

TOBIAS SCHNITZER

GROUP LEADER – TARGET-SELECTIVE CATALYSIS

I enjoy sharing my excitement of science with others and developing target-selective catalysts to shape a more sustainable future.



Tobias Schnitzer
06. April 1990 | German

Institute for Organic Chemistry
Faculty for Chemistry and Pharmacy
Albrecht-Ludwigs University Freiburg

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EDUCATION

2019
Doctor of Science (with distinction)
ETH Zürich, Switzerland

2014
Master of Science (1.0; excellent)
Heidelberg University, Germany

2012
Bachelor of Science (1.5; good)
Heidelberg University, Germany

2009
Abitur (1.0; excellent)
Ludwig-Georgs-Gymnasium
Darmstadt, Germany

KEY VALUES

Supervised Students

18
Bachelor students (2)
Master students (12)
PhD students (4)

Conference Contributions

19
Poster presentations (10)
Oral presentations (9)

Peer-reviewed Publications

25
PreDoc (2)
PhD (15)
PostDoc (8)

ACADEMIC EXPERIENCE

Since 2023 **Research Group Leader on Target-Selective Catalysis**
University of Freiburg, Germany

2020–2022 **Postdoctoral Researcher & Lecturer for Organic Chemistry**
TU Eindhoven, The Netherlands with Prof. E. W. Meijer

Construction of Complex Molecular Systems with Emerging Complexity via Combined Covalent and Non-Covalent Synthesis

- Exploring catalysis on, with, and in the presence of supramolecular assemblies
- Kinetic investigation of non-classical reaction behavior of multi-component systems
- Systematic experimental and computational system analysis

2015–2019 **PhD Researcher**
ETH Zürich, Switzerland with Prof. H. Wennemers

Proline-Rich Peptides – From Catalysts to Metal Organic Frameworks

- Development of catalytically active peptides for C–C bond formations
- Mechanistic investigations on organocatalyzed reactions
- Peptides as scaffolds in collagen models and metal organic frameworks

2014 **Master Thesis Student**
University of Heidelberg, Germany with Prof. A. S. K. Hashmi

Gold-Catalyzed Synthesis of Benzodipyrroles with Applications in Organic Electronics

- Development of a gold-catalyzed cyclization strategy to access unprecedented benzodipyrrole fluorophores
- Photophysical and -chemical characterization of benzodipyrroles

2013 **Research Student**
Stockholm University, Sweden with Prof. J.-E. Bäckvall

Towards the Stereoselective Total Synthesis of Formoterol Using Chemoenzymatic Dynamic Kinetic Resolution

- Optimization of enzyme-catalyzed amidation reactions with engineered lipases
- Exploring multiple routes for the synthesis of a formoterol precursor

2012 **Bachelor Thesis Student**
University of Heidelberg, Germany with Prof. G. Helmchen

Enantioselective Total Synthesis of (–)-Indolizidine 209D

- Exploring multiple synthetic routes for the synthesis of an indolizidine alkaloid with a stereoselective iridium-catalyzed allylic substitution as key step

TEACHING

Course Lead

Lecture on Organocatalysis, Univ. Freiburg
Practical course Organic Chemistry, TU Eindhoven

Practical Course Assistant Organic Chemistry, TU Eindhoven
Basic Organic Chemistry, ETH Zürich

Lecture Assistant

Macromolecular and Organic Chemistry, TU Eindhoven
Chemical Biology – Peptides, ETH Zürich
Basic Organic Chemistry, ETH Zürich
Inorganic Chemistry for Biotechnologists, Univ. Heidelberg

KEY PUBLICATIONS

How Subtle Changes Can Make a Difference: Reproducibility in Complex Supramolecular Systems
T. Schnitzer,[‡] M. D. Preuss,[‡] J. van Basten, S. M. C. Schoenmakers, A. J. H. Spiering, G. Vantomme, E. W. Meijer*
Angew. Chem. Int Ed. **2022**, *61*, e202206738.

Peptide–Metal Frameworks with Metal Strings Guided by Dispersion Interactions
T. Schnitzer, E. Paernuk, N. Trapp, R. Gershoni-Poranne, H. Wennemers*
J. Am. Chem. Soc. **2021**, *143*, 644–648.

Organocatalysed Conjugate Addition Reactions of Aldehydes to Nitroolefins with *Anti* Selectivity
T. Schnitzer, A. Budinská, H. Wennemers*
Nat. Catal. **2020**, *3*, 143–147.

Influence of the *Trans/Cis* Conformer Ratio on the Stereoselectivity of Peptidic Catalysts
T. Schnitzer, H. Wennemers*
J. Am. Chem. Soc. **2017**, *139*, 15356–15362.

AWARDS & SCHOLARSHIPS

- 2023** Liebig Group Leader Scholarship of the Fonds der Chemischen Industrie
- 2020** Young Talent Award 2020 of the Max-Bergmann-Kreis for an excellent PhD thesis
Finalist of the Reaxys PhD Prize 2020
ETH Medal of the ETH Zürich for excellent PhD thesis
- 2019–2021** Postdoc.Mobility scholarship of the Swiss National Science Foundation
- 2018** Travel Award of the American Peptide Society
Award at the Syngenta workshop for talented PhD students
SCNAT Chemistry Travel Award
- 2015–2017** Kekulé PhD scholarship of the Fonds der Chemischen Industrie
- 2015** Price of the Dr.-Sophie-von-Berntsen-Fond for excellent achievements in the chemistry master studies
- 2013** Erasmus+ Placement travel scholarship (Stay at Stockholm University)
- 2012–2014** Deutschlandstipendium awarded by Clariant AG
- 2009** Price of the German Chemical Society (GDCh), for excellent achievements in chemistry at high school

PROFESSIONAL SKILLS

- Manuscript Reviewing** Angewandte Chemie (Wiley-VCH)
Journal of the American Chemical Society (ACS)
The Journal of Organic Chemistry (ACS)
Organic Letters (ACS)
ACS Applied Materials & Interfaces (ACS)
Helvetica Chimica Acta (Wiley-VCH)
- Completed Soft Skill Courses** Supervision of PhD students (1 day)
Grant writing and presenting for funding committees (2 days)
CV optimization & project valorization (1/2 day)
- Laboratory Safety** Safety Officer at the laboratories of Prof. H. Wennemers at ETH Zürich (4 years)
- Languages** German (native), English (fluent), French (intermediate)
Durch (basic), Swedisch (basic), Latin (latinum)