

Prof. Dr. Stefan Lochbrunner

Curriculum Vitae

Professor in Experimental Physics

Area of research: Dynamics of Molecular Systems

Affiliation: Institute of Physics
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D.o.b.: 12 May 1967, Regensburg, Germany

Scientific Career and Academic Education

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| 2007 to date | Full professor (W3), Institute of Physics, Faculty of Mathematics and Natural Sciences, University of Rostock |
| 2004 - 2007 | Lecturer at the Chair for BioMolecular Optics, Department for Physics, Ludwig-Maximilians-Universität München |
| 2004 | Habilitation in Experimental Physics, Thesis "Exploring the multidimensional character of ultrafast molecular dynamics" |
| 2000 - 2004 | Assistant at the Chair for BioMolecular Optics, Department for Physics, Ludwig-Maximilians-Universität München |
| 1999 | Postdoc, Steacie Institute for Molecular Sciences, National Research Council of Canada, Ottawa, Canada |
| 1998 | Postdoc, Institute for Medical Optics, Ludwig-Maximilians Universität München |
| 1994 - 1997 | Dissertation (Dr. rer. nat.) at the Max-Planck-Institute of Quantum Optics, München, Thesis "Time resolved investigations of ultrafast relaxation processes in polyenes in solution" |
| 1987 - 1994 | Dipl. Phys., General Physics, Technische Universität München |

Awards and Scholarships

- Habilitation award 2004 of the "Münchener Universitätsgesellschaft"
- Postdoc scholarship of the German Science Foundation 1998 - 1999

Notable Services

- Managing director of the Institute of Physics, University of Rostock, 2010 - 2012
- Spokes man of the integrated graduate school of the collaborative research center SFB 652, since 2009
- Head of the division Molecular Physics of the German Physical Society, since 2015

Topics of Research

- Dynamics of excitons in organic materials and supramolecular structures
- Elementary steps in photocatalysis
- Ultrafast reactions, electronic dynamics in molecules, and charge transfer processes
- Condensed matter in intense laser fields
- Nonlinear vibrational spectroscopy
- Generation of ultrashort and shaped laser pulses

Ten Selected Publications

- C. Merschjann, S. Tschierlei, T. Tyborski, K. Kailasam, S. Orthmann, D. Hollmann, T. Schedel-Niedrig, A. Thomas, and S. Lochbrunner: *Complementing Graphenes: 1D Interplanar Charge Transport in Polymeric Graphitic Carbon Nitrides*, Adv. Mater. **27** (2015), 7993.
- F. Fennel and S. Lochbrunner: *Exciton-exciton annihilation in a disordered molecular system by direct and multistep Förster transfer*, Phys. Rev. B **92** (2015), 140301(R).
- S. Tschierlei, M. Karnahl, N. Rockstroh, H. Junge, M. Beller, and S. Lochbrunner: *Substitution-Controlled Excited State Processes in Heteroleptic Copper(I) Photosensitizers Used in Hydrogen Evolving Systems*", ChemPhysChem **15** (2014), 3709-3713.
- A. Neubauer, G. Grell, A. Friedrich, S. Bokarev, P. Schwarzbach, F. Gärtner, A.-E. Surkus, H. Junge, M. Beller, O. Kühn, and S. Lochbrunner: *Electron and Energy-Transfer Processes in a Photocatalytic System Based on an Ir(III)-Photosensitizer and an Iron Catalyst*, J. Phys. Chem. Lett. **5** (2014), 1355.
- M. Lütgens, F. Friedriszik, and S. Lochbrunner: *Direct observation of the cyclic dimer in liquid acetic acid by probing the C=O vibration with ultrafast coherent Raman spectroscopy*, Phys. Chem. Chem. Phys. **16** (2014), 18010.
- F. Fennel, S. Wolter, Z. Xie, P.-A. Plötz, O. Kühn, F. Würthner, and S. Lochbrunner: *Biphasic Self-Assembly Pathways and Size-Dependent Photophysical Properties of Perylene Bisimide Dye Aggregates*, J. Am. Chem. Soc. **135** (2013), 18722.
- S. Kohse, A. Neubauer, A. Pazidis, S. Lochbrunner, and U. Kragl: *Photoswitching of Enzyme Activity by Laser-Induced pH-Jump*, J. Am. Chem. Soc. **135** (2013), 9407-9411.
- H. Marciniak, X.-Q. Li, F. Würthner, and S. Lochbrunner: *One dimensional exciton diffusion in perylene bisimide aggregates*, J. Phys. Chem. A **115** (2011), 648.
- H. Marciniak, M. Fiebig, M. Huth, S. Schiefer, B. Nickel, F. Selmaier, and S. Lochbrunner, *Ultrafast Exciton Relaxation in Microcrystalline Pentacene Films*, Phys. Rev. Lett. **99** (2007), 176402
- S. Lochbrunner, A. J. Wurzer, and E. Riedle, *The microscopic mechanism of ultrafast excited state proton transfer: a 30 fs study of 2-(2'-hydroxyphenyl)benzothiazole*, J. Phys. Chem. A **107** (2003), 10580.