

# List of Publications

## R. Steitz

July 2, 2018

- *Drastic Swelling of Lipid Oligobilayers by Polyelectrolytes - A Potential Molecular Model for the Internal Structure of Lubricating Films in Mammalian Joints*  
Felicitas Schwörer, Marcus Trapp, Xiao Xu, Olaf Soltwedel, Joachim Dzubiella, Roland Steitz, and Reiner Dahint  
Langmuir, 2018, 34 (4), pp 1287–1299  
DOI: 10.1021/acs.langmuir.7b03229
- *Magnetic state of Nb(1-7nm)/Cu30Ni70 (6nm) superlattices revealed by Polarized Neutron Reflectometry and SQUID magnetometry,*  
Yu. Khaydukov, R. Morari, D. Lenk, V. Zdravkov, D.G. Merkel, B.-K. Seidlhofer, C. Müller, H.-A. Krug von Nidda, T. Keller, R. Steitz, A. Sidorenko, S. Horn, R. Tidecks, and B. Keimer  
IOP Conf. Series: Journal of Physics: Conf. Series 862 (2017) 012013.  
DOI:10.1088/1742-6596/862/1/012013
- *Electrochemical lithiation of silicon electrodes: neutron reflectometry and secondary ion mass spectrometry investigations*  
Bujar Jerliu, Lars Dörrer, Erwin Hüger, Beatrix-Kamelia Seidlhofer, Roland Steitz, Günter Borchardt, Harald Schmidt  
Int J Mater Res, 108 (2017) 999-1007.  
DOI: 10.3139/146.111536
- *On the explanation of Paramagnetic Meissner effect in superconductor/ferromagnet heterostructures*  
B. Nagy, Yu. Khaydukov, D. Efremov, A. S. Vasenko, L. Mustafa, J.-H. Kim, T. Keller, K. Zhernenkov, A. Devishvili, R. Steitz, B. Keimer and L. Bottyán  
EPL, 116 (2016) 17005
- *BioRef II – neutron reflectometry with relaxed resolution for fast, kinetic measurements at HZB*  
M. Trapp, R. Steitz, M. Kreuzer, M. Strobl, M. Rose, R. Dahint  
Review of Scientific Instruments 87, 105112 (2016); DOI: 10.1063/1.4964294
- *Lithiation of a Crystalline Silicon Model Anode for Lithium-Ion Batteries*  
Beatrix-Kamelia Seidlhofer, Bujar Jerliu, Erwin Hüger, Robert Cubitt, Harald Schmidt, Roland Steitz, Matthias Ballauff

- 2016, ACS Nano, 10, 7458-7466.
- *Preparation of a new oligolamellar stratum corneum lipid model*  
Müller, Josefina; Schroeter, Annett; Steitz, Roland; Trapp, Marcus; Neubert, Reinhard  
Langmuir 2016, 32, 4673
  - *Volume profile of  $\alpha$ -chymotrypsin during adsorption and enzymatic reaction at a poly(acrylic acid) brush*  
Artem Levin, Mirko Erlkamp, Roland Steitz, Claus Czeslik  
Physical Chemistry Chemical Physics 2016, 18 (13), 9070-9078.
  - *Comparative adsorption of saturated and unsaturated fatty acids at the iron oxide/oil interface*  
Wood, Mary; Casford, Michael; Steitz, Roland; Zarbakhsh, Ali; Welbourn, Rebecca;  
Clarke, Stuart  
Langmuir 2016, 32, 534-540.
  - *Polymer-Induced Swelling of Solid-Supported Lipid Membranes*  
Martin Kreuzer, Marcus Trapp, Reiner Dahint, Roland Steitz,  
Membranes 2016, 6, 2; DOI:10.3390/membranes6010002
  - *Surface Active Lipid Linings under Shear Load – A Combined In-Situ Neutron Reflectivity and AFT-FTIR Study*  
Felicitas Schwörer, Marcus Trapp, Matthias Ballauff, Reiner Dahint and Roland Steitz  
Langmuir 2015, 31 (42), 11539-11548.
  - *Poly-acrylic acid brushes and adsorbed proteins*  
Matthias Reinhardt, Martin Kreuzer, Thomas Geue, Reiner Dahint, Matthias Ballauff and  
Roland Steitz,  
Zeitschrift Für Physikalische Chemie-International Journal of Research in Physical  
Chemistry & Chemical Physics 2015, 229, (7-8), 1119-1139.
  - *Substrate-stress-induced magnetic/nonmagnetic structural correlations in Fe/Si multilayers*  
Amitesh Paul, Anke Teichert, Thomas Krist, and Roland Steitz  
Journal of Applied Crystallography, 2015, 48, (4), 1023-1033.
  - *Bilayer undulation dynamics in unilamellar phospholipid vesicles: Effect of temperature, cholesterol and trehalose*  
Beate-Annette Brüning, Sylvain Prévost, Ralf Stehle, Roland Steitz, Peter Falus, Bela  
Farago, Thomas Hellweg  
Biochimica et Biophysica Acta (BBA) - Biomembranes 2014, 1838 (10), 2412-2419.

- *Design of a horizontal neutron reflectometer for the European Spallation Source*  
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- *Volume Expansion during Lithiation of Amorphous Silicon Thin Film Electrodes Studied by In-Operando Neutron Reflectometry*  
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- *Interdependence between training and magnetization reversal in granular Co-CoO exchange bias systems*  
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 Physical Review B 89 (2014), p. ARTN 144407  
 DOI: 10.1103/PhysRevB.89.144407
- *About different types of water in swollen polyelectrolyte multilayers*  
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- *Fine-Tuning the Structure of Stimuli-Responsive Polymer Films by Hydrostatic Pressure and Temperature*  
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- *Pressure-induced protein adsorption at aqueous-solid interfaces*  
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- *Neutron reflectometry studies on the lithiation of amorphous silicon electrodes in lithium-ion batteries*  
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 Physical Chemistry Chemical Physics 2013, 15 (20), 7777-7784.
- *Exchange bias induced by O ion implantation in ferromagnetic thin films*  
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- *Impact of a model synovial fluid on supported lipid membranes*  
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*Biochimica et Biophysica Acta* 1818 (2012) 2648–2659.
- *Selective Self Assembly of Glutamate Molecules on Polyelectrolyte Multilayers*  
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- *Probing the Room Temperature Deuterium Absorption Kinetics in Nanoscale Magnesium Based Hydrogen Storage Multi layers Using Neutron Reflectometry, X-ray Diffraction, and Atomic Force Microscopy,*  
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- *Influence of magnetocrystalline anisotropy on the magnetization reversal mechanism in exchange bias Co/CoO bilayers*  
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- *Nanoscale structural and mechanical effects of beta-amyloid (1-42) on polymer cushioned membranes: A combined study by neutron reflectometry and AFM Force Spectroscopy*  
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- *Soft Functional Interfaces*  
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- *Effect of ionic strength and type of ions on the structure of water swollen polyelectrolyte multilayers*  
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Markus Strobl, Roland Steitz, Martin Kreuzer, Michael Rose, Holger Herrlich, Ferenc Mezei, Michael Grunze, and Reiner Dahint,  
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- *Simultaneous polarized neutron reflectometry and anisotropic magnetoresistance measurements*  
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Kreuzer, Martin; Kaltofen, Thomas; Steitz, Roland; Zehnder, Beat H.; Dahint, Reiner,  
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- *Magnetic Proximity Effects in V/Fe Superconductor/Ferromagnet Single Bilayer Revealed by Waveguide-Enhanced Polarized Neutron Reflectometry*  
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- *BioRef - a time-of-flight neutron reflectometer combined with in-situ infrared spectroscopy at the Helmholtz Centre Berlin*  
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