

Schiller

Personal Data

Title	Prof. Dr.
First name	Stefan
Name	Schiller
Current position	Professor for Pharmaceutical Technology
Current institution, country	Goethe University Frankfurt, Institute for Pharmaceutical Technology, Germany
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Qualifications and Career

Stages	Periods and Details
Degree programme	Chemistry, Diploma & Ph.D. 1994 – 2003, Justus-Liebig-Universität, Gießen, Germany, University of Massachusetts, Amherst, MA, USA, Johannes Gutenberg-Universität Mainz & MPI für Polymerforschung, Mainz, Germany
Doctorate	Title of thesis: <i>"Biomimese biologischer Membranen: Konzeptionierung, Synthese und biophysikalische Charakterisierung einer Hierarchie festkörpergestützter Mimikry biologischer Membranen"</i> , Prof. Dr. Wolfgang Knoll, MPI für Polymerforschung & Prof. Dr. Horst Kunz Johannes Gutenberg-Universität Mainz, Germany.
Stages of academic career	<p>Since 09/2022 Professor of Pharmaceutical Technology, Institute for Pharmaceutical Technology, Goethe University Frankfurt, Germany</p> <p>08/2008 – 008/2022, Junior Research fellow of the Freiburg Institute for Advanced Studies (FRIAS), BMBF-Group Leader (BMBF-Forschungspreis <i>Nächste Generation biotechnologischer Verfahren</i> – „Universell modularer Produktionsorganismus“), group leader (non-tenured) of the Cluster of Excellence LivMatS, University of Freiburg, Germany</p> <p>03/2003 – 7/2008, Post-doctoral research fellow, Supervisor: Prof. Dr. Peter G. Schultz, The Scripps Research Institute, La Jolla, CA, USA</p> <p>09/1998 – 03/2003, Doctoral student, Supervisor: Prof. Dr. Horst Kunz, Johannes Gutenberg-Universität Mainz & Prof. Dr. Wolfgang Knoll, MPI für Polymerforschung Mainz, Germany</p>

02/2010 – 05/2010, Visiting student, groups of Prof. Dr. Craig Hawker IBM Almaden, (USA) and Prof. Dr. Curtis Frank, Stanford University (USA)

Teaching – responsibilities at GU

Grundlagen der Arzneiformenlehre (Vorlesung, 2. Semester)

Arzneiformenlehre (Seminar mit Praktikum, 2. Semester)

Akademischer Studiengangsleiter des Masterstudiengangs
Arzneimittelforschung

10 selected publications

1. Huber, M. C., Schreiber, A., Stühn, L. G., Schiller, S. M.* “Programming Protein Phase-Separation Employing a Modular Library of Intrinsically Disordered Precision Block Copolymer-Like Proteins Creating Dynamic Cytoplasmatic Compartmentalization” **Biomaterials**, **2023** Aug; 299:122165.
2. Lüdeke, S.*, Lohner, P., Stühn, L. G., Betschart, M. U., Huber, M. C., Schreiber, A., Schiller, S. M.* „Dynamic Structural Changes and Thermodynamics in Protein Phase Separation Processes of an Intrinsically Disordered-Ordered Protein Model“ **Angew. Chemie Int. Ed.** **2022**, Vol.61 Issue 3, e202112738.
3. Huber, M. C., Jonas, U., Schiller, S. M.* “An Autonomous Chemically Fueled Artificial Protein Muscle” **Adv. Intell. Syst.** **2022**, 2100189, 2022-01-13, DOI: 10.1002/aisy.202100189.
4. Schreiber, A., Stühn, L. G., Geissinger, S. E., Huber, M. C., Schiller, S. M., “Directed Assembly of Elastin-like Proteins into defined Supramolecular Structures and Cargo Encapsulation In Vitro“, Journal of Visualized Experiments (J. Vis. Exp.) JOVE **2020**, (158), e60935.
5. Geissinger, S. E., Schreiber, A., Huber, M. C., Schiller, S. M., “Adjustable Bioorthogonal Conjugation Platform for Protein Studies in Live Cells based on Artificial Compartments“, ACS Synthetic Biology, 2020 Apr 17; 9(4):827-842.
6. Schreiber, A., Stühn, L. G., Huber, M. C., Geissinger, S. E., Rao, A., Schiller, S. M.* „Self-Assembly Toolbox of Tailored Supramolecular Architectures Based on an Amphiphilic Protein Library“ **Small**, **2019** Jul;15(30):e1900163.
7. Schreiber, A., Huber, M. C., Schiller, S. M.* “Prebiotic protocell model based on dynamic protein membranes accommodating anabolic reactions” **Langmuir**, **2019**, 35, 9593-9610.
8. Huber, M. C., Schreiber, A., von Olshausen, P., Varga, B. R., Kretz, O., Joch, B., Barnert, S., Schubert, R., Eimer, S., Kele, P., Schiller, S. M.* “Designer amphiphilic proteins as building blocks for the intracellular formation of organelle-like compartments” **Nature Materials** **2015**, 14(1), 125-132.
9. Schreiber, A., Huber, M. C., Cölfen, H., Schiller, S. M.* “Protein Adaptor with Genetically Encoded Interaction-Sites Guiding the Hierarchical Assembly of Plasmonically Active

Nanoarchitectures", DOI: 10.1038/ncomms7705 **NatComm.**, 2015, 6, article number 6705.

10. Huber, M., Schreiber, A., Benz, K., Schiller, S. M.* *"Introducing a combinatorial DNA-toolbox platform constituting defined protein-based biohybrid materials"* **Biomaterials** 2014, 35, 31, 8767-79.

Academic Distinctions

- 1) BMBF Forschungspreis "Biotechnologie 2020+"
- 2) BMBF Ideenwettbewerb Biotechnologie 2020+ Initiative: Neue Produkte für die Bioökonomie
- 3) Förderung durch den Innovationsfonds der Albert-Ludwigs Universität Freiburg ("Chemische System-Biologie des Lipid-Codes")
- 4) RiSC-Programm (Research Seed Capital) des Ministerium für Wissenschaft, Forschung und Kunst Baden-Württemberg (MWK) fördert riskante Projekte (Blue Sky Research) von herausragenden Nachwuchswissenschaftlerinnen und Nachwuchswissenschaftlern ("Chemische System-Biologie des Lipid-Codes")
- 5) Ideenwettbewerb Biotechnologie & Medizintechnik MWK BW
- 6) Fellowship of the German Academic Exchange Service (DAAD) 09/1999 - 12/1999
- 7) Fellowship of the German Academic Exchange Service (DAAD) 08/1995 - 03/1996