H. Kim, D. K. Morr, and R. Wiesendanger, Nano Letters 24 13875-14152 (2024)*

Skyrmion dynamics in attractive and repulsive local magnetic fields

L. Reimers, A. F. Schäffer, E. Y. Vedmedenko, R. Lo Conte, J. Appl. Phys. **136** 135302 (2024)

Scanning tunneling spectroscopy study of proximity superconductivity in finite-size quantized surface states

L. Schneider, Ch. von Bredow, H. Kim, K. That Ton, T. Hänke, J. Wiebe, and R. Wiesendanger, Phys. Rev. B **110** L100505 (2024)

Large diversity of magnetic phases in two-dimensional magnets with spin-orbit coupling and superconductivity

J. Neuhaus-Steinmetz, T. Matthies, E. Y. Vedmedenko, Th. Posske, and R. Wiesendanger, Phys. Rev. B **110** 155427 (2024)

SP-STM study of the multi-Q phases in GdRu₂Si₂

J. Spethmann, N. D. Khanh, H. Yoshimochi, R. Takagi, S. Hayami, Y. Motome, R. Wiesendanger, S. Seki, and K. von Bergmann, Phys. Rev. Mater. **8** 064404 (2024)

Experimental Realization of Monolayer alpha-Tellurene

X. Huang, R. Xiong, C. Hao, W. Li, B. Sa, J. Wiebe, and R. Wiesendanger, Advanced Materials **36** 2309023 (2024)

Two-dimensional lateral heterojunction arrays with tailored interface band bending

X. Huang, R. Xiong, C. Hao, P. Beck, B. Sa, J. Wiebe, and R. Wiesendanger, Advanced Materials **36** 2308007 (2024)

Phase Coexistence of Mn Trimer Clusters and Antiferromagnetic Mn Islands on Ir(111)

A. Rodríguez-Sota, V. Saxena, J. Spethmann, R. Wiesendanger, R. Lo Conte, A. Kubetzka, and K. von Bergmann, ACS Nano **2024** **18** (4) 3699–3706 (2024)

Coupling of the triple-q state to the atomic lattice by anisotropic symmetric exchange

F. Nickel, A. Kubetzka, S. Haldar, R. Wiesendanger, S. Heinze, and K. von Bergmann, Phys. Rev. B **108** L180411 (2023)

Large interlayer Dzyaloshinskii-Moriya interactions across Ag-layers

J. A. Arregi, P. Riego, A. Berger, and E. Y. Vedmedenko, Nature Communications **14** 6927 (2023)

Observation and formation mechanism of 360° domain wall rings in synthetic anti-ferromagnets with interlayer chiral interactions

M. A. Cascales Sandoval, A. Hierro-Rodríguez, S. Ruiz-Gómez, L. Skoric, C. Donnelly, M. A. Niño, E. Y. Vedmedenko, D. McGrouther, S. McVitie, S. Flewett, N. Jaouen, M. Foerster, and A. Fernández-Pacheco, Appl. Phys. Lett. **123** 172407 (2023)

Quantum skyrmion Hall effect in f-electron systems

R. Peters, J. Neuhaus-Steinmetz, and Th. Posske, Phys. Rev. Res. **5** 033180 (2023)

Topological nodal point superconductivity in checkerboard magnet-superconductor hybrid systems

T. Kieu, E. Mascot, J. Bedow, R. Wiesendanger, and D. K. Morr, Phys. Rev. B **108** L060509 (2023)

STM study of Nb(111) prepared by different methods

J. Goedecke, M. Bazarnik, and R. Wiesendanger, Phys. Rev. Materials **7** 084803 (2023)

Proximity superconductivity in atom-by-atom crafted quantum dots

L. Schneider, K. That Ton, I. Ioannidis, J. Neuhaus-Steinmetz, Th. Posske, R. Wiesendanger, and J. Wiebe, Nature **621** 60 (2023)

Probing the topologically trivial nature of end states in antiferromagnetic atomic chains on superconductors

L. Schneider, Ph. Beck, L. Rozsa, Th. Posske, J. Wiebe and R. Wiesendanger, Nature Commun. **14** 2742 (2023)

Search for large topological gaps in atomic spin chains on proximitized superconducting heavy-metal layers

Ph. Beck, B. Nyári, L. Schneider, L. Rózsa, A. Lászlóffy, K. Palotás, L. Szunyogh, B. Ujjalussy, J. Wiebe, and R. Wiesendanger, Communications Physics **6** 83 (2023)

Increased localization of Majorana modes in antiferromagnetic chains on superconductors

D. Crawford, E. Mascot, M. Shimizu, R. Wiesendanger, D. K. Morr, H. O. Jeschke, and S. Rachel, Phys. Rev. B **107** 075410 (2023)

Antiferromagnetism-driven two-dimensional topological nodal-point superconductivity

M. Bazarnik, R. Lo Conte, E. Mascot, K. von Bergmann, D. K. Morr, and R. Wiesendanger, Nature Commun. **14** 614 (2023)

Systematic study of Mn atoms, artificial dimers, and chains on superconducting Ta(110)

P. Beck, L. Schneider, R. Wiesendanger, and J. Wiebe, Phys. Rev. B **107** 024426 (2023)

Majorana modes with side features in magnet-superconductor hybrid systems

D. Crawford, E. Mascot, M. Shimizu, L. Schneider, Ph. Beck, J. Wiebe, R. Wiesendanger, H. O. Jeschke, D. K. Morr, and S. Rachel, npj Quantum Materials **7** 117 (2022)

Nano-scale collinear multi-Q states driven by higher-order interactions

M. Gutzeit, A. Kubetzka, S. Haldar, H. Pralow, M. A. Goerzen, R. Wiesendanger, S. Heinze, and K. von Bergmann, Nature Communications **13** 5764 (2022)

Experimental realization of semiconducting monolayer Si₂Te₂ films

X. Huang, R. Xiong, K. Volckaert, C. Hao, D. Biswas, M. Bianchi, Ph. Hofmann, Ph. Beck, J. Warmuth, B. Sa, J. Wiebe, and R. Wiesendanger, Advanced Functional Materials **2208281** (2022)

Correlation of magnetism and disordered Shiba bands in Fe monolayer islands on Nb(110)

J. J. Goedecke, L. Schneider, Y. Ma, K. Ton That, D. Wang, J. Wiebe, and R. Wiesendanger, ACS Nano **16** 14066 (2022)

Spin revolution breaks time reversal symmetry of rolling magnets

E. Y. Vedmedenko and R. Wiesendanger, npj Scientific Reports **12** 13608 (2022)

Ultrasensitive Sub-monolayer Palladium Induced Chirality Switching and Topological Evolution of Skyrmions

G. Chen, C. Ophus, R. Lo Conte, R. Wiesendanger, G. Yin, A. K. Schmid, and K. Liu, Nano Letters **22** 6678 (2022)

Creating arbitrary sequences of mobile magnetic skyrmions and antiskyrmions

P. Siegl, M. Stier, A. F. Schäffer, E. Y. Vedmedenko, Th. Posske, R. Wiesendanger, and M. Thorwart, Phys. Rev. B **106** 014421 (2022)

Nanoscale skyrmions on a square atomic lattice

R. Brüning, A. Kubetzka, K. von Bergmann, E. Vedmedenko, and R. Wiesendanger, Phys. Rev. B **105** L241401 (2022)

Topological characterization of dynamic chiral magnetic textures using machine learning

T. Matthies, A. Schäffer, Th. Posske, R. Wiesendanger, and E. Vedmedenko, Phys. Rev. Appl. **17** 054022 (2022)

Controlled creation of quantum skyrmions

P. Siegl, E. Y. Vedmedenko, M. Stier, M. Thorwart, and T. Posske, Phys. Rev. Res. **4** 023111 (2022)

Complex magnetic ground states and topological electronic phases of atomic spin chains on superconductors

J. Neuhaus-Steinmetz, E. Y. Vedmedenko, T. Posske, and R. Wiesendanger, Phys. Rev. B **105** 165415 (2022)

Coexistence of antiferromagnetism and superconductivity in Mn/Nb(110)

R. Lo Conte, M. Bazarnik, K. Palotás, L. Rózsa, L. Szunyogh, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Phys. Rev. B **105** L100406 (2022)

Precursors of Majorana modes and their length-dependent energy oscillations probed at both ends of atomic Shiba chains

Lucas Schneider, Philip Beck, Jannis Neuhaus-Steinmetz, Levente Rózsa, Thore Posske, Jens Wiebe, and Roland Wiesendanger, Nature Nanotechnology **17** 384 (2022)

Structural and superconducting properties of ultrathin Ir films on Nb(110)

Ph. Beck, L. Schneider, L. Bachmann, J. Wiebe, and R. Wiesendanger, Phys. Rev. Materials **6** 024801 (2022)

Controlled growth of Gd-Pt surface alloys on Pt(111)

M. Przychodnia, M. Hermanowicz, E. Sierda, M. Elsebach, T. Grzela, R. Wiesendanger, and M. Bazarnik, Phys. Rev. B **105** 035416 (2022)

Zero-field skyrmionic states and in-field edge-skyrmions induced by boundary tuning

J. Spethmann, E. Vedmedenko, R. Wiesendanger, A. Kubetzka, and K. von Bergmann, npj Commun. Phys. **5** 19 (2022)

Disorder-induced time effect in the antiferromagnetic domain state of Fe_{1+y}Te

J. Fikacek, J. Warmuth, F. Arnold, C. Piamonteze, Z. Mao, V. Holy, Ph. Hofmann, M. Bremholm, J. Wiebe, R. Wiesendanger, and J. Honolka, J. Magn. Magn. Mater. **540** 168426 (2021)

Distorted 3Q state driven by topological-chiral magnetic interactions

S. Haldar, S. Meyer, A. Kubetzka, and S. Heinze, Phys. Rev. B **104** L180404 (2021)

Anisotropic non-split zero-energy vortex bound states in a conventional superconductor

H. Kim, Y. Nagai, L. Rózsa, D. Schreyer, and R. Wiesendanger, Appl. Phys. Rev. **8** 031417 (2021)

Discovery and characterization of a new type of domain wall in a row-wise antiferromagnet

J. Spethmann, M. Grünebohm, R. Wiesendanger, K. von Bergmann, and A. Kubetzka, Nature Communications 12 3488 (2021)

Surface orbital order and chemical potential inhomogeneity of the iron-based superconductor FeTe_{0.55}Se_{0.45} investigated with special STM tips

D. Wang, R. Zhong, G. Gu, and R. Wiesendanger, Phys. Rev. Research 3 L032055 (2021)

Precise measurement of the configurational energy of bent graphene membranes via three-dimensional force field spectroscopy

M. Ashino, K. Nishioka, K. Hayashi, and R. Wiesendanger, Phys. Rev. B 104 085407 (2021)

Correlation of Yu–Shiba–Rusinov States and Kondo Resonances in Artificial Spin Arrays on an s-Wave Superconductor

A. Kamlapure, L. Cornils, R. Žitko, M. Valentyuk, R. Mozara, S. Pradhan, J. Fransson, A. I. Lichtenstein, J. Wiebe, and R. Wiesendanger, Nano Letters 21 6748 (2021)

Spin-spiral state of a Mn monolayer on W(110) studied by soft x-ray absorption spectroscopy at variable temperature

J. Honolka, S. Krotzky, M. Herzog, T. Herden, V. Sessi, H. Ebert, J. Minar, K. von Bergmann, R. Wiesendanger, and O. Siper, Phys. Rev. B 103 174419 (2021)

Topological Shiba bands in artificial spin chains on superconductors

L. Schneider, P. Beck, T. Posske, D. Crawford, E. Mascot, S. Rachel, R. Wiesendanger and J. Wiebe, Nature Physics 17 943 (2021)

Impact of magnetic domains on magnetic flux concentrators

F. Maspero, S. Cuccurullo, D. Mungpara, A. Schwarz, and R. Bertacco, J. Magn. Magn. Mater. 535 168072 (2021)

Phonon-mediated tunneling into a two-dimensional electron gas on the Be(0001) surface

H. Osterhage, R. Wiesendanger and S. Krause, Phys. Rev. B 103 155428 (2021)

Observation of hydrogen-induced Dzyaloshinskii-Moriya interaction and reversible switching of magnetic chirality

G. Chen, M.C. Robertson, M. Hoffmann, C. Ophus, A.L.F. Cauduro, R. Lo Conte, H. Ding, R. Wiesendanger, S. Blügel, A. K. Schmid, and K. Liu, Phys. Rev. X 11 021015 (2021)

Anomalous Flexural Elasticities of Graphene Membranes Unveiled by Manipulating Topology

M. Ashino, K. Nishioka, K. Hayashi, and R. Wiesendanger, Phys. Rev. Lett. 126 146101 (2021)

Spin-orbit coupling induced splitting of Yu-Shiba-Rusinov states in antiferromagnetic dimers

P. Beck, L. Schneider, L. Rózsa, K. Palotás, A. Lászlóffy, L. Szunyogh, J. Wiebe, and R. Wiesendanger, Nature Communications 12 2040 (2021)

Spin-Polarized Yu-Shiba-Rusinov States in an Iron-Based Superconductor

D. Wang, J. Wiebe, R. Zhong, G. Gu, and R. Wiesendanger, Phys. Rev. Lett. 126 076802 (2021)

Role of impurity clusters for the current-driven motion of magnetic skyrmions

M. Stier, R. Strobel, S. Krause, W. Häusler, and M. Thorwart, Phys. Rev. B 103 054420 (2021)

Atomic-scale spin-polarization maps using functionalized superconducting probes

L. Schneider, P. Beck, J. Wiebe, and R. Wiesendanger, Science Advances 7 (4) eabd7302 (2021)

Stacking-Dependent Spin Interactions in Pd/Fe Bilayers on Re(0001)

W. Li, S. Paul, K. von Bergmann, S. Heinze, and R. Wiesendanger, Phys. Rev. Lett. 125 227205 (2020)

Rotating edge-field driven processing of chiral spin textures in racetrack devices

A. F. Schäffer, P. Sigl, M. Stier, T. Posske, J. Berakdar, M. Thorwart, R. Wiesendanger, and E. Y. Vedmedenko, npj Scientific Reports 10 20400 (2020)

Topological superconductivity induced by a triple-q magnetic structure

J. Bedow, E. Mascot, Th. Posske, G. S. Uhrig, R. Wiesendanger, S. Rachel, and D. K. Morr, Phys. Rev. B 102 1800504(R) (2020)

Control of emergent magnetic monopole currents in artificial spin ice

H. Arava, E. Y. Vedmedenko, J. Cui, J. Vijayakumar, A. Kleibert, and L. J. Heyderman, Phys. Rev. B 102 144413 (2020)

Knoten in der Magnetisierung

K. von Bergmann, Physik Journal 19 (10) 30 (2020)

A cavity optomechanical locking scheme based on the optical spring effect

P. Rohse, J. Butlewski, F. Klein, T. Wagner, C. Friesen, A. Schwarz, R. Wiesendanger, K. Sengstock, and C. Becker, Rev. Sci. Instr. **91** 103102 (2020)

Controlling in-gap end states by linking nonmagnetic atoms and artificially-constructed spin chains on superconductors

L. Schneider, S. Brinker, M. Steinbrecher, J. Hermenau, T. Posske, M. dos Santos Dias, S. Lounis, R. Wiesendanger, and J. Wiebe, Nature Commun. **11** 4707 (2020)

Long-range focusing of magnetic bound states in superconducting lanthanum

H. Kim, L. Rózsa, D. Schreyer, E. Simon, and R. Wiesendanger, Nature Commun. **11** 4573 (2020)

Spectroscopic signature of the Stark shifted Tamm-type surface state of La(0001)

D. Schreyer, H. Kim, and R. Wiesendanger, New Journ. Phys. **22** 093013 (2020)

Large Dzyaloshinskii–Moriya interaction induced by chemisorbed oxygen on a ferromagnet surface

G. Chen, A. Mascaraque, H. Jia, B. Zimmermann, M.C. Robertson, R. Lo Conte, M. Hoffmann, M.A. González Barrio, H. Ding, R. Wiesendanger, E.G. Michel, S. Blügel, A. K. Schmid, and K. Liu, Science Advances **6** eaba 4924 (2020)

The 2020 magnetism roadmap

E. Y. Vedmedenko, R. K. Kawakami, D. D. Sheka, P. Gambardella, A. Kirilyuk, A. Hirohata, C. Binek, O. Chubykalo-Fesenko, S. Sanvito, and B. J. Kirby, Journal of Physics D: Applied Physics **53** 453001 (2020)

Towards skyrmion-superconductor hybrid systems

A. Kubetzka, J. M. Bürger, R. Wiesendanger, and K. von Bergmann, Phys. Rev. Mat. **4** 081401(R) (2020)

Tuning the Properties of Zero-Field Room Temperature Ferromagnetic Skyrmions by Interlayer Exchange Coupling

R. Lo Conte, A. K. Nandy, G. Chen, A. L. Fernandes Cauduro, A. Maity, C. Ophus, Z. Chen, A. T. N'Diaye, K. Liu, A. K. Schmid, and R. Wiesendanger, Nano Letters **20** 4739 (2020)

Temperature and magnetic field dependent behavior of atomic-scale skyrmions in Pd/Fe/Ir(111) nanoislands

P. Lindner, L. Bargsten, S. Kovarik, J. Friedlein, J. Harm, S. Krause, and R. Wiesendanger, Phys. Rev. B **101** 214445 (2020)

The 2020 skyrmionics roadmap

C. Back, V. Cros, H. Ebert, K. Everschor-Sitte, A. Fert, M. Garst, Tianping Ma, S. Mankovsky, T. L. Monchesky, M. Mostovoy, N. Nagaosa, S.S.P. Parkin, C. Pfleiderer, N. Reyren, A. Rosch, Y. Taguchi, Y. Tokura, K. von Bergmann, and J. Zang, J. Phys. D: Appl. Phys. **53** 363001 (2020)

Discovery of Magnetic Single- and Triple-q States in Mn/Re(0001)

J. Spethmann, S. Meyer, K. von Bergmann, R. Wiesendanger, S. Heinze, and A. Kubetzka, Phys. Rev. Lett. **124** 227203 (2020)

Real-space imaging of atomic-scale spin textures at nanometer distances

A. Schlenhoff, S. Kovarik, S. Krause and R. Wiesendanger, Appl. Phys. Lett. **116** 122406 (2020)

Plumbene on a Magnetic Substrate: A Combined Scanning Tunneling Microscopy and Density Functional Theory Study

G. Bihlmayer, J. Sassmannshausen, A. Kubetzka, S. Blügel, K. von Bergmann, and R. Wiesendanger, Phys. Rev. Lett. **124** 126401 (2020)

In Situ Synthesis of Metal–Salophene Complexes on Intercalated Graphene

M. Elsebach, E. Sierda, J. Goedecke, L. Bignardi, M. Hermanowicz, M. Rohde, R. Wiesendanger, and M. Bazarnik, J. Phys. Chem. C **124** 4279 (2020)

A radio-frequency spin-polarized scanning tunneling microscope

J. Friedlein, J. Harm, P. Lindner, L. Bargsten, M. Bazarnik, S. Krause, and R. Wiesendanger, Rev. of Scientific Instruments **90** 123705 (2019)

Electrical Detection of Domain Walls and Skyrmions in Co Films Using Noncollinear Magnetoresistance

M. Perini, S. Meyer, A. Kubetzka, R. Wiesendanger, S. Heinze, and K. von Bergmann, Phys. Rev. Lett. **123** 23705 (2019)

Probing Weakly Hybridized Magnetic Molecules by Single-Atom Magnetometry

E. Sierda, M. Elsebach, R. Wiesendanger, and M. Bazarnik, Nano Lett. **19** 9013-9018 (2019)

Colloquium: Atomic spin chains on surfaces

D.-J. Choi, N. Lorente, J. Wiebe, K. von Bergmann, A. F. Otte, and A. J. Heinrich, Rev. Mod. Phys. **91** 041001 (2019)

Atomically thin oxide layer on the elemental superconductor Ta(001) surface

R. Mozara, A. Kamlapure, M. Valentiyuk, L. Cornils, A. I. Lichtenstein, J. Wiebe, and R. Wiesendanger, Phys. Rev. Materials **3** 094801 (2019)

Reduced thermal stability of antiferromagnetic nanostructures

L. Rózsa, S. Selzer, T. Birk, U. Atxitia, and U. Nowak, *Phys. Rev. B* **100** 064422 (2019)

Isolated zero field sub-10 nm skyrmions in ultrathin Co films

S. Meyer, M. Perini, S. von Malottki, A. Kubetzka, R. Wiesendanger, K. von Bergmann, and S. Heinze, *Nature Communications* **10** 3823 (2019)

Vacuum Resonance States as Atomic-Scale Probes of Noncollinear Surface Magnetism

A. Schlenhoff, S. Kovarik, S. Krause, and R. Wiesendanger, *Phys. Rev. Lett.* **123** 087202 (2019)

Magnetism and in-gap states of 3d transition metal atoms on superconducting Re

L. Schneider, M. Steinbrecher, L. Rózsa, J. Bouaziz, K. Palotás, M. dos Santos Dias, S. Lounis, J. Wiebe, and R. Wiesendanger, *npj Quantum Materials* **4** 42 (2019)

Atomic-scale interface engineering of Majorana edge modes in a 2D magnet-superconductor hybrid system

A. Palacio-Morales, E. Mascot, S. Cocklin, H. Kim, S. Rachel, D. K. Morr, and R. Wiesendanger, *Science Advances* **5** eaav6600 (2019)

Influence of an Anomalous Temperature Dependence of the Phase Coherence Length on the Conductivity of Magnetic Topological Insulators

V. Tkáč, K. Výborný, V. Komanický, J. Warmuth, M. Michiardi, S. Ngeun, M. Vondráček, R. Tarasenko, M. Vališka, V. Stetsovych, K. Carva, I. Garate, M. Bianchi, J. Wiebe, V. Holý, Ph. Hofmann, G. Springholz, V. Sechovský, and J. Honolka, *Phys. Rev. Lett.* **123** 036406 (2019)

Step-Edge-Induced Anisotropic Chiral Spin Coupling in Ultrathin Magnetic Films

A. Schlenhoff, S. Krause, and R. Wiesendanger, *Phys. Rev. Lett.* **123** 037201 (2019)

Interlayer Dzyaloshinskii-Moriya Interactions

E. Y. Vedmedenko, P. Riego, J. A. Arregi, and A. Berger, *Phys. Rev. Lett.* **122** 257202 (2019)

Stochastic dynamics and pattern formation of geometrically confined skyrmions

A. F. Schäffer, L. Rózsa, J. Berakdar, E. Y. Vedmedenko, and R. Wiesendanger, *NPG Commun. Phys.* **2** 72 (2019)

Stabilizing spin systems via symmetrically tailored RKKY interactions

J. Hermenau, S. Brinker, M. Mariani, M. Steinbrecher, M. dos Santos Dias, R. Wiesendanger, S. Lounis, and J. Wiebe, *Nature Communications* **10** 2565 (2019)

Nanoscale magnetic skyrmions and target states in confined geometries

D. Cortés-Ortuno, N. Romming, M. Beg, K. von Bergmann, A. Kubetzka, O. Hovorka, H. Fangohr, and R. Wiesendanger, *Phys. Rev. B* **99** 214408 (2019)

Symmetry-breaking interlayer Dzyaloshinskii-Moriya interactions in synthetic antiferromagnets

A. Fernández-Pacheco, E. Vedmedenko, F. Ummelen, R. Mansell, D. Petit, and R. P. Cowburn, *Nature Materials* **18** 679–684 (2019)

Magnetic structure of monatomic Fe chains on Re(0001): Emergence of chiral multispin interactions

A. Lászlóffy, L. Rózsa, K. Palotás, L. Udvardi, and L. Szunyogh, *Phys. Rev. B* **99** 184430 (2019)

Atomically resolved magnetic structure of a Gd-Au surface alloy

M. Bazarnik, M. Abadía, J. Brede, M. Hermanowicz, E. Sierda, M. Elsebach, T. Hänke and R. Wiesendanger, *Phys. Rev. B* **99** 174419 (2019)

Thermal skyrmion diffusion used in a reshuffler device

J. Zázvorka, F. Jakobs, D. Heinze, N. Keil, S. Kromin, S. Jaiswal, K. Litzius, G. Jakob, P. Virnau, D. Pinna, K. Everschor-Sitte, L. Rózsa, A. Donges, U. Nowak, and M. Kläui, *Nature Nanotechnology* **14** 658–661 (2019)

Magneto-Seebeck tunneling on the atomic scale

C. Friesen, H. Osterhage, J. Friedlein, A. Schlenhoff, R. Wiesendanger, and S. Krause, *Science* **363** 1065 (2019)

Tuning non-collinear magnetic states by hydrogenation

A. Finco, P.-J. Hsu, K. von Bergmann, and R. Wiesendanger, *Phys. Rev. B* **99** 064436 (2019)

Nanoscience and Nanotechnology at the Centennial of Universität Hamburg

R. H. Blick, H. Graener, A. Mews, H. Weller, R. Wiesendanger, and W. Parak, *ACS Nano* **13** 1 (2019)

Stable bismuth sub-monolayer termination of Bi₂Se₃

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)

Localized spin waves in isolated kpi-skyrmions

L. Rózsa, J. Hagemeister, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. B 98 224426 (2018)

An atomically thin oxide layer on the elemental superconductor Ta(001) surface

R. Mozara, A. Kamlapure, M. Valentyuk, L. Cornils, A. I. Lichtenstein, J. Wiebe, and R. Wiesendanger, Phys. Rev. Materials 3 094801 (2018)

Magnetic domain walls in strain-patterned ultrathin films

A. Finco, M. Perini, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Phys. Rev. B 98 174435 (2018)

Pb-induced skyrmions in a double layer of Fe on Ir(111)

J. Sassmannshausen, A. Kubetzka, P.-J. Hsu, K. von Bergmann, and R. Wiesendanger, Phys. Rev. B 98 144443 (2018)

Combined feedback and sympathetic cooling of a mechanical oscillator coupled to ultracold atoms

P. Christoph, T. Wagner, H. Zhong, R. Wiesendanger, K. Sengstock, A. Schwarz, and C. Becker, New Journ. Phys. 30 093020 (2018)

Engineering the spin couplings in atomically crafted spin chains on an elemental superconductor

A. Kamlapure, L. Cornils, J. Wiebe, and R. Wiesendanger, Nature Communications 9 3253 (2018)

Non-collinear spin states in bottom-up fabricated atomic chains

M. Steinbrecher, R. Rausch, K. T. Ton, J. Hermenau, A. A. Khajetoorians, M. Potthoff, R. Wiesendanger, and J. Wiebe, Nature Communications 9 2853 (2018)

Scanning Seebeck tunneling microscopy

C. Friesen, H. Osterhage, J. Friedlein, A. Schlenhoff, R. Wiesendanger, and S. Krause, J. Phys. D: Appl. Phys. 51 324001 (2018)

Controlled creation and stability of k_F skyrmions on a discrete lattice

J. Hagemeister, A. Siemens, L. Rózsa, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. B 97 174436 (2018)

Domain walls and Dzyaloshinskii-Moriya interaction in epitaxial Co/Ir(111) and Pt/Co/Ir(111)

M. Perini, S. Meyer, B. Dupé, S. von Malottki, A. Kubetzka, K. von Bergmann, R. Wiesendanger, and S. Heinze, Phys. Rev. B 97 184425 (2018)

Competition of Dzyaloshinskii-Moriya and Higher-Order Exchange Interactions in Rh/Fe Atomic Bilayers on Ir(111)

N. Romming, H. Pralow, A. Kubetzka, M. Hoffmann, S. von Malottki, S. Meyer, B. Dupé, R. Wiesendanger, K. von Bergmann, and S. Heinze, Phys. Rev. Lett. 120 207201 (2018)

Toward tailoring Majorana bound states in artificially constructed magnetic atom chains on elemental superconductors

H. Kim, A. Palacio-Morales, T. Posske, L. Rózsa, K. Palotás, L. Szunyogh, M. Thorwart, R. Wiesendanger, Science Advances 4 eaar5251 (2018)

Theory of high-resolution tunneling spin transport on a magnetic skyrmion

K. Palotás, L. Rózsa, and L. Szunyogh, Phys. Rev. B 97 174402 (2018)

Effective damping enhancement in noncollinear spin structures

L. Rózsa, J. Hagemeister, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. B 30 100404 (2018)

Inducing skyrmions in ultrathin Fe films by hydrogen exposure

P. J. Hsu, L. Rózsa, A. Finco, L. Schmidt, K. Palotas, E. Vedmedenko, L. Udvardi, L. Szunyogh, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Nature Communications 9 1571 (2018)

Enhanced spin-ordering temperature in ultrathin FeTe films grown on a topological insulator

U. R. Singh, J. Warmuth, A. Kamlapure, L. Cornils, M. Bremholm, Ph. Hofmann, J. Wiebe, and R. Wiesendanger, Phys. Rev. B 97 144513 (2018)

Domain imaging across the magneto-structural phase transitions in Fe_{1+y}Te

J. Warmuth, M. Bremholm, P. Hofmann, J. Wiebe, and R. Wiesendanger, npj Quantum Materials 3 21 (2018)

Magnetism of a Co monolayer on Pt(111) capped by overlayers of 5d elements: A spin-model study

E. Simon, L. Rózsa, K. Palotás, and L. Szunyogh, Phys. Rev. B 97 134405 (2018)

- Perturbative calculations of quantum spin tunneling in effective spin systems with a transversal magnetic field and transversal anisotropy**
M. Krizanac, E. Y. Vedmedenko, and R. Wiesendanger, New Journ. Phys. **19** 013032 (2017)
- Interfacial superconductivity in a bi-collinear anti-ferro-magnetic-ly ordered FeTe monolayer on a topological insulator**
S. Manna, A. Kamlapure, L. Cornils, T. Hänke, E. M. J. Hedegaard, M. Bremholm, B. B. Iversen, Ph. Hofmann, J. Wiebe, and R. Wiesendanger, Nature Communications (2017)
- Structural and electronic properties of ultrathin FeSe films grown on Bi₂Se₃(0001) studied by STM/STS**
U. R. Singh, J. Warmuth, V. Markmann, J. Wiebe, and R. Wiesendanger, J. Phys.: Condens. Matter **29** 025004 (2017)
- Electric-field-driven switching of individual magnetic Skyrmions**
P.-J. Hsu, A. Kubetzka, A. Finco, N. Romming, K. von Bergmann, and R. Wiesendanger, Nature Nanotechnology **12** 123 (2017)
- Reorientation of the diagonal double-stripe spin structure at Fe_{1+x}Te bulk and thin-film surfaces**
T. Hänke, U. R. Singh, L. Cornils, S. Manna, A. Kamlapure, M. Bremholm, E. M. J. Hedegaard, B. B. Iversen, Ph. Hofmann, J. Hu, Z. Mao, J. Wiebe, and R. Wiesendanger, Nature Commun. **8** 13939 (2017)
- Tailoring noncollinear magnetism by misfit dislocation lines**
A. Finco, P.-J. Hsu, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Phys. Rev. B **94** 214402 (2016)
- Skyrmions at the Edge: Confinement Effects in Fe/Ir(111)**
J. Hagemeister, D. Iaia, E. Y. Vedmedenko, K. von Bergmann, A. Kubetzka, and R. Wiesendanger, Phys. Rev. Lett. **117** 207202 (2016)
- Nickel: The time-reversal symmetry conserving partner of iron on a chalcogenide topological insulator**
M. Vondráček, L. Cornils, J. Minár, J. Warmuth, M. Michiardi, C. Piamonteze, L. Barreto, J. A. Miwa, M. Bianchi, Ph. Hofmann, L. Zhou, A. Kamlapure, A. A. Khajetoorians, R. Wiesendanger, J.-L. Mi, B.-B. Iversen, S. Mankovsky, St. Borek, H. Ebert, M. Schüler, T. Wehling, J. Wiebe, and J. Honolka, Phys. Rev. B **94** 161114(R) (2016)
- Pattern formation in skyrmionic materials with anisotropic environments**
J. Hagemeister, E. Y. Vedmedenko, and R. Wiesendanger, Phys. Rev. B **94** 104434 (2016)
- Coupling of Coexisting Noncollinear Spin States in the Fe Monolayer on Re(0001)**
A. Palacio Morales, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Nano Letters **16** 6252 (2016)
- Set-up of a high-resolution 300 mK atomic force microscope in an ultra-high vacuum compatible 3He/10 T cryostat**
H. von Allwörden, K. Ruschmeier, A. Köhler, T. Eelbo, A. Schwarz and R. Wiesendanger, Rev. Sci. Instr. **87** 073702 (2016)
- Symmetry breaking in spin spirals and skyrmions by in-plane and canted magnetic fields**
L. Schmidt, J. Hagemeister, P.-J. Hsu, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, New Journ. Phys. **18** 075007 (2016)
- Topological insulator homojunctions including magnetic layers: The example of n-type (n-QLs Bi₂Se₃/Mn-Bi₂Se₃) heterostructures**
M. Vališka, J. Warmuth, M. Michiardi, M. Vondráček, A. S. Ngankeu, V. Holy, V. Sechovský, G. Springholz, M. Bianchi, J. Wiebe, P. Hofmann and J. Honolka, Appl. Phys. Lett. **108** 262402 (2016)
- Nanoscale magnetic skyrmions in metallic films and multilayers: a new twist for spintronics**
R. Wiesendanger, Nature Reviews Materials **1** 16044 (2016)
- STM study of the preparation of clean Ta(110) and the subsequent growth of two-dimensional Fe islands**
T. Eelbo, V. Zdravkov, and R. Wiesendanger, Surf. Sci. **653** 113 (2016)
- The properties of isolated chiral skyrmions in thin magnetic films**
A. O. Leonov, T. L. Monchesky, N. Romming, A. Kubetzka, A. N. Bogdanov, and R. Wiesendanger, New Journ. Phys. **18** 065003 (2016)
- Pinning and movement of individual nanoscale magnetic skyrmions via defects**
Ch. Hanneken, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, New Journ. Phys. **18** 055009 (2016)
- Quantum technology: from research to application**
W. P. Schleich, K. S. Ranade, C. Anton, M. Arndt, M. Aspelmeyer, M. Bayer, G. Berg, T. Calarco, H. Fuchs, E. Giacobino, M. Grassl, P. Hänggi, W.M. Heckl, I. V. Hertel, S. Huelga, F. Jelezko, B. Keimer, J. P. Kotthaus, G. Leuchs, N. Lütkenhaus, U. Maurer, T. Pfau, M. B. Plenio, E. M. Rasel, O. Renn, C. Silberhorn, J. Schiedmayer, D. Schmitt-Landsiedel, K. Schönhammer, A. Ustinov, P. Walther, H. Weinfurter, E. Welzl, R. Wiesendanger, S. Wolf, A. Zeilinger, and P. Zoller, Appl. Phys. B **122** 130 (2016)

Band-gap engineering by Bi intercalation of graphene on Ir(111)

J. Warmuth, A. Bruix, M. Michiardi, T. Hänke, M. Bianchi, J. Wiebe, R. Wiesendanger, B. Hammer, P. Hofmann, and A. A. Khajetoorians, Phys. Rev. B **93** 165437 (2016)

Skymionics gets hot

S. Krause and R. Wiesendanger, Nature Materials **15** 493 (2016)

Minimal radius of magnetic skyrmions: statics and dynamics

A. Siemens, Y. Zhang, J. Hagemeister, E. Vedmedenko, and R. Wiesendanger, New Journ. Phys. **18** 045021 (2016)

Structural and magnetic properties of Ni/Fe nanostructures on Ir(111)

D. Iaia, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Phys. Rev. B **93** 134409 (2016)

Quantum revivals and magnetization tunneling in effective spin systems

M. Krizanac, D. Altwein, E. Y. Vedmedenko, and R. Wiesendanger, New Journ. Phys. **18** 033029 (2016)

Spin-sensitive shape asymmetry of adatoms on noncollinear magnetic substrates

D. Serrate, Y. Yoshida, M. Moro-Lagares, A. Kubetzka, and R. Wiesendanger, Phys. Rev. B **93** 125424 (2016)

Tailoring the chiral magnetic interaction between two individual atoms

A. A. Khajetoorians, M. Steinbrecher, M. Ternes, M. Bouhassoune, M. dos Santos Dias, S. Lounis, J. Wiebe, and R. Wiesendanger, Nature Communications **7** 10620 (2016)

Dynamics of Bound Monopoles in Artificial Spin Ice: How to Store Energy in Dirac Strings

E. Y. Vedmedenko, Phys. Rev. Lett. **116** 077202 (2016)

High-frequency magnetization dynamics of individual atomic-scale magnets

S. Krause, A. Sonntag, J. Hermenau, J. Friedlein, and R. Wiesendanger, Phys. Rev. B **93** 064407 (2016)

Absence of a spin-signature from a single Ho adatom as probed by spin-sensitive tunneling

M. Steinbrecher, A. Sonntag, M. dos Santos Dias, M. Bouhassoune, S. Lounis, J. Wiebe, R. Wiesendanger, and A. A. Khajetoorians, Nature Communications **7** 10454 (2016)

Guiding Spin Spirals by Local Uniaxial Strain Relief

P.-J. Hsu, A. Finco, L. Schmidt, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Phys. Rev. Lett. **116** 017201 (2016)

Tunneling into thin superconducting films: Interface-induced quasiparticle lifetime reduction

P. Löptien, L. Zhou, A. A. Khajetoorians, J. Wiebe, and R. Wiesendanger, Surf. Sci. **643** 6 (2016)

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)

Stability of Single Skymionic Bits

J. Hagemeister, N. Romming, K. von Bergmann, E. Y. Vedmedenko, and R. Wiesendanger, Nature Communications **6** 8455 (2015)

Electrical detection of magnetic skyrmions by tunnelling non-collinear magnetoresistance

C. Hanneken, F. Otte, A. Kubetzka, B. Dupé, N. Romming, K. von Bergmann, R. Wiesendanger, and S. Heinze, Nature Nanotechnology **10** 1039 (2015)

Investigating the differences between Co adatoms states on surfaces of selected bismuth chalcogenides

M. Wałowska, M. Sikora, M. Dobrzański, T. Eelbo, M. M. Soares, M. Rams, I. Miotkowski, R. Wiesendanger, R. Berndt, Z. Kozłowski, and A. Kozłowski, Phys. Rev. B **92** 115412 (2015)

Tuning emergent magnetism in a Hund's impurity

A. A. Khajetoorians, M. Valentyuk, M. Steinbrecher, T. Schlenk, A. Shick, J. Kolorenc, A. I. Lichtenstein, T. O. Wehling, R. Wiesendanger and J. Wiebe, Nature Nanotechnology **10** 958 (2015)

Magnetic bubbles with a twist

K. von Bergmann, Science **349** 234 (2015)

Magnetic Nano-skyrmion Lattice Observed in a Si-Wafer-Based Multilayer System

A. Schlenhoff, P. Lindner, J. Friedlein, S. Krause, R. Wiesendanger, M. Weinl, M. Schreck, and M. Albrecht, ACS Nano **9** 5908 (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)

Field-Dependent Size and Shape of Single Magnetic Skyrmions

N. Romming, A. Kubetzka, C. Hanneken, K. von Bergmann, and R. Wiesendanger, Phys. Rev. Lett. 114 177203 (2015)

Influence of the Local Atom Configuration on a Hexagonal Skyrmion Lattice

K. von Bergmann, M. Menzel, A. Kubetzka, and R. Wiesendanger, Nano Lett. 15 3280 (2015)

Temperature and non-linear response of cantilever-type mechanical oscillators used in atomic force microscopes with interferometric detection

G. Fläschner, K. Ruschmeier, A. Schwarz, R. Bakhtiari, M. Thorwart, and R. Wiesendanger, Appl. Phys. Lett. 106 123102 (2015)

Description of a dissipative quantum spin dynamics with a Landau-Lifshitz/Gilbert like damping and complete derivation of the classical Landau-Lifshitz equation

R. Wieser, Eur. Phys. J. B 88 77 (2015)

Response of the topological surface state to surface disorder in TlBiSe₂

F. Pielmeier, G. Landolt, B. Slomski, S. Muff, J. Berwanger, A. Eich, A. A. Khajetoorians, J. Wiebe, Z. S. Aliev, M. B. Babanly, R. Wiesendanger, J. Osterwalder, E. V. Chulkov, F. J. Giessibl, and J. H. Dil, New Journ. Phys. 17 023067 (2015)

Spin Polarization of the Split Kondo State

K. von Bergmann, M. Ternes, S. Loth, C. P. Lutz, and A. J. Heinrich, Phys. Rev. Lett. 114 076601 (2015)

Bounds on expectation values of quantum subsystems and perturbation theory

K. Them, E. Y. Vedmedenko, K. Fredenhagen, and R. Wiesendanger, J. Phys. A: Math. Theor. 48 075301 (2015)

Giant magnetization canting due to symmetry breaking in zigzag Co chains on Ir(001)

B. Dupé, J. E. Bickel, Y. Mokrousov, F. Otte, K. von Bergmann, A. Kubetzka, S. Heinze, and R. Wiesendanger, New J. Phys. 17 023014 (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)

Neuartige Konzepte für die Informationstechnologie

H. Fuchs and R. Wiesendanger, nanoTECHNOLOGIE aktuell 8 28 (2014)

Long-range magnetic coupling between nanoscale organic–metal hybrids mediated by a nanoskyrmion lattice

J. Brede, N. Atodiresei, V. Caciuc, M. Bazarnik, A. Al-Zubi, S. Blügel, and R. Wiesendanger, Nature Nanotechnology 9 1018 (2014)

Intra- and interband electron scattering in a hybrid topological insulator: Bismuth bilayer on Bi₂Se₃

A. Eich, M. Michiardi, G. Bihlmayer, X.-G. Zhu, J.-L. Mi, Bo B. Iversen, R. Wiesendanger, Ph. Hofmann, A. A. Khajetoorians, and J. Wiebe, Phys. Rev. B 90 155414 (2014)

Superconductivity of lanthanum revisited: enhanced critical temperature in the clean limit

P. Löptien, L. Zhou, A. A. Khajetoorians, J. Wiebe, and R. Wiesendanger, J. Phys.: Condens. Matter 26 425703 (2014)

Interface-induced chiral domain walls, spin spirals and skyrmions revealed by spin-polarized scanning tunneling microscopy

K. von Bergmann, A. Kubetzka, O. Pietzsch, and R. Wiesendanger, J. Phys.: Condens. Matter 26 394002 (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)

Scanning tunneling microscopy study of Fe, Co and Cr growth on Re(0001)

S. Ouazi, T. Pohlmann, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Surf. Sci. 630 280 (2014)

Thermal Stability of an Interface-Stabilized Skyrmion Lattice

A. Sonntag, J. Hermenau, S. Krause, and R. Wiesendanger, Phys. Rev. Lett. 113 077202 (2014)

Computing with spins and magnets

B. Behin-Aein, J.-P. Wang, and R. Wiesendanger, MRS Bulletin 39 696 (2014)

Influence of long-range interactions on the switching behavior of particles in an array of ferromagnetic nanostructure

A. Neumann, D. Altwein, C. Thönnißen, R. Wieser, A. Berger, A. Meyer, E. Vedmedenko and H.-P. Oepen, *New Journ. Phys.* **16** 083012 (2014)

Spin-resolved imaging and spectroscopy of individual molecules with sub-molecular spatial resolution

J. Brede and R. Wiesendanger, *MRS Bulletin* **39** 608 (2014)

Detecting the dipole moment of a single carbon monoxide molecule

A. Schwarz, A. Köhler, J. Grenz, and R. Wiesendanger, *Appl. Phys. Lett.* **105** 011606 (2014)

Hitting the limit of magnetic anisotropy

Alexander Ako Khajetoorians and Jens Wiebe, *Science* **344** 976 (2014)

Using Metallic Noncontact Atomic Force Microscope Tips for Imaging Insulators and Polar Molecules: Tip Characterization and Imaging Mechanisms

D. Z. Gao, J. Grenz, M. B. Watkins, F. F. Canova, A. Schwarz, R. Wiesendanger, and A. L. Shluger, *ACS Nano* **8** 5339 (2014)

Miniaturized high-precision piezo driven two axes stepper goniometer

H. Zhong, A. Schwarz, and R. Wiesendanger, *Rev. Sci. Instr.* **85** 045006 (2014)

Formation and structural analysis of twisted bilayer graphene on Ni(111) thin films

T. Iwasaki, A. A. Zakharov, T. Eelbo, M. Wasniowska, R. Wiesendanger, J. H. Smet, and U. Starke, *Surf. Sci.* **625** 44 (2014)

Strong out-of-plane magnetic anisotropy of Fe adatoms on Bi₂Te₃

T. Eelbo, M. Wasniowska, M. Sikora, M. Dobrzanski, A. Kozłowski, A. Pulkin, G. Autes, I. Miotkowski, O. V. Yazyev, and R. Wiesendanger, *Phys. Rev. B* **89** 104424 (2014)

Towards experimental tests and applications of Lieb-Robinson bounds

K. Them, *Phys. Rev. A* **89** 022126 (2014)

Enhanced Atomic-Scale Spin Contrast due to Spin Friction

S. Ouazi, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, *Phys. Rev. Lett.* **112** 076102 (2014)

Screening and atomic-scale engineering of the potential at a topological insulator surface

P. Löptien, L. Zhou, J. Wiebe, A. A. Khajetoorians, J. L. Mi, B. B. Iversen, Ph. Hofmann, and R. Wiesendanger, *Phys. Rev. B* **89** 085401 (2014)

Parity effects in 120° spin spirals

M. Menzel, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, *Phys. Rev. Lett.* **112** 047204 (2014)

Topologically Protected Magnetic Helix for All-Spin-Based Applications

E. Y. Vedmedenko and D. Altwein, *Phys. Rev. Lett.* **112** 017206 (2014)

Electric-field-induced magnetic anisotropy in a nanomagnet investigated on the atomic scale

A. Sonntag, J. Hermenau, A. Schlenhoff, J. Friedlein, S. Krause, and R. Wiesendanger, *Phys. Rev. Lett.* **112** 017204 (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)

Co atoms on Bi₂Se₃; revealing a coverage dependent spin reorientation transition

T. Eelbo, M. Sikora, G. Bihlmayer, M. Dobrzański, A. Kozłowski, I. Miotkowski, and R. Wiesendanger, *New Journ. Phys.* **15** 113026 (2013)

Spin Excitations of Individual Fe Atoms on Pt(111): Impact of the Site-Dependent Giant Substrate Polarization

A. A. Khajetoorians, T. Schlenk, B. Schweflinghaus, M. dos Santos Dias, M. Steinbrecher, M. Bouhassoune, S. Lounis, J. Wiebe, and R. Wiesendanger, *Phys. Rev. Lett.* **111** 157204 (2013)

Magnetische Knoten auf der Festplatte

C. Hanneken, and N. Romming, *Spektrum der Wissenschaft* **Okt. 2013** 22 (2013)

Writing and Deleting Single Magnetic Skyrmions

N. Romming, C. Hanneken, M. Menzel, J. E. Bickel, B. Wolter, K. von Bergmann, A. Kubetzka, and R. Wiesendanger, *Science* **341** 6146 (2013)

Modification of Electrical Properties of Graphene by Substrate-Induced Nanomodulation

Jong-Kwon Lee, S. Yamazaki, Hyeol Yun, Jinwoo Park, G. P. Kennedy, Gyu-Tae Kim, O. Pietzsch, R. Wiesendanger, SangWook Lee, Suklyun Hong, U. Dettlaff-Weglikowska, and S. Roth, *Nano Letters* **13** 3494-500 (2013)

Collective magnetism in arrays of spinor Bose–Einstein condensates

E. Y. Vedmedenko, M. Schult, J. Kronjäger, R. Wiesendanger, K. Bongs, and K. Sengstock, New Journ. Phys. 15 063033 (2013)

Influence of the degree of decoupling of graphene on the properties of transition metal adatoms

T. Eelbo, M. Wasniowska, M. Gyamfi, S. Forti, U. Starke, and R. Wiesendanger, Phys. Rev. B 87 205443 (2013)

Comparison of Quantum and Classical Relaxation in Spin Dynamics

R. Wieser, Phys. Rev. Lett. 110 147201 (2013)

Adatoms and Clusters of 3d Transition Metals on Graphene: Electronic and Magnetic Configurations

T. Eelbo, M. Wasniowska, P. Thakur, M. Gyamfi, B. Sachs, T. O. Wehling, S. Forti, U. Starke, C. Tieg, A. I. Lichtenstein, and R. Wiesendanger, Phys. Rev. Lett. 110 136804 (2013)

Controllable Magnetic Doping of the Surface State of a Topological Insulator

T. Schlenk, M. Bianchi, M. Koleini, A. Eich, O. Pietzsch, T. O. Wehling, T. Frauenheim, A. Balatsky, J.-L. Mi, B. B. Iversen, J. Wiebe, A. A. Khajetoorians, Ph. Hofmann, and R. Wiesendanger, Phys. Rev. Lett. 110 126804 (2013)

Determining Adsorption Geometry, Bonding, and Translational Pathways of a Metal–Organic Complex on an Oxide Surface: Co–Salen on NiO(001)

A. Schwarz, D. Z. Gao, K. Lämmle, J. Grenz, M. B. Watkins, A. L. Shluger, and R. Wiesendanger, J. Phys. Chem. C 117 1105 (2013)

Non-equilibrium finite temperature dynamics of magnetic quantum systems: applications to spin-polarized scanning tunneling microscopy

K. Them, T. Stapelfeldt, E. Y. Vedmedenko, and R. Wiesendanger, New Journ. Phys. 15 013009 (2013)

A theoretical study of the dynamical switching of a single spin by exchange forces

R. Wieser, V. Caciuc, C. Lazo, H. Hölscher, E. Y. Vedmedenko, and R. Wiesendanger, New Journal of Physics 15 013011 (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)

Current-Driven Spin Dynamics of Artificially Constructed Quantum Magnets

A. A. Khajetoorians, B. Baxevanis, C. Hübner, T. Schlenk, S. Krause, T. O. Wehling, S. Lounis, A. Lichtenstein, D. Pfannkuche, J. Wiebe, and R. Wiesendanger, Science 339 no. 6115 pp (2013)

Role of hybridization in the Rashba splitting of noble metal monolayers on W(110)

M. Hortamani and R. Wiesendanger, Phys. Rev. B 86 235437 (2012)

Spin-resolved characterization of single cobalt phthalocyanine molecules on a ferromagnetic support

J. Brede and R. Wiesendanger, Phys. Rev. B 86 184423 (2012)

Magnetization switching utilizing the magnetic exchange interaction

R. Schmidt, A. Schwarz, and R. Wiesendanger, Phys. Rev. B 86 174402 (2012)

Tunneling anisotropic magnetoresistance on the atomic scale

K. von Bergmann, M. Menzel, D. Serrate, Y. Yoshida, S. Schröder, P. Ferriani, A. Kubetzka, R. Wiesendanger, and S. Heinze, Phys. Rev. B 86 134422 (2012)

Magnetic coupling of single Co adatoms to a Co underlayer through a Pd spacer of variable thickness

L. V. Dzemiantsova, M. Hortamani, C. Hanneken, A. Kubetzka, K. von Bergmann, and R. Wiesendanger, Phys. Rev. B 86 094427 (2012)

Robust Nodal Structure of Landau Level Wave Functions Revealed by Fourier Transform Scanning Tunneling Spectroscopy

K. Hashimoto, T. Champel, S. Florens, C. Sohrmann, J. Wiebe, Y. Hirayama, R. A. Römer, R. Wiesendanger, and M. Morgenstern, Phys. Rev. Lett. 109 116805 (2012)

Spin Friction Observed on the Atomic Scale

B. Wolter, Y. Yoshida, A. Kubetzka, S.-W. Hla, K. von Bergmann, and R. Wiesendanger, Phys. Rev. Lett. 109 116102 (2012)

Individual Atomic-Scale Magnets Interacting with Spin-Polarized Field-Emitted Electrons,

A. Schlenhoff, S. Krause, A. Sonntag, and R. Wiesendanger, Phys. Rev. Lett. 109 097602 (2012)

Robust Surface Doping of Bi₂Se₃ by Rubidium Intercalation

M. Bianchi, R. C. Hatch, Z. Li, P. Hofmann, F. Song, J. Mi, B. B. Iversen, Z. M. Abd El-Fattah, P. Löptien, L. Zhou, A. A. Khajetoorians, J. Wiebe, R. Wiesendanger, and J. W. Wells, ACS Nano **6** 7009 (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) Terbium(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)

Rechnen mit magnetischen Atomen

H. Fuchs and R. Wiesendanger, Nanotechnologie Aktuell (2012)

In-plane magnetic anisotropy of Fe atoms on Bi₂Se₃(111)

J. Honolka, A. A. Khajetoorians, V. Sessi, T. O. Wehling, S. Stepanow, J.-L. Mi, B. B. Iversen, T. Schlenk, J. Wiebe, N. B. Brookes, A. I. Lichtenstein, Ph. Hofmann, K. Kern, and R. Wiesendanger, Phys. Rev. Lett. **108** 256811 (2012)

Impact of intercalated cobalt on the electronic properties of graphene on Pt(111)

M. Gyamfi, T. Eelbo, M. Wasniowska, and R. Wiesendanger, Phys. Rev. B **85** 205434 (2012)

Atomic-scale magnetic dissipation from spin-dependent adhesion hysteresis

E. Y. Vedmedenko, Q. Zhu, U. Kaiser, A. Schwarz, and R. Wiesendanger, Phys. Rev. B **85** 174410 (2012)

Molecular Kondo chain

A. DiLullo, S.-H. Chang, N. Baadjj, K. Clark, J.-P. Klöckner, M.H. Prosenc, S. Sanvito, R. Wiesendanger, G. Hoffmann, and S.-W. Hla, Nano Lett. **12** 3174 (2012)

Information Transfer by Vector Spin Chirality in Finite Magnetic Chains

M. Menzel, Y. Mokrousov, R. Wieser, J. E. Bickel, E. Vedmedenko, S. Blügel, S. Heinze, K. von Bergmann, A. Kubetzka, and R. Wiesendanger, Phys. Rev. Lett. **108** 197204 (2012)

Atom-by-atom engineering and magnetometry of tailored nanomagnets

A. A. Khajetoorians, J. Wiebe, B. Chilian, S. Lounis, S. Blügel, and R. Wiesendanger, Nature Physics **8** 497 (2012)

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)

Magnetic dipole configurations in honeycomb lattices: order and disorder

A. Schumann, P. Szary, E. Y. Vedmedenko, and H. Zabel, New J. Phys. **14** 035015 (2012)

Spin-resolved splitting of Kondo resonances in the presence of RKKY-type coupling

Y.-S. Fu, Q.-K. Xue, and R. Wiesendanger, Phys. Rev. Lett. **108** 087203 (2012)

Conical spin-spiral state in an ultra-thin film driven by higher-order spin interactions

Y. Yoshida, S. Schröder, P. Ferriani, D. Serrate, A. Kubetzka, K. von Bergmann, S. Heinze, and R. Wiesendanger, Phys. Rev. Lett. **108** 087205 (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)

Gitter aus magnetischen Wirbeln

S. Heinze, K. von Bergmann, and G. Bihlmayer, Physik in unserer Zeit **43** 6 (2012)

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

K. Hashimoto, J. Wiebe, T. Inaoka, Y. Hirayama, R. Wiesendanger, and M. Morgenstern, Journal of Physics: Conference Series **334** 012008 (2011)

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. Wasniowska, 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)

Controlling the state of quantum spins with electric currents

S. Loth, K. von Bergmann, M. Ternes, A. F. Otte, C. P. Lutz, and A. J. Heinrich, *Nature Physics* **6** 340 (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)

Spin mapping at the nanoscale and atomic scale

R. Wiesendanger, *Rev. Mod. Phys.* **81** 1495 (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. Preißler, 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 DomainWall 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. Fechtner, M. Funk, and R. Wiesendanger, J. Am. Chem. Soc. **130** 14072 (2008)

The role of magnetic anisotropy in the Kondo effect

A. F. Otte, M. Ternes, K. von Bergmann, S. Loth, H. Brune, C. P. Lutz, C. F. Hirjibehedin, and A. J. Heinrich, Nature Physics **4** 847 (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)

MExFM - 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. Kurfieß, 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 Bi₂Sr₂CaCu₂O_{8+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)

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. Koepf, 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. Ravić, 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)

Al₂O₃-films on Ni₃Al(111): a template for nanostructured cluster growth

C. Becker, A. Rosenhahn, A. Wiltner, K. von Bergmann, J. Schneider, P. Pervan, M. Milun, M. Kralj, and K. Wandelt, New Journal of Physics 4 75 (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. Pratzler, 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)

Preferential cluster nucleation on long-range superstructures on Al₂O₃/Ni₃Al(111)

C. Becker, K. von Bergmann, A. Rosenhahn, J. Schneider, and K. Wandelt, Surface Science **486** L443 (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)

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. Löhdorf, 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. Löhdorf, and R. Wiesendanger, IEEE Trans. Magn. 33 4050 (1997)

Scanning Probe Microscopy and Spectroscopy: From Basic Research to Industrial Applications

A. Born and R. Wiesendanger, Informacije MIDEM 27 (4) 246 (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. Löhdorf, 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. Löhdorf, A. Wadas, Ch. Witt, and R. Wiesendanger, J. Vac. Sci. & Tech. B 14 3625 (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)

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)

Fabrication of atomic wires by self-organization

Ch. Witt, M. Bode, and R. Wiesendanger, Appl. Phys. A 63 303 (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. Löhdorf, A. Wadas, H.A.M. van den Berg, and R. Wiesendanger, Appl. Phys. Lett. 68 3635 (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)

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 1180 (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)

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)