

Scanning Probe Methods Group, Prof. Dr. Roland Wiesendanger

Publications: Original Articles

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Subgroup: STM/SPSTM on Magnetic Nanostructures

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)**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)**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)**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)**Step-Edge-Induced Anisotropic Chiral Spin Coupling in Ultrathin Magnetic Films***A. Schlenhoff, S. Krause, and R. Wiesendanger, Phys. Rev. Lett.* **123** 037201 (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)**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)**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)**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)**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)**A gateway towards non-collinear spin processing using three-atom magnets with strong substrate coupling***J. Hermenau, J. Ibañez-Azpiroz, Chr. Hübner, A. Sonntag, B. Baxevanis, K. T. Ton, M. Steinbrecher, A. A. Khajetoorians, M. dos Santos Dias, S. Blügel, R. Wiesendanger, S. Lounis, and J. Wiebe, Nature Communications* **8** 642 (2017)**Temperature-Induced Increase of Spin Spiral Periods***A. Finco, L. Rózsa, P.-J. Hsu, A. Kubetzka, E. Vedmedenko, K. von Bergmann, and R. Wiesendanger, Phys. Rev. Lett.* **119** 037202 (2017)**Impact of the skyrmion spin texture on magnetoresistance***A. Kubetzka, Ch. Hanneken, R. Wiesendanger, and K. von Bergmann, Phys. Rev. B* **95** 104433 (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)

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