Dr. Ing. Tomáš Neveselý

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PROFESSIONAL EXPERIENCE

Humboldt-Universität zu Berlin

Postdoctoral researcher in the group of Prof. Stefan Hecht
07/2023 – 07/2026

- Development of novel spiropyran-based photoswitching systems for Xolography and general use
- Supervising and mentoring undergraduate students
- Preparing and contributing to grant applications

Universität Münster

Postdoctoral researcher in the group of Prof. Ryan Gilmour
04/2022 – 03/2023

- Collaboration with DSM Vitamin
- Complex olefin manipulation applicable in vitamin synthesis

PhD student in the group of Prof. Ryan Gilmour
10/2018 – 03/2022

- Design of new photochemical reactions
- Elucidation of reaction mechanism with the help of mechanistic probes and spectroscopic methods
- Supervision of Master students during project modules and Bachelor thesis

University of Chemistry and Technology in Prague

Undergraduate student in the group of Prof. Radek Cibulka
09/2011 – 08/2018

- Development of a new system for photochemical oxidation of sulfides to sulfoxides
- Optimization of reaction conditions and mechanistic studies
- Development of novel catalytical systems involving flavins

Universität Regensburg

Research assistant in the group of Prof. Burkhard König
09/2017 – 02/2018

- Design of novel flavin based photocatalysts with improved reductive properties
- Spectroscopic and computational characterization of the new derivatives

Profile summary

Photochemist and researcher integrating computational and synthetic chemistry to design, understand, and optimize functional chemical systems. Proven track record of high-impact publications, with strong collaboration, scientific communication skills across interdisciplinary teams and above all the ability to adapt to new challenges.

Skills

Organic synthesis:
Schlenk techniques, photoredox, scale –up, complex purification
Molecular analysis:
NMR, LC, GC, MS, IR
Optical spectroscopy:
UV-Vis, fluorescence, quantum yield
Computational chemistry:
ORCA, Gaussian; DFT, TDDFT, post HF
Statistics and data processing:
Origin, LabPlot
Scientific communication:
Presenting and writing results
Teaching experience:
Lectures, seminars, laboratory projects, theses supervision

Additional skills and qualification

Language proficiency:
English (C2), German (B1), Spanish (A2)
Technical skills:
CAD design, FDM and DLP printing, soldering
Certificates:
Good Scientific practice
Good Manufacturing practice

Driver's license class B

EDUCATION

Universität Münster

Ph.D. in Organic Chemistry

- Doctoral Thesis: *Generating Molecular Complexity via Photocatalysis: From Mechanism to Design and Application*
- Absolvent of Cells in Motion program of the International Max Planck Research School run by the University of Münster and the Max Planck Institute for Molecular Biomedicine

University of Chemistry and Technology in Prague

M.Sc. in Organic Chemistry

- Master's Thesis: *Flavin derivatives for photocatalytic reductions*
- Erasmus+ study exchange, Universität Regensburg, Germany
- Coursework included: Organic Synthesis, Retrosynthesis, Coordination Chemistry, Physical Organic Chemistry, Quantum Organic Chemistry, Computations and Visualization of Molecules, Organic Technology, Methods of Substances Structure Determination

B.Sc. in Chemistry (Eurobachelor)

- Bachelor's Thesis: *Photooxidation of sulfides mediated by flavins and visible light*
- Coursework included: Organic, Inorganic, Analytical and Physical Chemistry, Biochemistry, Bioorganic Chemistry of Natural Compounds, Structural Analysis of Drugs, Toxicology, Computational Chemistry, Chemical Engineering

KEY PUBLICATIONS

1) **Neveselý**, T.; Molloy, J. J.; McLaughlin, C.; Brüss, L.; Daniliuc, C. G.; Gilmour, R. Leveraging the N→π* Interaction in Alkene Isomerization by Selective Energy Transfer Catalysis. *Angew. Chem. Int. Ed.* **2022**, 61, e202113600.
2) **Neveselý**, T.; Wienhold, M.; Molloy, J. J.; Gilmour, R. Advances in the E → Z Isomerization of Alkenes Using Small Molecule Photocatalysts. *Chem. Rev.* **2022**, 122, 2, 2650–2694.
3) **Neveselý**, T.; Svobodová, E.; Chudoba, J.; Sikorski, M.; Cibulka, R. Efficient Metal-Free Aerobic Photooxidation of Sulfides to Sulfoxides Mediated by a Vitamin B2 Derivative and Visible Light. *Adv. Synth. Catal.* **2016**, 358 (10), 1654–1663.

In total 13 publication with 1150 citations and HI=12 (GoogleScholar 04.05.2026).

REFERENCES

Professor Stefan Hecht, HU Berlin SH@hu-berlin.de

Professor Ryan Gilmour, Universität Münster Ryan.Gilmour@uni-muenster.de

Professor Radek Cibulka, UCT Prague Radek.Cibulka@vscht.cz