


Dr. Daniela Täuber

email: Daniela.Taeuber@uni-jena.de webpage: <https://BioPOLIM.de>

since Nov. 2024	Employment at Friedrich Schiller University Jena, Institute of Physical Chemistry, AG Heintzmann, Head Team BioPOLIM	
07-10/24	Unemployment; +08-10 Marginal employment at LIPHT	
Oct. 2022 Mar. 2024	Deputy professorship of Photonic Nanomaterials (80-25%), Friedrich Schiller University Jena.	
June 2020- June 2024	DFG project <i>Life2DPOLIM</i> with own position (E14) at Leibniz-IPHT (10/22-03/24 partial)	
Dec. 2019- May 2020	Postdoctoral Scholarship project "PolIRIm" at graduate academy and in the group of Rainer Heintzmann at the IPC, FSU Jena	
Since Dec. 2019	Senior Postdoc & Head of Team BioPOLIM in the "Heintzmann Lab" Department of Microscopy, Leibniz Institute of Photonic Technology & Institute of Physical Chemistry, Friedrich-Schiller University, Jena, Germany; Supervision of own research projects, Proj. applications & Lecturing	
10+11/19	Unemployment	
Oct. 2017- Sept. 2019	"Group leader" in Dept. of Quantum Detection at the Leibniz Institute of Photonic Technology, Jena, Germany; Work on instrument funding & external measurements	
Sept. 2014- Sept. 2017	Postdoc in the Single Molecule Spectroscopy group of Ivan Scheblykin, Lund University, Sweden (10/2014-04/2016 Personal Research Grant DFG-TA 1049/1) Moved with 2 teenagers (14 & 16 yrs)	
Nov. 2011- Aug. 2014	Postdoc in the groups "Optical Spectroscopy and Molecular Physics" and "Experimental Sensorics," Chemnitz University of Technology, Chemnitz, Germany	
Oct. 2011	Doctoral Thesis "Characterization of heterogeneous diffusion in confined soft matter" Advisor: Prof. Christian von Borczyskowski, Optical Spectroscopy and Molecular Physics, Chemnitz University of Technology; Final grade: "magna cum laude"	
2006-2011 2009-2010	Oct. 2006 re-entered professional life by starting a PhD project at TU Chemnitz DAAD/MinCyT DA0807 "Controlling Dynamic Properties of Ultra-thin Polymer Films via Photoactive Molecules," including 4 months research stay in Buenos Aires. (02+03/2010 with 2 children (9 & 11 yrs)	
1994-2006	Childcare and honorary work (children born 1994, 1996, 1998, 2000)	
1992-1994	Secondary School Assistant Teaching. Second State Exam	
1986-1991	Studies of Physics and Mathematics at FAU Erlangen-Nürnberg. First State Exam	
1967	born in Nürnberg, Germany, birth name März, four children	

Supervision

2 PhD students (ongoing, +1 PhD co-supervision), 6 Masters students (+1 ongoing), 2 Diploma students, 2 Bachelor students, & Students in internships, laboratory works and seminars since 2007







Third party funding

11/24-10/27	DFG project <i>HiResi4RPE</i> with M. Hammer (UKJ), R. Heintzmann (DT: 116 T€)
10/22-10/23	Project <i>pintXsum</i> with Christin David, profil line Light, FSU Jena (30 T€)
06/20-05/24	DFG project funding Ta 1049/2 <i>Live2DPOLIM</i> including own position (400 T€)
12/19-05/20	Postdoctoral Scholarship Project <i>POLIRIM</i> funded by FSU/TMWWDG (16 T€)
01/19-09/20	Main Contribution to EFRE <i>BiopolarSpec</i> Infrastructure Funding (420 T€)
05/2018	Laserlab Europe Access Grant to Lund university with Adrian Press, UKJ (10 T€)

10/14-03/16	DFG personal research grant Ta 1049/1 at Lund University (60 T€)
2009/10	DAAD/MinCyT project PK2D/08/11702 with C. von Borczyskowski, TU Chemnitz, and P.F. Aramendía and B. Araújo, Univ. Buenos Aires, Argentina (10 T€)
2011-2013	Contribution to DFG-FOR 887 BO 935/20-2 of C. von Borczyskowski (170 T€)

Peer-reviewed Scientific Publications

(Corresponding Author: , if different to last author)

- 1) Anindo, S. T.; **Täuber, D.**; David, C. Photothermal Expansion of Nanostructures in Photoinduced Force Microscopy. *J. Phys. Chem. C* **2025**, *129* (9), 4517–4529. <https://doi.org/10.1021/acs.jpcc.4c08305>.
- 2) Joseph, J.; Spantzel, L.; Ali, M.; Moonnukandathil Joseph, D.; Unger, S.; Reglinski, K.; Krafft, C.; Müller, A.-D.; Eggeling, C.; Heintzmann, R.; Börsch, M.; Press, A. T.; **Täuber, D.** Nanoscale Chemical Characterization of Secondary Protein Structure of F-Actin Using Mid-Infrared Photoinduced Force Microscopy (PiF-IR). *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* **2024**, *306*, 123612. <https://doi.org/10.1016/j.saa.2023.123612>
- 3) Luo, X.; Xue, Y.; Wu, J.; Cai, W.; **Täuber, D.**; Malovicho, I.; Sava, B.; Cen, C.; Lu, X.; Zhao, C.; Scheblykin, I. G.; Yu, J.; Mai, W.; Lui, F.; Wang, E.; Hou, L. (2022) Intrinsic Polarization-Sensitive Organic Photodetector with Self-Assembled All-Polymer Heterojunction. *Applied Physics Letters* *121*, (23), 233301. <https://aip.scitation.org/doi/10.1063/5.0128850>
- 4) **Täuber, D.** (2021). Achromatic optical retardation from perovskites. *Light Sci. Appl.* *10*, 225. [doi: 10.1038/s41377-021-00638-y](https://doi.org/10.1038/s41377-021-00638-y) (Research Highlight).
- 5) Martinac, P.; Press, A. T.; Medyukhina, A.; Benecke, K.-J.; Shi, J.; **Täuber, D.**; Hoepfener, S.; Cseresnyes, Z.; Scheblykin, I. G.; Gräler, M. H.; Rubio, I.; Figge, M. T.; Schubert, U. S.; Bauer, M. (2019) Inhibition of Phosphoinositide 3-Kinase- γ Improves Liver Function in Sepsis by Preventing RhoA-Mediated Cholestasis” in 9th International Congress “Sepsis and Multiorgan Dysfunction. *Infection*, *47* (1), S6–S7. <https://doi.org/10.1007/s15010-019-01341-2>
- 6) Camacho, R.; **Täuber, D.**; Scheblykin, I. G. (2019). Fluorescence Anisotropy Reloaded —Emerging Polarization Microscopy Methods for Assessing Chromophores' Organization and Excitation Energy Transfer in Single Molecules, Particles, Films, and Beyond. *Advanced Materials*, *31*, 1805671. <https://doi.org/10.1002/adma.201805671>
- 7) Camacho, R.; **Täuber, D.**; Hansen, C.; Shi, J.; Bousset, L.; Melki, R.; Li, J.-Y.; Scheblykin, I. G. (2018). 2D Polarization Imaging as a Low-Cost Fluorescence Method to Detect α -Synuclein Aggregation Ex Vivo in Models of Parkinson’s Disease. *Commun. Biol.* *1*, 157. <https://www.nature.com/articles/s42003-018-0156-x>
- 8) **Täuber, D.**, Tian, Y., Xia, Y., Inganäs, O., Scheblykin, I. G. (2017). Nanoscale Chain Alignment and Morphology in All-Polymer Blends Visualized Using 2D Polarization Fluorescence Imaging: Correlation to Power Conversion Efficiencies in Solar Cells. *Phys. Chem. C*, *121*(40), 21848–21856. <https://doi.org/10.1021/acs.jpcc.7b05244>
- 9) **Täuber, D.**, Cai, W., Inganäs, O., Scheblykin, I. G. (2017). Macroscopic Domains within an Oriented TQ1 Film Visualized Using 2D Polarization Imaging. *ACS Omega*, *2*(1), 32-40. <https://pubs.acs.org/doi/abs/10.1021/acsomega.6b00264>
- 10) **Täuber, D.**, Dobrovolsky, A., Camacho, R., Scheblykin, I. G. (2016). Exploring the Electronic Band Structure of Organometal Halide Perovskite via Photoluminescence Anisotropy of Individual Nanocrystals. *Nano Letters*, *16*(8), 5087–5094. <https://doi.org/10.1021/acs.nanolett.6b02012>
- 11) **Täuber, D.**, Radschreit, K., von Borczyskowski, C., Osipov, V. A., Schulz, M. (2016). Fluorescence correlation spectroscopy in thin films at reflecting substrates as a means to study nanoscale structure and dynamics at soft matter interfaces. *Phys. Rev. E*, *94*(1), 12804. <https://doi.org/10.1103/PhysRevE.94.012804>
- 12) **Täuber, D.**, von Borczyskowski, C. (2016) Identification of Heterogeneous Surface Properties via Fluorescent Probes in: *Self-Assembled Organic-Inorganic Nanostructures: Optics and Dynamics* (Ed: E. Zenkevich and C. von Borczyskowski:), Pan Stanford Publishers Singapore.
- 13) Araújo, B., Carattino, A., **Täuber, D.**, von Borczyskowski, C., Aramendía, P. F. (2014). Influence of the Glass Transition on Rotational Dynamics of Dyes in Thin Polymer Films: Single-Molecule and Ensemble Experiments. *Phys. Chem. A*, *118*(45), 10309–10317. <https://doi.org/10.1021/jp500272y>

- 14) ^(*) **Täuber, D.**, von Borczyskowski, C. (2013). Single molecule studies on dynamics in liquid crystals. *International Journal of Molecular Sciences*, 14(10). <https://doi.org/10.3390/ijms141019506>
- 15) Gerlach, F., **Täuber, D.**, von Borczyskowski, C. (2013) Correlated blinking via time dependent energy transfer in single CdSe quantum dot-dye nanoassemblies, *Chem. Phys. Lett.*, 572, 90-95. <https://www.sciencedirect.com/science/article/pii/S0009261413005010>
- 16) ^(*) **Täuber, D.**, Trenkmann, I., von Borczyskowski, C. (2013). Influence of van der Waals interactions on morphology and dynamics in ultrathin liquid films at silicon oxide interfaces. *Langmuir*, 29(11), 3583–3593. <https://doi.org/10.1021/la3043796>
- 17) Araoz, B.; **Täuber, D.**; von Borczyskowski, C.; Aramendía, P. F. (2012). Cage Effect in Poly(Alkyl Methacrylate) Thin Films Studied by Nile Red Single Molecule Fluorescence Spectroscopy. *J. Phys. Chem. C*, 116 (13), 7573–7580. <https://pubs.acs.org/doi/abs/10.1021/jp3004097>
- 18) **Täuber, D.** (2011) “Characterization of heterogeneous diffusion in confined soft matter”. Dissertation, TU Chemnitz. <http://nbn-resolving.de/urn:nbn:de:bsz:ch1-qucosa-77658>.
- 19) Krause S., Aramendía P.F., **Täuber, D.**, von Borczyskowski C. (2011) Freezing single molecule dynamics on interfaces and in polymers. *Phys. Chem. Chem. Phys.* 13, 1754-1761. <https://pubs.rsc.org/en/Content/ArticleLanding/2011/CP/c0cp01713b#!divAbstract>
- 20) Schulz, B., **Täuber, D.**, Schuster, J., Baumgärtel, T., von Borczyskowski, C. (2011). Influence of mesoscopic structures on single molecule dynamics in thin smectic liquid crystal films. *Soft Matter*, 7(16), 7431–7440. <https://doi.org/10.1039/c1sm05434a>
- 21) Schulz, B., **Täuber, D.**, Friedriszik, F., Graaf, H., Schuster, J., von Borczyskowski, C. (2010). Optical detection of heterogeneous single molecule diffusion in thin liquid crystal films. *Phys. Chem. Chem. Phys.*, 12(37), 11555–11564. <https://doi.org/10.1039/c004042h>
- 22) Thim-Mabrey, C.; Brack-Bernsen, L.; Täuber, D. (eds): Naturwissenschaftliche Aussagen und sozial verantwortbare Entscheidungen. II. Regensburger Symposium 2009. Norderstedt: Books on Demand 2010, ISBN-13: 9783842346550 (E-Book: ISBN-13: 9783732211449).

Further engagement in the Academic Community

- Invited presentation at META2025, *Symposium II: New trends in nanophotonics and advanced materials*, Malaga, Spain, in July 2025.
- Invited Presentation at the European User Meeting of Molecular Vista, Mainz, Oct. 2024.
- Science SLAM set-up Jena: hochauflösender Infrarotspektroskopiebildung für die Anwendung in den Lebenswissenschaften: HiResiMIR4Life, Oct. 2023, Jena.
- Invited Seminar Presentation at the Institute for Biomedical Optics, Uni Lübeck, July 2023.
- Elected Deputy Equals Opportunity Officer at Leibniz-IPHT (04/23-06/24)
- Invited Presentation at Laserlab Europe User Meeting 2018, Nov. 2018, Paris.
- Invited Presentations at European Commission TAIEX Regional Workshop on Biomedical Engineering - Nanotechnology. Mostar, Bosnia and Herzegovina, July 2018.
- Representative of Sweden in European Union Cost Action MP1302 Nanospectroscopy (2014-17)
- Co-initiator and board member of the trans-disciplinary „Regensburger Symposien“ (2007-17)
- Initiative for & co-organization of a Focussed Session: *Van der Waals at soft matter interfaces: structure and dynamics* at the annual spring conference of the German Physical Society (DPG) in Regensburg together with Karin Jacobs, Saarland University (2013)

Certificates and Reviewing Activities:

- Certificate "Führung in der Wissenschaft" Graduierte Academy, FSU Jena, 2021
- Certificate "Lehrqualifikation Basic" Servicestelle LehreLernen, FSU Jena, 2020
- (several more certificates of individual classes in communication & leadership)

Reviewing Activities for:

Advanced Optical Materials // Journal of Physical Chemistry Letters // Nature Photonics // RSC Advances // ACS Materials Letters // Nano Letters // ACS Nano // Journal of Luminescence // Journal of Physical Chemistry // Langmuir // Physical Chemistry Chemical Physics