

Abel, Bernd, Prof. Dr.



General Information

Name Prof. Dr. Bernd Abel

Address Wilhelm-Ostwald-Institute for Physical and Theoretical Chemistry, Leipzig University, Linnéstr. 2, 04103 Leipzig, Germany
Leibniz Institute of Surface Engineering (IOM), Permoserstr. 15, 04318 Leipzig, Germany

Phone +49 (0) 341 97-39771 (UL), +49 (0) 341 235-2373 (IOM)

Email bernd.abel@uni-leipzig.de, bernd.abel@iom-leipzig.de

Current Position University Professor, Physical Chemistry, W3 and Head of the Department "Sensoric Surfaces & Functional Interfaces", and Deputy Director of the IOM

Academic Education

1882 – 1990 Study of Chemistry in Göttingen, Diploma (1986)

Scientific Education

1999 Habilitation in Physical Chemistry, University of Göttingen, Prof. J. Troe

1990 Doctorate in Physical Chemistry, University of Göttingen, Prof. J. Troe

Professional Career

2012 – present Deputy Director of the Institute and Head of the Department "Sensoric Surfaces & Functional Interfaces" of the Leibniz Institute of Surface Modification (IOM) and Chair for „Chemical Engineering of Polymers“ (W3), Faculty of Chemistry and Mineralogy, Leipzig University

2018 Somorjai Visiting Miller Professor at the UC Berkeley, USA

2008 – 2012 Full Professor (Chair for Physical Chemistry and Reaction Dynamics, W3), Ostwald-Institute for Physical and Theoretical Chemistry, Leipzig University

2009 Visiting professor at the Chemistry Department of the Monash University in Melbourne, Australia

2007 Guest Professor at the Chemistry Department of the University of California at Irvine (UCI), USA

2002 – 2008 Associate Professor (apl), Georg-August University Göttingen

1990 – 1993 Associated research fellow in the George-Harrison Spectroscopy Laboratory at MIT, Fellow of the German Science Foundation (DFG)

Miscellaneous

2019	Visiting Professor at the Jet Propulsion Laboratory (JPL/NASA), Pasadena, USA
2018	Founder and co-owner of Advanced Microfluidic Systems GmbH
2018	Somorjai Visiting Miller Professorship Award of the UC Berkeley, USA
2010 – 2015	Director of the Ostwald Institute for Physical and Theoretical Chemistry at the Leipzig University
2014	European Aluminium Award for outstanding technical innovations (Special Prize, Novelis-IOM)
2012 – 2020	Elected member of the DFG Fachkollegium 303 "Physikalische und Theoretische Chemie"
2007	Göttingen Innovation Award
2001	Nernst-Haber-Bodenstein-Prize (German Bunsen Society for Physical Chemistry)
1999	Sir Harold Thompson Memorial Award (Elsevier Science)

List of 10 selected publications:

1. Staacke, R.; John, R.; Wunderlich, R.; Horsthemke, L.; Knolle, W.; Laube, C.; Glosekotter, P.; Burchard, B.; Abel, B.; Meijer, J., Isotropic Scalar Quantum Sensing of Magnetic Fields for Industrial Application. *Adv Quantum Technol* **2020**, 3 (8), 2000037.
2. Postberg, F.; Khawaja, N.; Abel, B.; Choblet, G.; Glein, C. R.; Gudipati, M. S.; Henderson, B. L.; Hsu, H. W.; Kempf, S.; Klenner, F.; Moragas-Klostermeyer, G.; Magee, B.; Nolle, L.; Perry, M.; Reviol, R.; Schmidt, J.; Srama, R.; Stolz, F.; Tobie, G.; Trieloff, M.; Waite, J. H., Macromolecular organic compounds from the depths of Enceladus. *Nature* **2018**, 558 (7711), 564-568.
3. Neff, A.; Niefind, F.; Abel, B.; Mannsfeld, S. C. B.; Siefermann, K. R., Imaging Nanoscale Morphology of Semiconducting Polymer Films with Photoemission Electron Microscopy. *Adv Mater* **2017**, 29 (29), 1701012-.
4. Sivis, M.; Duwe, M.; Abel, B.; Ropers, C., Extreme-ultraviolet light generation in plasmonic nanostructures. *Nat Phys* **2013**, 9 (5), 304-309.
5. Abel, B., Hydrated Interfacial Ions and Electrons. *Annu Rev Phys Chem* **2013**, 64, 533-552.
6. Sivis, M.; Duwe, M.; Abel, B.; Ropers, C., Nanostructure-enhanced atomic line emission. *Nature* **2012**, 485 (7397), E1-E2.
7. Faubel, M.; Siefermann, K. R.; Liu, Y.; Abel, B., Ultrafast Soft X-ray Photoelectron Spectroscopy at Liquid Water Microjets. *Accounts Chem Res* **2012**, 45 (1), 120-130.
8. Siefermann, K. R.; Liu, Y. X.; Lugovoy, E.; Link, O.; Faubel, M.; Buck, U.; Winter, B.; Abel, B., Binding energies, lifetimes and implications of bulk and interface solvated electrons in water. *Nat Chem* **2010**, 2 (4), 274-279.
9. Siefermann, K. R.; Abel, B., Ion Chemistry Mediated by Water Networks. *Science* **2010**, 327 (5963), 280-281.

10. Vohringer-Martinez, E.; Hansmann, B.; Hernandez, H.; Francisco, J. S.; Troe, J.; Abel, B., Water catalysis of a radical-molecule gas-phase reaction. *Science* **2007**, *315* (5811), 497-501.

(ca. 240 publications, 11 Patents)