

# Prof. Dr. Frithjof Nolting

## List of Publications

August 2015

131 refereed papers which have been cited  
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### Publications in refereed journals

- (1) **Electric field stimulation setup for photoemission electron microscopes**, M. Buzzi, C. A. F. Vaz, J. Raabe, and *F. Nolting*, Rev. Sci. Instrum. **86**, 083702 (2015).
- (2) **Interfacial properties of LaMnO<sub>3</sub>/LaNiO<sub>3</sub> superlattices grown along (001) and (111) orientations**, C. Piamonteze, M. Gibert, J. Heidler, J. Dreiser, S. Rusponi, H. Brune, J.-M. Triscone, *F. Nolting*, and U. Staub, Phys. Rev. B **92**, 014426 (2015).
- (3) **Reduction of Mn19 Coordination Clusters on a Gold Surface**, Jan Dreiser, Ayuk M. Ako, Christian Wäckerlin, Jakoba Heidler, Christopher E. Anson, Annie K. Powell, Cinthia Piamonteze, *Frithjof Nolting*, Stefano Rusponi, and Harald Brune, J. Phys. Chem. C **119**, 3550 (2015).
- (4) **Nanoscale sub-100 picosecond all-optical magnetization switching in GdFeCo microstructures**, L. Le Guyader, M. Savoini, S.E. Moussaoui, M. Buzzi, A. Tsukamoto, A. Itoh, A. Kirilyuk, T. Rasing, A.V. Kimel, and *F. Nolting*, Nat. Commun. **6**, 5839 (2015).
- (5) **Manipulating magnetism in La0.7Sr0.3MnO<sub>3</sub> via piezostrain**, J. Heidler, C. Piamonteze, R. V. Chopdekar, M. A. Uribe-Laverde, A. Alberca, M. Buzzi, A. Uldry, B. Delley, C. Bernhard, and *F. Nolting*, Phys. Rev. B **91**, 024406 (2015).
- (6) **In situ magnetic and electronic investigation of the early stage oxidation of Fe nanoparticles using x-ray photoemission electron microscopy**, C. A. F. Vaz, A. Balan, *F. Nolting* and A. Kleibert, Phys. Chem. Chem. Phys. **16**, 26624 (2014).
- (7) **X-ray induced demagnetization of single-molecule magnets**, Jan Dreiser, Rasmus Westerström, Cinthia Piamonteze, *Frithjof Nolting*, Stefano Rusponi, Harald Brune, Shangfeng Yang, Alexey Popov, Lothar Dunsch, and Thomas Greber, Appl. Phys. Lett. **105**, 032411 (2014).
- (8) **Reflections on a measurement of the gravitational constant using a beam balance and 13tons of mercury**, S. Schlamminger, R. E. Pixley, *F. Nolting*, J. Schurr, and U. Straumann, Phil. Trans. R. Soc. A **372**: 20140027 (2014).
- (9) **Thermally Induced Magnetic Relaxation in Building Blocks of Artificial Kagome Spin Ice**, Alan Farhan, Armin Kleibert, Peter M. Derlet, Luca

- Anghinolfi, Ana Balan, Rajesh V. Chopdekar, Marcus Wyss, Sebastian Gliga, *Frithjof Nolting*, and Laura J. Heyderman, Phys. Rev. B **89**, 214405 (2014).
- (10) **Interlayer exchange coupling in Fe nanocluster superlattices on Al<sub>2</sub>O<sub>3</sub>/Ni<sub>3</sub>Al(111)**, S. Vlaic, L. Gragnaniello, S. Rusponi, A. Cavallin, F. Donati, Q. Dubout, C. Piamonteze, J. Dreiser, *F. Nolting*, and H. Brune, Phys Rev. B **89**, 245402 (2014).
  - (11) **Direct observation of temperature dependent magnetic domain structure of the multiferroic La<sub>0.66</sub>Sr<sub>0.34</sub>MnO<sub>3</sub>/BiFeO<sub>3</sub> bilayer system by x-ray linear dichroism- and x-ray magnetic circular dichroism-photoemission electron microscopy**, C. Mix, S. Finizio, M. Buzzi, F. Kronast, *F. Nolting*, G. Jakob, and M. Kläui, J. Appl. Phys. 115, 193901 (2014).
  - (12) **Reaching the Magnetic Anisotropy Limit of a 3d Metal Atom**, Ileana G. Rau, Susanne Baumann, Stefano Rusponi, Fabio Donati, Sebastian Stepanow, Luca Gragnaniello, Jan Dreiser, Cinthia Piamonteze, *Frithjof Nolting*, Shruba Gangopadhyay, Oliver R. Albertini, Roger M. Macfarlane, Christopher P. Lutz, Barbara Jones, Pietro Gambardella, Andreas J. Heinrich and Harald Brune, Science **344**, 988 (2014).
  - (13) **Investigating magneto-chemical interactions at molecule–substrate interfaces by X-ray photo-emission electron microscopy**, Jan Girovsky, Michele Buzzi, Christian Wackerlin, Dorota Siewert, Jan Nowakowski, Peter M. Oppeneer, *Frithjof Nolting*, Thomas A. Jung, Armin Kleibert and Nirmalya Ballav, Chem. Commun. **50**, 5190 (2014).
  - (14) **Magnetic Anisotropy Engineering in Thin Film Ni Nanostructures by Magnetoelastic Coupling**, S. Finizio, M. Foerster, M. Buzzi, B. Krüger, M. Jourdan, C. A. F. Vaz, J. Hockel, T. Miyawaki, A. Tkach, S. Valencia, F. Kronast, G. P. Carman, *F. Nolting*, and M. Kläui, Phys. Rev. Applied 1, 021001 (2014).
  - (15) **Direct Observation of Magnetic Metastability in Individual Iron Nanoparticles**, A. Balan, P. M. Derlet, A. Fraile Rodríguez, J. Bansmann, R. Yanes, U. Nowak, A. Kleibert, and *F. Nolting*, Phys. Rev. Lett. **112**, 107201 (2014).
  - (16) **Extended reciprocal space observation of artificial spin ice with x-ray resonant magnetic scattering**, J. Perron, L. Anghinolfi, B. Tudu, N. Jaouen, J.-M. Tonnerre, M. Sacchi, *F. Nolting*, J. Lüning, and L. J. Heyderman, Phys. Rev. B **88**, 214424 (2013).
  - (17) **Origin of interface magnetism in BiMnO<sub>3</sub>/SrTiO<sub>3</sub> and LaAlO<sub>3</sub>/SrTiO<sub>3</sub> heterostructures**, M. Salluzzo, S. Gariglio, D. Stornaiuolo, V. Sessi, S. Rusponi, C. Piamonteze, G. M. De Luca, M. Minola, D. Marré, A. Gadaleta, H. Brune, *F. Nolting*, N. B. Brookes, and G. Ghiringhelli, Phys. Rev. Lett. **111**, 087204 (2013).

- (18) **The effect of magnetocrystalline anisotropy on the domain structure of patterned Fe<sub>2</sub>CrSi Heusler alloy thin films**, T. Miyawaki, M. Foerster, S. Finizio, C. A. F. Vaz, M.-A. Mawass, K. Inagaki, N. Fukatani, L. Le Guyader, *F. Nolting*, K. Ueda, H. Asano, and M. Kläui, *J. App. Phys.* **114**, 073905 (2013).
- (19) **Direct observation of thermal relaxation in artificial spin ice**, A. Farhan, P. M. Derlet, A. Kleibert, A. Balan, R.V. Chopdekar, M. Wyss, J. Perron, A. Scholl, *F. Nolting*, and L.J. Heyderman, *Phys. Rev. Lett.* **111**, 057204 (2013).
- (20) **A new endstation at the Swiss Light Source for ultraviolet photoelectron spectroscopy, X-ray photoelectron spectroscopy, and X-ray absorption spectroscopy measurements of liquid solutions**, Matthew A. Brown, Amaia Beloqui Redondo, Inga Jordan, Nicolas Duyckaerts, Ming-Tao Lee, Markus Ammann, *Frithjof Nolting*, Armin Kleibert, Thomas Huthwelker, Jean-Pierre Mächler, Mario Birrer, Juri Honegger, Reto Wetter, Hans Jakob Wörner, and Jeroen A. van Bokhoven, *Rev. Sci. Instrum.* **84**, 073904 (2013).
- (21) **Single domain spin manipulation by electric fields in strain coupled artificial multiferroic nanostructures**, M. Buzzi, R. V. Chopdekar, J. L. Hockel, A. Bur, T. Wu, N. Pilet, P. Warnicke, G. P. Carman, L. J. Heyderman, and *F. Nolting*, *Phys Rev. Lett.* **111**, 027204 (2013).
- (22) **Exploring hyper-cubic energy landscapes in thermally active finite artificial spin-ice systems**, A. Farhan, P. M. Derlet, A. Kleibert, A. Balan, R. V. Chopdekar, M. Wyss, L. Anghinolfi, *F. Nolting*, and L. J. Heyderman, *Nat. Phys.* **9**, 375 (2013).
- (23) **Strain-dependent magnetic configurations in manganite-titanate heterostructures probed with soft X-ray techniques**, R.V. Chopdekar, J. Heidler, C. Piamonteze, Y. Takamura, A. Scholl, S. Rusponi, H. Brune, L.J. Heyderman, and *F. Nolting*, *Eur. Phys. J. B* **86**, 241 (2013).
- (24) **Two-Dimensional Supramolecular Electron Spin Arrays**, Christian Wäckerlin, Jan Nowakowski, Shi-Xia Liu, Michael Jaggi, Dorota Siewert, Jan Girovsky, Anelia Shchyryba, Tatjana Hählen, Armin Kleibert, Peter M. Oppeneer, *Frithjof Nolting*, Silvio Decurtins, Thomas A. Jung, Nirmalya Ballav, *Adv. Mater.* **25**, 2404 (2013).
- (25) **The effect of magnetic anisotropy on the spin configurations of patterned La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> elements**, P. Wohlhüter, J. Rhensius, C. A. F. Vaz, J. Heidler, H. S. Körner, A. Bisig, M. Foerster, L. Méchin, F. Gaucher, A. Locatelli, M. A. Niño, S. El. Moussaoui, *F. Nolting*, E. Goering, L. J. Heyderman and M. Kläui, *J. Phys.: Condens. Matter* **25** 176004 (2013).
- (26) **Dynamics of Laser induced spin reorientation in Co/SmFeO<sub>3</sub> heterostructure**, L. Le Guyader, A. Kleibert, *F. Nolting*, L. Joly, P. M. Derlet, R. V. Pisarev, A. Kirilyuk, Th. Rasing, and A. V. Kimel, *Phys. Rev. B* **87**, 054437 (2013).

- (27) **Effect of Surface Charge Density on the Affinity of Oxide Nanoparticles for the Vapor–Water Interface**, M.A. Brown, N. Duyckaerts, A. Beloqui Redondo, I. Jordan, F. Nolting, A. Kleibert, M. Ammann, H.J. Wörner, J.A. van Bokhoven, Z. Abbas, *Langmuir*, **29**, 5023 (2013).
- (28) **Ammonia Coordination Introducing a Magnetic Moment in On-Surface Low-Spin Porphyrin**, Christian Wäckerlin, Kartick Tarafder, Jan Girovsky, Jan Nowakowski, Tatjana Hählen, Anelia Shchyrba, Dorota Siewert, Armin Kleibert, *Frithjof Nolting*, Peter M. Oppeneer, Thomas A. Jung, and Nirmalya Ballav, *Angewandte Chemie*, **52**, 4568 (2013).
- (29) **Low temperature ferromagnetism in chemically ordered FeRh nanocrystals**, A. Hillion, A. Cavallin, S. Vlaic, A. Tamion, F. Tournus, G. Khadra, J. Dreiser, C. Piamonteze, *F. Nolting*, S. Rusponi, K. Sato, T. J. Konno, O. Proux, V. Dupuis, and H. Brune, *Phys. Rev. Lett.* **110**, 087207 (2013).
- (30) **On-surface coordination chemistry of planar molecular spin systems: novel magnetochemical effects induced by axial ligands**, Christian Wäckerlin, Kartick Tarafder, Dorota Siewert, Jan Girovsky, Tatjana Hählen, Cristian Iacobita, Armin Kleibert, *Frithjof Nolting*, Thomas A. Jung, Peter M. Oppeneer, and Nirmalya Ballav, *Chem. Sci.* **3**, 3154 (2012).
- (31) **XMCD Study of a Methoxide-Bridged Dy<sup>III</sup>–Cr<sup>III</sup> Cluster Obtained by Fluoride Abstraction from cis-[Cr<sup>III</sup>F<sub>2</sub>(phen)<sub>2</sub>]<sup>+</sup>**, Jan Dreiser, Kasper S. Pedersen, Torben Birk, Magnus Schau-Magnussen, Cinthia Piamonteze, Stefano Rusponi, Thomas Weyhermüller, Harald Brune, *Frithjof Nolting*, and Jesper Bendix, *J. Phys. Chem. A* **116**, 7842 (2012).
- (32) **Control of the magnetization in pre-patterned half-metallic La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> nanostructures**, J. Heidler, J. Rhensius, C.A.F. Vaz, P. Wohlhueter, H.S. Koerner, A. Bisig, S. Schweitzer, A. Farhan, L. Mechlin, L. Le Guyader, *F. Nolting*, A. Locatelli, T.O. Mentes, M.A. Nino, F. Kronast, L. J. Heyderman, and M. Klaeui, *J. Appl. Phys.* **112**, 103921 (2012).
- (33) **Artificial kagome spin ice: dimensional reduction, avalanche control and emergent magnetic monopoles**, R. V. Hügli, G. Duff, B. O'Conchuir, E. Mengotti, A. Fraile Rodríguez, *F. Nolting*, L. J. Heyderman and H. B. Braun, *Phil. Trans. R. Soc. A* **370**, 5767 (2012).
- (34) **Highly efficient all-optical switching of magnetization in GdFeCo microstructures by interference-enhanced absorption of light**, M. Savoini, R. Medapalli, B. Koene, A. R. Khorsand, L. Le Guyader, L. Duò, M. Finazzi, A. Tsukamoto, A. Itoh, *F. Nolting*, A. Kirilyuk, A. V. Kimel, and Th. Rasing, *Phys. Rev. B* **86**, 140404(R) (2012).
- (35) **Thermalized ground state of artificial kagome spin ice building blocks**, Unnar B. Arnalds, Alan Farhan, Rajesh V. Chopdekar, Vassilios Kapaklis, Ana Balan, Evangelos Th. Papaioannou, Martina Ahlberg, *Frithjof Nolting*, Laura J. Heyderman, and Björgvin Hjörvarsson, *Appl. Phys. Lett.* **101**, 112404 (2012).

- (36) **X-Treme beamline at SLS: a beamline for x-ray magnetic circular and linear dichroism at high field and low temperature**, Cinthia Piamonteze, Uwe Flechsig, Stefano Rusponi, Jan Dreiser, Jakoba Heidler, Marcus Schmidt, Reto Wetter, Marco Calvi, Thomas Schmidt, Helena Pruchova, Juraj Krempasky, Christoph Quitmann, Harald Brune and *Frithjof Nolting*, J. Synchrotron Rad. **19**, 661 (2012).
- (37) **Spatially Resolved Strain-imprinted Magnetic States in an Artificial Multiferroic**, R.V. Chopdekar, V.K. Malik, A. Fraile Rodríguez, L. Le Guyader, Y. Takamura, A. Scholl, D. Stender, C.W. Schneider, C. Bernhard, *F. Nolting*, and L.J. Heyderman, Phys. Rev. B **86**, 014408 (2012).
- (38) **Studying nanomagnets and magnetic heterostructures with X-ray PEEM at the Swiss Light Source**, L. Le Guyader, A. Kleibert, A. Fraile Rodríguez, S. El Moussaoui, A. Balan, M. Buzzi, J. Raabe, and *F. Nolting*, J. Electron. Spectrosc. Relat. Phenom. **185**, 371 (2012).
- (39) **An Endohedral Single-Molecule Magnet with Long Relaxation Times: DySc<sub>2</sub>N@C<sub>80</sub>**, Rasmus Westerström, Jan Dreiser, Cinthia Piamonteze, Matthias Muntwiler, Stephen Weyeneth, Harald Brune, Stefano Rusponi, *Frithjof Nolting*, Alexey Popov, Shangfeng Yang, Lothar Dunsch, and Thomas Greber, J. Am. Chem. Soc. **134**, 9840 (2012).
- (40) **Emergent magnetic monopoles, disorder, and avalanches in artificial kagome spin ice (invited)**, R. V. Hügli, G. Duff, B. O'Conchuir, E. Mengotti, L. J. Heyderman, A. Fraile Rodríguez, *F. Nolting*, and H. B. Braun, J. App. Phys. **111**, 07E103 (2012).
- (41) **Demonstration of laser induced magnetization reversal in GdFeCo nanostructures**, L. Le Guyader, S. El Moussaoui, M. Buzzi, R. V. Chopdekar, L. J. Heyderman, A. Tsukamoto, A. Itoh, A. Kirilyuk, Th. Rasing, A. V. Kimel, and *F. Nolting*, Appl. Phys. Lett. **101**, 022410 (2012).
- (42) **Direct observation of a ferri-to-ferromagnetic transition in a fluoride-bridged 3d–4f molecular cluster**, Jan Dreiser, Kasper S. Pedersen, Cinthia Piamonteze, Stefano Rusponi, Zaher Salman, Md. Ehesan Ali, Magnus Schau-Magnussen, Christian Aa. Thuesen, Stergios Piligkos, Høgni Weihe, Hannu Mutka, Oliver Waldmann, Peter Oppeneer, Jesper Bendix, *Frithjof Nolting* and Harald Brune, Chem. Sci. **3**, 1024 (2012).
- (43) **Ultrafast Heating as a Sufficient Stimulus for Magnetization Reversal in a Ferrimagnet**, T. A. Ostler, J. Barker, R. F. L. Evans, R. Chantrell, U. Atxitia, O. Chubykalo-Fesenko, S. El Moussaoui, L. Le Guyader, E. Mengotti, L. J. Heyderman, *F. Nolting*, A. Tsukamoto, A. Itoh, D. Afanasiev, B. A. Ivanov, A. M. Kalashnikova, K. Vahaplar, J. Mentink, A. Kirilyuk, Th. Rasing and A. V. Kimel, Nat. Commun. **3**, 666 (2012).
- (44) **Spin configurations in Co<sub>2</sub>FeAl<sub>0.4</sub>Si<sub>0.6</sub> Heusler alloy thin film elements**, C. A. F. Vaz, J. Rhensius, J. Heidler, P. Wohlhueter, A. Bisig, H. S. Koerner, T. O.

- Mentes, A. Locatelli, L. Le Guyader, *F. Nolting*, T. Graf, C. Felser, L. J. Heyderman, and M. Klaeui, *Appl. Phys. Lett.* **99**, 182510 (2011).
- (45) **Nanostructuring of GdFeCo thin films for laser induced magnetization switching**, L. Le Guyader, S. El Moussaoui, E. Mengotti, L. J. Heyderman, *F. Nolting*, A. Tsukamoto, A. Itoh, A. Kirilyuk, Th. Rasing, and A. V. Kimel, *J. Magn. Soc. Jpn.* **36**, 21 (2012).
- (46) **Resonant photoelectron diffraction with circularly polarized light**, Martin Morscher, *Frithjof Nolting*, Thomas Brugger, and Thomas Greber, *Phys. Rev. B* **84**, 140406(R) (2011).
- (47) **Thermal melting of magnetic stripe domains**, W. Kuch, K. Fukumoto, J. Wang, *F. Nolting*, C. Quitmann, and T. Ramsvik, *Phys. Rev. B* **83**, 172406 (2011).
- (48) **Real space observation of emergent magnetic monopoles and associated Dirac strings in artificial kagome spin ice**, E. Mengotti, L. J. Heyderman, A. Fraile Rodríguez, *F. Nolting*, R.V. Hügli, and H. B. Braun, *Nature Phys.* **7**, 68 (2011).
- (49) **Indirect Magnetic Coupling of Manganese Porphyrin to a Ferromagnetic Cobalt Substrate**, D. Chylarecka, T. K. Kim, K. Tarafder, K. Müller, O K. Gödel, I. Czekaj, C. Wäckerlin, M. Cinchetti, Md. E. Ali, C. Piamonteze, F. Schmitt, J.-P. Wüstenberg, C. Ziegler, *F. Nolting*, M. Aeschlimann, P. M. Oppeneer, N. Ballav, and T. A. Jung, *J. Phys. Chem. C* **115**, 1295 (2011).
- (50) **Anisotropy of the L<sub>2,3</sub> x-ray magnetic linear dichroism of Fe films on GaAs: Experiment and ab initio theory**, *F. Nolting*, D. Legut, J. Rusz, P. M. Oppeneer, G. Woltersdorf, and Ch. H. Back, *Phys. Rev. B* **82**, 184415 (2010).
- (51) **Domain wall velocity measurement in permalloy nanowires with X-ray magnetic circular dichroism imaging and single shot Kerr microscopy**, T.A. Moore, P. Mohrke, L. Heyne, A. Kaldun, M. Klaeui, D. Backes, J. Rhensius, L.J. Heyderman, J.-U. Thiele, A. Fraile Rodriguez, *F. Nolting*, T.O. Mentes, M.A. Nino, A. Locatelli, A. Potenza, H. Marchetto, S. Cavill, S.S. Dhesi, *J. Magn. Magn. Mater.* **322**, 1347 (2010).
- (52) **Magnetic-field-induced domain-wall motion in permalloy nanowires with modified Gilbert damping**, T.A. Moore, P. Mohrke, L. Heyne, A. Kaldun, M. Klaui, D. Backes, J. Rhensius, L.J. Heyderman, J.U. Thiele, G. Woltersdorf, A. Fraile Rodriguez, *F. Nolting*, T.O. Mentes, M.A. Nino, A. Locatelli, A. Potenza, H. Marchetto, S. Cavill, S.S. Dhesi, *Phys. Rev. B* **82**, 094445 (2010).
- (53) **Direct Determination of Large Spin-Torque Nonadiabaticity in Vortex Core Dynamics**, L. Heyne, J. Rhensius, D. Ilgaz, U. Rüdiger, M. Kläui, L. Joly, *F. Nolting*, L. J. Heyderman, J. U. Thiele, and F. Kronast, *Phys. Rev. Lett.* **105**, 187203 (2010).

- (54) **In situ contacting and current-injection into samples in photoemission electron microscopes**, L. Heyne, M. Kläui, J. Rhensius, L. Le Guyader, and F. Nolting, Rev. Sci. Instrum. **81**, 113707 (2010).
- (55) **Direct observation of high velocity current induced domain wall motion**, L. Heyne, J. Rhensius, A. Bisig, S. Krzyk, P. Punke, M. Kläui, L.J. Heyderman, L. Le Guyader, and F. Nolting, Appl. Phys. Lett. **96**, 032504 (2010).
- (56) **Probing single magnetic nanoparticles by polarization-dependent soft x-ray absorption spectromicroscopy**, A. Fraile Rodríguez, A. Kleibert, J. Bansmann and F. Nolting, J. Phys. D: Appl. Phys. **43**, 474006 (2010).
- (57) **Controlling spins in adsorbed molecules by a chemical switch**, C. Wäckerlin, D. Chylarecka, A. Kleibert, K. Müller, C. Iacovita, F. Nolting, T. A. Jung, and N. Ballav, Nature Commun. **1**, 61 (2010).
- (58) **Magnetism of 3d transition metal nanoparticles on surfaces probed with synchrotron radiation - from ensembles towards individual objects**, J. Bansmann, A. Kleibert, M. Getzlaff , A. Fraile Rodriguez, F. Nolting, C. Boeglin, K.-H. Meiwes-Broer, Phys. Stat. Sol. B **247**, 1152 (2010).
- (59) **Performance measurements at the SLS SIM beamline**, U. Flechsig, F. Nolting, A. Fraile Rodriguez, J. Krempasky, C. Quitmann, T. Schmidt, S. Spielmann, and D. Zimoch, AIP Conf. Proc **1234**, 319 (2010).
- (60) **Synchronized monochromator and insertion device energy scans at SLS**, J. Krempaský, U. Flechsig, T. Korhonen, D. Zimoch, Ch. Quitmann, and F. Nolting, AIP Conf. Proc. **1234**, 705 (2010).
- (61) **Self-Assembly and Superexchange Coupling of Magnetic Molecules on Oxygen Reconstructed Ferromagnetic Thin Film**, D. Chylarecka, C. Wäckerlin, T. Kim, K. Müller, F. Nolting, A. Kleibert, N. Ballav, T. A. Jung, J. Phys. Chem. Lett. **1**, 1408 (2010).
- (62) **Size-Dependent Spin Structures in Iron Nanoparticles**, A. Fraile Rodríguez, A. Kleibert, J. Bansmann, A. Voitkans, L. J. Heyderman, and F. Nolting, Phys. Rev. Lett. **104**, 127201 (2010).
- (63) **Imaging of Domain Wall Inertia in Permalloy Half-Ring Nanowires by Time-Resolved Photoemission Electron Microscopy**, J. Rhensius, L. Heyne, D. Backes, S. Krzyk, L. J. Heyderman, L. Joly, F. Nolting, and M. Kläui, Phys. Rev. Lett. **104**, 067201 (2010).
- (64) **Longitudinal detection of ferromagnetic resonance using x-ray transmission measurements**. G. Boero, S. Rusponi, J. Kavich, A. Lodi Rizzini, C. Piamonteze, F. Nolting, C. Tieg, J.-U. Thiele, and P. Gambardella, Rev. Sci. Instrum. **80**, 123902 (2009).
- (65) **Geometry-dependent scaling of critical current densities for current-induced domain wall motion and transformations**. L. Heyne, G. Tatara, H.

- Kohno, J. Rhensius, Y.-J. Cho, D. Bedau, S. Krzyk, C. Dette, H. Körner, J. Fischer, L. J. Heyderman, L. Joly, *F. Nolting*, S. Seo, U. Rüdiger and M. Kläui, Phys. Rev. B **80**, 184405 (2009).
- (66) **Spin-reorientation in the heterostructure Co/SmFeO<sub>3</sub>**, L. Joly, *F. Nolting*, A. Kimel, A. Kirilyuk, Th. Rasing, R.V. Pisarev, J. Phys.: Condens. Matter **21**, 446004 (2009).
- (67) **Simultaneous in-plane and out-of-plane exchange bias using a single antiferromagnetic layer resolved by x-ray magnetic circular dichroism**, J. Nogués, S. Stepanow, A. Bollero, J. Sort, B. Dieny, *F. Nolting*, and P. Gambardella, Appl. Phys. Lett. **95**, 152515 (2009).
- (68) **Scaling of spin relaxation and angular momentum dissipation in permalloy nanowires**, T. A. Moore, M. Kläui, L. Heyne, P. Möhrke, D. Backes, J. Rhensius, U. Rüdiger, L. J. Heyderman, J.-U. Thiele, G. Woltersdorf, C. H. Back, A. Fraile Rodríguez, *F. Nolting*, T. O. Mentes, M. Á. Niño, A. Locatelli, A. Potenza, H. Marchetto, S. Cavill, and S. S. Dhesi, Phys. Rev. B **80**, 132403 (2009).
- (69) **Looking inside an endohedral fullerene: Inter- and intramolecular ordering of Dy<sub>3</sub>N@C<sub>80</sub>(I<sub>h</sub>) on Cu(111)**, Matthias Treier, Pascal Ruffieux, Roman Fasel, *Frithjof Nolting*, Shangfeng Yang, Lothar Dunsch, and Thomas Greber, Phys. Rev. B **80**, 081403(R) (2009).
- (70) **Use of Gel-Assisted assembly to Fabricate Multi-Component Molecular Gradient Layers and the Investigation of Structure and Electron Transport therein**, Peter Morf, Nirmalya Ballav, *Frithjof Nolting*, Florian von Wrochem, Heinz-Georg Nothofer, Akio Yasuda, Jurina M. Wessels, and Thomas A. Jung, ChemPhysChem **10**, 2212 (2009).
- (71) **Magnetic and Structural Investigation of ZnSe Semiconductor Nanoparticles Doped With Isolated and Core-Concentrated Mn<sup>2+</sup> Ions**, Christina Graf, Andreas Hofmann, Thomas Ackermann, Christine Boeglin, Ranjani Viswanatha, Xiaogong Peng, Arantxa Fraile Rodríguez, *Frithjof Nolting*, and Eckart Rühl, Adv. Funct. Mater. **19**, 2501 (2009).
- (72) **Double-resonant x-ray and microwave absorption: Atomic spectroscopy of precessional, orbital, and spin dynamics**, G. Boero, S. Rusponi, P. Bencok, R. Meckenstock, J.-U. Thiele, *F. Nolting*, and P. Gambardella, Phys. Rev. B **79**, 224425 (2009).
- (73) **Dipolar energy states in clusters of perpendicular magnetic Nanoislands**, E. Mengotti, L. J. Heyderman, A. Bisig, A. Fraile Rodríguez, L. Le Guyader, *F. Nolting*, and H. B. Braun, J. Appl. Phys. **105**, 113113 (2009).
- (74) **Magnetic structure near the Co/NiO(001) interface**, E. Arenholz, G. van der Laan, and *F. Nolting*, Appl. Phys. Lett. **93**, 162506 (2008).

- (75) **Building blocks of an artificial Kagome spin ice: Photoemission electron microscopy of arrays of ferromagnetic islands**, E. Mengotti, L. J. Heyderman, A. Fraile Rodríguez, A. Bisig, L. Le Guyader, *F. Nolting*, and H-B. Braun, Phys. Rev. B **78**, 144402 (2008).
- (76) **Impact of interface orientation on magnetic coupling in highly ordered systems: A case study of the low-indexed  $\text{Fe}_3\text{O}_4/\text{NiO}$  interfaces**, I.P. Krug, F.U. Hillebrecht, M.W. Haverkort, A. Tanaka, L.H. Tjeng, H. Gomonay, A. Fraile-Rodríguez, *F. Nolting*, S. Cramm, and C.M. Schneider, Phys. Rev. B **78**, 064427 (2008).
- (77) **Measuring magnetic excitations in microstructures using X-ray microscopy**, C. Quitmann, J. Raabe, C. Buehler, M. Buess, S. Johnson, *F. Nolting*, V. Schlott, A. Streun, Nucl. Instrum. Methods Phys. Res., Sect. A **588**, 494 (2008).
- (78) **Antiferromagnetic  $\text{LaFeO}_3$  thin films and their effect on exchange bias**, J W Seo, E E Fullerton, *F Nolting*, A Scholl, J Pompeyrine and J-P Locquet, J. Phys.: Condens. Matter **20**, 264014 (2008).
- (79) **Direct imaging of current-induced domain wall motion in CoFeB structures** L. Heyne, M. Kläui, D. Backes, P. Möhrke, T. A. Moore, J. G. Kimling, Olivier Boulle, U. Rüdiger, L. J. Heyderman, A. Fraile Rodríguez, *F. Nolting*, K. Kirsch, and R. Mattheis, J. Appl. Phys. **103**, 07D928 (2008).
- (80) **Transport anisotropy in  $\text{In}_{0.75}\text{Ga}_{0.25}\text{As}$  two-dimensional electron gases induced by indium concentration modulation**, D. Ercolani, G. Biasiol, E. Cancellieri, M. Rosini, C. Jacoboni, F. Carillo, S. Heun, L. Sorba, and *F. Nolting*, Phys. Rev. B **77**, 235307 (2008).
- (81) **Relation between Non-Adiabaticity and Damping in Permalloy Studied by Current Induced Spin Structure Transformations**, L. Heyne, D. Backes, T. A. Moore, S. Krzyk, M. Kläui, U. Rüdiger, L. J. Heyderman, A. Fraile Rodríguez, *F. Nolting*, T. O. Mentes, M. Á. Niño, A. Locatelli, K. Kirsch, and R. Mattheis, Phys. Rev. Lett. **100**, 066603 (2008).
- (82) **Easy axis magnetization reversal in cobalt antidot arrays**, E. Mengotti, L. J. Heyderman, *F. Nolting*, B. R. Craig, J. N. Chapman, L. Lopez-Diaz, R. J. Matelon, U. G. Volkmann, M. Kläui, U. Rüdiger, C. A. F. Vaz, and J. A. C. Bland, J. Appl. Phys **103**, 07D509 (2008).
- (83) **Element-resolved x-ray ferrimagnetic and ferromagnetic resonance spectroscopy**, G. Boero, S. Mouaziz, S. Rusponi, P. Bencok, *F. Nolting*, S. Stepanow and P. Gambardella, New J. of Phys. **10**, 013011 (2008).
- (84) **Domain Wall Spin Structures in 3d Metal Ferromagnetic Nanostructures**, M. Laufenberg, M. Kläui, D. Backes, W. Bührer, H. Ehrke, D. Bedau, U. Rüdiger, *F. Nolting*, S. Cherifi, A. Locatelli, R. Belkhou, S. Heun, C. A. F. Vaz, J. A. C. Bland, L. J. Heyderman, T. Kasama, R. E. Dunin-Borkowski, A. Pavlovska, and E. Bauer, Adv. Solid State Phys. **46**, 281 (2007).

- (85) **Paramagnetism of the Co sublattice in ferromagnetic  $Zn_{1-x}Co_xO$  films**, A. Barla, G. Schmerber, E. Beaurepaire, A. Dinia, H. Bieber, S. Colis, F. Scheurer, J.-P. Kappler, P. Imperia, *F. Nolting*, F. Wilhelm, A. Rogalev, D. Müller, and J. J. Grob, Phys. Rev. B **76**, 125201 (2007).
- (86) **Antiferromagnetic domain configuration in patterned  $LaFeO_3$  thin films**, S. Czekaj, *F. Nolting*, L.J. Heyderman, K. Kunze, and M. Krüger, J. Phys.: Cond. Mat. **19**, 386214 (2007).
- (87) **Ferromagnetic Nanorings**, C. A. F. Vaz, T. J. Hayward, J. Llandro, F. Schackert, D. Morecroft, J. A. C. Bland, M. Kläui, M. Laufenberg, D. Backes, U. Rüdiger, F. J. Castaño, C. A. Ross, L. J. Heyderman, *F. Nolting*, A. Locatelli, G. Faini, S. Cherifi, and W. Wernsdorfer, J. Phys.: Cond. Mat. **19**, 255207 (2007).
- (88) **X-ray imaging and spectroscopy of individual cobalt nanoparticles using photoemission electron microscopy**, A. Fraile Rodríguez, F. Nolting, J. Bansmann, A. Kleibert, and L. J. Heyderman, J. Magn. Magn. Mater. **316**, 426 (2007).
- (89) **Cobalt antidot arrays on membranes: fabrication and investigation with transmission x-ray microscopy**, L.J. Heyderman, S. Czekaj, *F. Nolting*, D.-H. Kim, and P. Fischer, J. Magn. Magn. Mater. **316**, 99 (2007).
- (90) **Surface characterization of  $Mn_xGe_{1-x}$  and  $Cr_yMn_xGe_{1-x-y}$  dilute magnetic semiconductors**, P. Gambardella, L. Claude, S. Rusponi, K. J. Franke, H. Brune, J. Raabe, *F. Nolting*, P. Bencok, A. T. Hanbicki, B. T. Jonker, C. Grazioli, M. Veronese, and C. Carbone, Phys. Rev. B **75**, 125211 (2007).
- (91) **Structural characterization of diamond-like carbon films for ultracold neutron applications**, F. Atchison, T. Bry's, M. Daum, P. Fierlinger, A. Foelske, M. Gupta, R. Henneck, S. Heule, M. Kasprzak, K. Kirch, R. Kötz, M. Ku'zniak, T. Lippert, C.-F. Meyer, *F. Nolting*, A. Pichlmaier, D. Schneider, B. Schultrich, P. Siemroth, U. Straumann, Diam. Relat. Mater. **16**, 334-341 (2007).
- (92) **Tunnel magnetoresistance and robust room temperature exchange bias with multiferroic  $BiFeO_3$  epitaxial thin films**, H. Béa, M. Bibes, S. Cherifi, *F. Nolting*, B. Warot-Fonrose, S. Fusil, G. Herranz, C. Deranlot, E. Jacquet, K. Bouzehouane, and A. Barthélémy, Appl. Phys. Lett. **89**, 242114 (2006).
- (93) **Permalloy thin films exchange coupled to arrays of cobalt islands**, A. Fraile Rodríguez, L. J. Heyderman, *F. Nolting*, A. Hoffmann, J. E. Pearson, L. M. Doeswijk, M. A. F. van den Boogaart, and J. Brugger, Appl. Phys. Lett. **89**, 142508 (2006).
- (94) **A Measurement of Newton's Gravitational Constant**, St. Schlamminger, E. Holzschuh, W. Kündig, *F. Nolting*, R.E. Pixley, J. Schurr, and U. Staub, Phys. Rev. D. **74**, 082001 (2006).

- (95) **Magnetization reversal in cobalt antidot arrays**, L. J. Heyderman, *F. Nolting*, D. Backes, S. Czekaj, L. Lopez-Diaz, M. Kläui, U. Rüdiger, C.A.F. Vaz, J.A.C. Bland, R.J. Matelon, U.G. Volkmann, and P. Fischer, Phys. Rev. B **73**, 214429 (2006).
- (96) **Quantitative determination of domain wall coupling energetics**, M. Laufenberg, D. Bedau, H. Ehrke, M. Kläui, U. Rüdiger, D. Backes, L. J. Heyderman, *F. Nolting*, C. A. F. Vaz, J. A. C. Bland, T. Kasama, R. E. Dunin-Borkowski, S. Cherifi, A. Locatelli, and S. Heun, Appl. Phys. Lett. **88**, 212510 (2006).
- (97) **Fundamental magnetic states of disk and ring elements**, C.A.F. Vaz, M. Kläui, J.A.C. Bland, L.J. Heyderman, C. David, and *F. Nolting*, Nucl. Instr. and Meth. in Phys. Res. B **246**, 13 (2006).
- (98) **Photoemission electron microscopy study of remanent magnetic domain states in ferromagnetic wedge films deposited on substrates with micrometer-sized square plateaus**, L. J. Heyderman, S. Czekaj, *F. Nolting*, E. Müller, P. Fischer, Ph. Gasser, and L. López-Díaz, J. Appl. Phys. **99**, 063904 (2006).
- (99) **Observation of thermally activated domain wall transformations**, M. Laufenberg, D. Backes, W. Bührer, D. Bedau, M. Kläui, U. Rüdiger, C. A. F. Vaz, J. A. C. Bland, L. J. Heyderman, *F. Nolting*, S. Cherifi, A. Locatelli, R. Belkhou, S. Heune, and E. Bauer, Appl. Phys. Lett. **88**, 052507 (2006).
- (100) **Sign dependence of the x-ray magnetic linear dichroism on the antiferromagnetic spin axis in  $\text{LaFeO}_3$  thin films**, S. Czekaj, *F. Nolting*, L.J. Heyderman, P.W. Willmott, and G. van der Laan, Phys. Rev. B. **73**, 020401(R) (2006).
- (101) **Multiplicity of magnetic domain states in circular elements probed by photoemission electron microscopy**, C.A.F. Vaz, M. Kläui, L.J. Heyderman, C. David, *F. Nolting*, and J.A.C. Bland, Phys. Rev. B **72**, 224426 (2005).
- (102) **Quantitative analysis of magnetic excitations in Landau-flux closure structures using synchrotron-radiation microscopy**, J. Raabe, C. Quitmann, C.H. Back, *F. Nolting*, S. Johnson, and C. Buehler, Phys. Rev. Lett. **94**, 217204 (2005).
- (103) **Induced magnetic ordering in a molecular monolayer**, A. Scheybal, T. Ramsvik, R. Bertschinger, M. Putero, *F. Nolting*, and T. A. Jung, Chem. Phys. Lett. **411**, 214 (2005).
- (104) **Controlled and reproducible domain wall displacement by current pulses injected in ferromagnetic ring structures**, M. Kläui, C. A. F. Vaz, J. A. C. Bland, W. Wernsdorfer, G. Faini, E. Cambril, L.J. Heyderman, *F. Nolting*, and U. Rüdiger, Phys. Rev. Lett. **94**, 106601 (2005).

- (105) **Domain-size-dependent exchange bias in Co/LaFeO<sub>3</sub>**, A. Scholl, F. Nolting, J.W. Seo, H. Ohldag, J. Stohr, S. Raoux, J.-P. Locquet, and J. Fompeyrine, *Appl. Phys. Lett.* **85**, 4085 (2004).
- (106) **Arrays of nanoscale magnetic dots: Fabrication by x-ray interference lithography and characterization**, L. J. Heyderman, H. H. Solak, C. David, D. Atkinson, R. P. Cowburn, and F. Nolting, *Appl. Phys. Lett.* **85**, 4989 (2004).
- (107) **Head-to-head domain-wall phase diagram in mesoscopic ring magnets**, M. Kläui, C. A. F. Vaz, J. A. C. Bland, L. J. Heyderman, F. Nolting, A. Pavlovska, E. Bauer, S. Cherifi, S. Heun, and A. Locatelli, *Appl. Phys. Lett.* **85**, 5637 (2004).
- (108) **Effect of the magnetocrystalline anisotropy on the magnetic behavior of ring elements**, C.A.F. Vaz, M. Kläui, J.A.C. Bland, L.J. Heyderman, and F. Nolting, *J. Appl. Phys.* **95**, 6732 (2004).
- (109) **Photoemission electron microscopy investigation of patterned cobalt/Terfenol-D sandwich films**, L. J. Heyderman, F. Nolting, and P. Fischer, *J. Magn. Magn. Mater.* **272-276**, e1311 (2004).
- (110) **Magnetic domain structures in ultrathin Fe<sub>x</sub>Ni<sub>(1-x)</sub> films on Cu(111): Dependence on film thickness and stoichiometry**, Y. Sato, T.F. Johnson, S. Chiang, J.A. Giacomo, X.D. Zhu, D.P. Land, F. Nolting, A. Scholl, *J. Vac. Sci. Technol. A* **22** (1), 135 (2004).
- (111) **X-Ray Photoemission Electron Microscopy Investigation of Magnetic Thin Film Antidot Arrays**, L. Heyderman, F. Nolting, and C. Quitman, *Appl. Phys. Lett.* **83**(9), 1797 (2003).
- (112) **Correlation between Exchange Bias and Pinned Interfacial Spins**, H. Ohldag, A. Scholl, F. Nolting, E. Arenholz, S. Maat, A.T. Young, M. Carey, and J. Stöhr, *Phys. Rev. Lett.* **91**(1), 017203 (2003).
- (113) **Determination of the Antiferromagnetic Spin Axis in Epitaxial LaFeO<sub>3</sub> Films by X-Ray Magnetic Linear Dichroism Spectroscopy**, J. Lüning, F. Nolting, A. Scholl, H. Ohldag, J.W. Seo, J. Fompeyrine, J.-P. Locquet, and J. Stöhr, *Phys. Rev. B* **67**, 214433 (2003).
- (114) **Imaging magnetic microstructures with soft X-ray microscopies**, P. Fischer, G. Denbeaux, F. Nolting, D. Goll, T. Eimüller, Ch. Quitmann, and G. Schütz, *Trans. Magn. Soc. Jpn.* **26**(10), 234 (2002).
- (115) **Soft X-ray Imaging and Spectroscopy of Single Nanocrystals**, J. Rockenberger, F. Nolting, J. Lüning, J. Hu, A.P. Alivisatos, *J. Chem. Phys.* **116**, 6322 (2002).
- (116) **A PEEM study of Small Agglomerates of colloidal iron oxide nanocrystal**, F. Nolting, J. Lüning, J. Rockenberger, J. Hu, and A. P. Alivisatos, *Surf. Rev. Lett.* **9**, 437 (2002).

- (117) **X-ray photoemission electron microscopy, a tool for the investigation of complex magnetic structures**, A. Scholl, H. Ohldag, F. Nolting, J. Stöhr, and H.A. Padmore, Rev. Sci. Instrum. **73**, 1362 (2002).
- (118) **Exploring the microscopic origin of exchange bias with photoelectron emission microscopy**, A. Scholl, F. Nolting, J. Stöhr, T. Regan, J. Luning, J.W. Seo, J.-P. Locquet, J. Fompeyrin, S. Anders, H. Ohldag, and H.A. Padmore, J. Appl. Phys. **89**, 7266 (2001).
- (119) **Studies of the magnetic structure at the ferromagnet-antiferromagnet interface**, A. Scholl, F. Nolting, J. Stöhr, J. Luning, J.W. Seo, J.-P. Locquet, J. Fompeyrin, S. Anders, H. Ohldag, and H.A. Padmore, J. Synchr. Rad. **8**, 101 (2001).
- (120) **Spin reorientation at the antiferromagnetic NiO(001) surface in response to an adjacent ferromagnet**, H. Ohldag, A. Scholl, F. Nolting, S. Anders, F.U. Hillebrecht, and J. Stöhr, Phys. Rev. Lett. **86**, 2878 (2001).
- (121) **X-ray spectromicroscopy of immiscible polymer blends: polystyrene-poly(methyl methacrylate)**, C. Morin, H. Ikeura-Sekiguchi, T. Tyliszczak, R. Cornelius, J.L. Brash, A.P. Hitchcock, A. Scholl, F. Nolting, G. Appel, D.A. Winesett, K. Kaznacheyev, and H. Ade, J. Electron Spectrosc. **121**, 203 (2001).
- (122) **Spectroscopic Identification and Direct Imaging of Interfacial Magnetic Spins**, H. Ohldag, T. J. Regan, J. Stöhr, A. Scholl, F. Nolting, J. Lüning, C. Stamm, S. Anders, and R. L. White, Phys. Rev. Lett. **87**, 247201 (2001).
- (123) **Chemical effects at metal/oxide interfaces studied by x-ray-absorption spectroscopy**, T. J. Regan, H. Ohldag, C. Stamm, F. Nolting, J. Lüning, J. Stöhr, and R. L. White, Phys. Rev. B **64**, 214422 (2001).
- (124) **Direct observation of the alignment of ferromagnetic spins by antiferromagnetic spins**, F. Nolting, A. Scholl, J. Stöhr, J.W. Seo, J. Fompeyrine, H. Siegwart, J.-P. Locquet, S. Anders, J. Lüning, E.E. Fullerton, M.F. Toney, M.R. Scheinfein, and H.A. Padmore, Nature **405**, 767 (2000).
- (125) **Observation of antiferromagnetic domains in epitaxial thin films**, A. Scholl, J. Stöhr, J. Lüning, J.W. Seo, J. Fompeyrine, H. Siegwart, J.-P. Locquet, F. Nolting, S. Anders, E.E. Fullerton, M.R. Scheinfein, and H.A. Padmore, Science **287**, 1014 (2000).
- (126) **Oscillatory decay of magnetization induced by domain-wall stray fields**, L. Thomas, J. Lüning, A. Scholl, F. Nolting, S. Anders, J. Stöhr, and S.S.P. Parkin, Phys. Rev. Lett **84**, 3462 (2000).
- (127) **A value for G from beam-balance experiments**, F. Nolting, J. Schurr, St. Schlamminger, and W. Kündig, Meas. Sci. Technol. **10**, 487 (1999).

- (128) **Gravitational Constant Measured by Means of a Beam Balance**, J. Schurr, *F. Nolting*, and W. Kündig, Phys. Rev. Lett **80**, 1142 (1998).
- (129) **Measurement of the gravitational constant G by means of a beam balance**, J. Schurr, *F. Nolting*, and W. Kündig, Phys. Lett. A **248**, 295 (1998).
- (130) **Determination of G by means of a beam balance**, *F. Nolting*, J. Schurr, and W. Kündig, IEEE Trans. Instrum. Meas. **48**, 245 (1999).
- (131) **Specific heat of CePd<sub>2</sub>Al<sub>3</sub> under high pressure**, *F. Nolting*, A. Eichler, S.A.M. Mentink, and J.A. Mydosh, Physica B **199&200**, 614 (1994).

Invited publications/ book chapters

- (132) **Magnetische Nanowelt**, A. Kleibert und *F. Nolting*, Physik-Journal **6**, 27 (2013).
- (133) **Hitze weist Magneten die Schaltrichtung**, *Frithjof Nolting*, Physik in unserer Zeit **3**, Seite 111 (2012).
- (134) **Monopole aus Nanomagneten**, Laura Heyderman, *Frithjof Nolting* und Hans-Benjamin Braun, Spektrum der Wissenschaft, **März**, Seite 12 (2011).
- (135) **Magnetic imaging with X-rays**, *F. Nolting*, in Magnetism and Synchrotron Radiation, Springer Proceedings in Physics, Vol. 133 Beaurepaire, E.; Bulou, H.; Scheurer, F.; Kappler, J.-P. (Eds.), Springer, Berlin Heidelberg, pp. 345 (2010).
- (136) **Carpet of magnetic colours**, L.J. Heyderman and *F. Nolting*, Europhysicsnews **38**, 22 (2007).
- (137) **Study of Ferromagnet-Antiferromagnet Interfaces Using X-Ray PEEM**, A. Scholl, H. Ohldag, *F. Nolting*, S. Anders, and J. Stöhr, in *Magnetic Microscopy of Nanostructures*, eds H. Hopster, H.-P. Oepen, Springer Verlag, (2005).
- (138) **Determination of the gravitational constant G by means of a beam balance**, *F. Nolting*, J. Schurr, St. Schlamminger, and W. Kündig, Europhysicsnews **31(4)**, 25 (2000).
- (139) **Die Gravitationskonstante – eine Herausforderung an die Messtechnik**, *F. Nolting*, J. Schurr, St. Schlamminger und W. Kündig, Physikalischen Blätter **55**, 51 (1999).