Weinelt, Martin, Prof. Dr. (date of birth: 09.06.1963, male)

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Position: Professor (W3)

Children: two (age 14 and 15)

Academic education

1983 – 1990 Study of physics, Technische Universität München, Diploma, Prof. Dr. Dietrich Menzel

Scientific degrees

1996 – 2002 Habilitation: Physics, Friedrich-Alexander-Universität Erlangen-Nürnberg, mentor: Prof. Dr. Thomas Fauster

1990 – 1994 PhD program, Technische Universität München, advisor: Prof. Dr. Hans-Peter Steinrück

Employment (since graduation)

since 2011 Professor (W3), Department of Physics, Freie Universität Berlin

2004 – 2010 Head of department A1, Max Born Institute for Nonlinear Optics and Ultrafast Spectroscopy, S-Professor (C3) at Freie Universität Berlin

2003 – 2004 Professor of Applied Physics (C3 *per pro*), Friedrich-Alexander-Universität Erlangen-Nürnberg

2002 – 2003 Associate professor (C2), Lehrstuhl für Festkörperphysik, Friedrich-Alexander-Universität Erlangen-Nürnberg

1996 – 2002 Research assistant (C1), Lehrstuhl für Festkörperphysik, Friedrich-Alexander-Universität Erlangen-Nürnberg, Prof. Dr. Thomas Fauster

1994 – 1996 Postdoc at Uppsala Universitet, Prof. Dr. Nils Mårtensson, Postdoctoral Fellow at the IBM beamline of the Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley CA, USA

Other activities and awards / honours

2014 – Spokesperson of Sfb 658 “Elementary Processes in Molecular Switches at Surfaces”

2012 – Co-speaker, Helmholtz Virtual Institute “Dynamic Pathways in Multidimensional Landscapes”

2011 – 2015 Head of the Leibniz Graduate School: Dynamics in New Light

2006 – 2010 Honorary member of the Institute of Physics, Scientific advisor of the Journal of Physics

1994 – 1996 Postdoctoral fellowship of the Swedish Research Council

Most important publications

Time-resolved spectroscopy

[1] *Time-resolved two-photon photoemission from metal surfaces*
M. Weinelt, J. Phys.: Condens. Matter **14** (2002) R1099

[2] *Dynamics of Exciton Formation at the Si(100) c(4x2) Surface*
M. Weinelt, M. Kutschera, Th. Fauster, and M. Rohlfing, Phys. Rev. Lett. **92** (2004) 126801

[3] *Two-state double-continuum Fano resonance at the silicon(100)-surface*
C. Eickhoff, M. Teichmann, and **M. Weinelt**, Phys. Rev. Lett. **107** (2011) 176804

[4] *Resonant photoemission in Ni metal at the 2p edges: resonant Raman and interference effects*
M. Weinelt, A. Nilsson, M. Magnuson, T. Wiell, O. Karis, N. Mårtensson, M. Samant, and J. Stöhr, Phys. Rev. Lett. **78** (1997) 967

[5] One-step and two-step description of deexcitation processes in weakly interacting systems
O. Karis, A. Nilsson, M. Weinelt, T. Wiell, C. Puglia, N. Wassdahl, N. Mårtensson, M. Samant, J. Stöhr, Phys. Rev. Lett. **73** (1996) 1380

Spin and magnetization dynamics

[6] *Spin-dependent electron dynamics in front of a ferromagnetic surface*
A. B. Schmidt, M. Wiemhöfer, M. Pickel, M. Donath, and M. Weinelt,
Phys. Rev. Lett. **95** (2005) 107402

[7] Ultrafast magnon generation in an Fe film on Cu(100)
A. B. Schmidt, M. Pickel, M. Donath, P. Buczek, A. Ernst, V.P. Zhukov, P.M. Echenique, L.M. Sandratskii, E.V. Chulkov, and M. Weinelt, Phys. Rev. Lett. **105** (2010) 197401

[8] Hot-electron-driven enhancement of spin-lattice coupling in gd and tb 4 f ferromagnets observed by femtosecond x-ray magnetic circular dichroism
A. Melnikov, C. Stamm, T. Kachel, N. Pontius, M. Sultan, C. Gahl, M. Weinelt, H.A. Dürr, U. Bovensiepen, Phys. Rev. Lett. **106** (2011) 127401

[9] *Femtosecond Laser Excitation Drives Ferromagnetic Gadolinium out of Magnetic Equilibrium*
R. Carley, K. Döbrich, B. Frietsch, C. Gahl, M. Teichmann, O. Schwarzkopf, P. Wernet, and M. Weinelt, Phys. Rev. Lett. **109** (2012) 057401

[10] Disparate ultrafast dynamics of itinerant and localized magnetic moments in gadolinium metal
B. Frietsch, J. Bowlan, R. Carley, M. Teichmann, S. Wienholdt, D. Hinzke, and U. Nowak, K. Carva, P. M. Oppeneer, and M. Weinelt, Nature Communications **6** (2015) 8262

[11] *Separating Exchange Splitting from Spin Mixing in Gadolinium by Femtosecond Laser Excitation*
B. Andres, M. Christ, C. Gahl, J. Kirschner, M. Wietstruk, and M. Weinelt, Phys. Rev. Lett. **115**, 207404 (2015)

Molecular systems

[12] *An atom-specific look at the surface chemical bond*

Nilsson, M. Weinelt, T. Wiell, P. Bennich, O. Karis, N. Wassdahl, J. Stöhr, M.G. Samant, Phys. Rev. Lett. **78** (1997) 2847

[13] The adsorption structure of glycine adsorbed on Cu(110); comparison with formate and acetate Cu(110)
J. Hasselström, O. Karis, M. Weinelt, N. Wassdahl, A. Nilsson, M. Nyberg, L.G.M. Pettersson, M.G. Samant, J. Stöhr, Surf. Sci. **407** (1998) 221

[14] *Structure and excitonic coupling in self-assembled monolayers of azobenzene-functionalized alkanethiols*
C. Gahl, R. Schmidt, D. Brete, E. McNellis, W. Freyer, R. Carley, K. Reuter, and **M. Weinelt**, J. Am. Chem. Soc. **132**, 1831 (2010)