

DENNIS SVATUNEK

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EDUCATION

PhD, TU Wien, passed with distinction	02.2013 – 12.2016
Thesis: Rapid and Controlled Bioorthogonal Ligations and Their Application in Molecular Imaging	
Supervisor: Prof. Günther Allmaier	
MSc in Technical Chemistry – Synthesis, TU Wien, passed with distinction	08.2011 – 01.2013
BSc in Technical Chemistry, TU Wien	10.2007 – 08.2011

POSITIONS

TU Wien, Project Assistant, Independent Researcher, PI	since 11.2020
University of California Los Angeles (UCLA), Postdoctoral Research	10.2018 – 10.2020
Advisor: Prof. Kendall N. Houk	
VU Amsterdam, Postdoctoral Research	03.2018 – 06.2018
Advisor: Prof. F. Matthias Bickelhaupt	
TU Wien, Project Assistant, Postdoctoral Research	01.2017 – 09.2018
University of Delaware, Visiting Researcher	08.2014 – 01.2015
Advisor: Prof. Joseph M. Fox	

RESEARCH INTERESTS

My focus is on the development and application of bioorthogonal reactions. This *in vivo* chemistry can be employed to significantly improve diagnostic and therapeutic medical methods. I am interested in the application in pretargeted imaging and targeted drug release. Using experimental and computational techniques, I investigate the mechanisms of these exceptional reactions to unravel the underlying factors that influence reactivity, stability, and selectivity. Using this knowledge, I optimize known and develop new reactions. Previous work includes the development of radiolabeled bioorthogonal reagents, investigation of reactivity in such reactions, and improvement to known reactants.

RESEARCH ACHIEVEMENTS

As of May 2022, I have published **36 publications in peer reviewed journals**. My papers have been **cited 664 times** corresponding to an **average of 19 per item**. Two papers have been among the **top 10% downloaded papers** in their respective journals within the first year of being published (ChemistryOpen and European Journal of Organic Chemistry). I have received **11 awards and scholarships, three fellowships and grants** that allowed for research stays at universities in other countries, and **two additional research grants**. I have given **7 talks** at international conferences and was an author on **24 research posters** presented at international conferences. I worked in and collaborated with 25 different research groups of which 8 collaborations are still ongoing.

AWARDS, SCHOLARSHIPS, & FELLOWSHIPS

- Award:** Theodor Körner Prize, Theodor Körner Stiftung Austria (2021)
- Award:** UCLA Department of Chemistry and Biochemistry Postdoctoral Research Award (2020)
- Award:** Austrian Marshall Plan Foundation Poster Award (3rd place) for the poster “Rational Design of Bioorthogonal Reactants using Energy Decomposition Methods” (D. Svatunek), awarded at the Austrian Research and Innovation Talks - ARIT 2020
- Fellowship:** “ASCINA Mentorship Fellow” (2019), fellowship by the network of Austrian Scientists & Scholars in North America
- Award:** Young Scientists Best Paper Award (2016) by Springer/Nature and Monatshefte für Chemie/Chemical Monthly for the publication “Efficient low-cost preparation of *trans*-cyclooctenes using a simplified flow setup for photoisomerization” (D. Svatunek *et al.*)
- Award:** Diploma Thesis Award (2013) of the Austrian Chemical Society for my diploma thesis “Silylpropargylethers as protecting groups in carbohydrate chemistry”
- Scholarship:** “Stiftungsstipendium der TU Wien” (2013), scholarship of the foundation of the Vienna University of Technology for excellence in studies
- Scholarship:** “Förderstipendium” (2012), supporting scholarship of the Federal Ministry of Science and Research, Austria
- Scholarship:** “Leistungsstipendium” (2012), merit scholarship for excellence in studies of the Federal Ministry of Science and Research, Austria
- Scholarship:** “Leistungsstipendium” (2010), merit scholarship for excellence in studies of the Federal Ministry of Science and Research, Austria
- Scholarship:** “Stiftungsstipendium der TU Wien” (2010), scholarship of the foundation of the Vienna University of Technology for excellence in studies

PEER REVIEWED PUBLICATIONS

1. Z. Wu, K. N. Houk, D. Boger, D. Svatunek
Mechanistic Insights into the Reaction of Amidines with 1,2,3-Triazines and 1,2,3,5-Tetrazines
Journal of the American Chemical Society, **2022**, accepted
DOI: [10.1021/jacs.2c03726](https://doi.org/10.1021/jacs.2c03726)
2. D. Svatunek, M. Wilkovitsch, L. Hartmann, K. N. Houk, H. Mikula
Uncovering the Key Role of Distortion in Bioorthogonal Tetrazine Tools That Defy the Reactivity/Stability Trade-Off
Journal of the American Chemical Society, **2022**, 144, 8171-8177
DOI: [10.1021/jacs.2c01056](https://doi.org/10.1021/jacs.2c01056)
3. U. M. Battisti, R. García-Vázquez, D. Svatunek, B. Herrmann, A. Löffler, H. Mikula, M. M. Herth
Synergistic Experimental and Computational Investigation of the Bioorthogonal Reactivity of Substituted Aryltetrazines
Bioconjugate Chemistry, **2022**, 33, 608-624
DOI: [10.1021/acs.bioconjchem.2c00042](https://doi.org/10.1021/acs.bioconjchem.2c00042)

4. A. Turlik, K.N. Houk, D. Svatunek
Origin of Increased Reactivity in Rhenium-Mediated Cycloadditions of Tetrazines
2021
The Journal of Organic Chemistry, **2021**, 86, 13129-13133
DOI: [10.1021/acs.joc.1c01564](https://doi.org/10.1021/acs.joc.1c01564)
5. R. García-Vázquez, U.M. Battisti, J.T. Jørgensen, V. Shalgunov, L. Hvass, D. Stares, I. Petersem, F. Crestey, A. Löffler, D. Svatunek, J. Kristensen, H. Mikula, A. Kjaer, M. Herth
Direct Aromatic ¹⁸F-Labeling of Highly Reactive Tetrazines for Pretargeted Bioorthogonal PET Imaging
Chemical Science, **2021**, 12, 11668-11675
DOI: [10.1039/D1SC02789A](https://doi.org/10.1039/D1SC02789A)
6. M. Ramirez, D. Svatunek, F. Liu, N.K. Garg, K.N. Houk
Origins of Endo Selectivity in Diels–Alder Reactions of Cyclic Allene Dienophiles
Angewandte Chemie International Edition, **2021**, 60, 14989-14997
DOI: [10.1002/anie.202101809](https://doi.org/10.1002/anie.202101809)
7. L. De Pascalis, M. Yau, D. Svatunek, Z. Tan, S. Tekkam, K.N. Houk, M.G. Finn
The Influence of Substitution on Thiol-Induced Oxanorbornadiene Fragmentation
Organic Letters, **2021**, 23, 3751-3754
DOI: [10.1021/acs.orglett.1c01164](https://doi.org/10.1021/acs.orglett.1c01164)
8. P. Chen, P. Ma, X. He, D. Svatunek, F. Liu, K.N. Houk
Computational Exploration of Ambiphilic Reactivity of Azides and Sustmann’s Paradigmatic Parabola
The Journal of Organic Chemistry, **2021**, 86, 5792-5804
DOI: [10.1021/acs.joc.1c00239](https://doi.org/10.1021/acs.joc.1c00239)
9. J. Stéen, J.T. Jørgensen, C. Denk, U.M. Battisti, K. Nørregaard, P. Edem, K. Bratteby, V. Shalgunov, M. Wilkovitsch, D. Svatunek, C.B.M. Poulie, L. Hvass L, S Marina, T. Wanek, R. Rossin, M. Robillard, J.L. Kristensen, H. Mikula, A. Kjaer, M. Herth
Lipophilicity and Click Reactivity Determine the Performance of Bioorthogonal Tetrazine Tools in Pretargeted in Vivo Chemistry
ACS Pharmacology & Translational Science, **2021**, 4, 824-833
DOI: [10.1021/acsptsci.1c00007](https://doi.org/10.1021/acsptsci.1c00007)
10. D. Svatunek, T. Hansen, K.N. Houk, T.A. Hamlin
How the Lewis Base F⁻ Catalyzes the 1,3-Dipolar Cycloaddition between Carbon Dioxide and Nitrilimines
The Journal of Organic Chemistry, **2021**, 86, 4320–4325
DOI: [10.1021/acs.joc.0c02963](https://doi.org/10.1021/acs.joc.0c02963)
11. I. Saha, E.K. Dang, D. Svatunek, K.N. Houk, P.G. Harran
Computational generation of an annotated giga-library of synthesizable, composite peptidic macrocycles
Proceedings of the National Academy of Sciences of the United States of America, **2020**, 24679-24690
DOI: [10.1073/pnas.2007304117](https://doi.org/10.1073/pnas.2007304117)
12. K. Johann, D. Svatunek, C. Seidl, S. Rizzelli, T. Bauer, L. Braun, K. Koynov, H. Mikula, M. Barz
Tetrazine- and *trans*-Cyclooctene-functionalised Polypept(o)ides for Fast Bioorthogonal Tetrazine Ligation
Polymer Chemistry, **2020**, 4396-4407
DOI: [10.1039/D0PY00375A](https://doi.org/10.1039/D0PY00375A)

13. V.B. Delchev, E. Horkel, D. Svatunek
Excited-state photocycloaddition of 6-azauracil to oxazetidine cyclodimer: A mechanism elucidation in water surroundings
Journal of Molecular Structure, **2020**, 1205, 127571
DOI: [10.1016/j.molstruc.2019.127571](https://doi.org/10.1016/j.molstruc.2019.127571)
14. D. Svatunek, R.P. Pemberton, J.L. Mackay, P. Liu, K.N. Houk
Concerted [4+2] and Stepwise (2+2) Cycloadditions of Tetrafluoroethylene with Butadiene: DFT and DLPNO-UCCSD(T) Explorations
The Journal of Organic Chemistry, **2020**, 85, 3858-3864
DOI: [10.1021/acs.joc.0c00222](https://doi.org/10.1021/acs.joc.0c00222)
15. D. Svatunek, G. Eilenberger, C. Denk, D. Lumpi, C. Hametner, G. Allmaier, H. Mikula
Live Monitoring of Strain-Promoted Azide Alkyne Cycloadditions in Complex Reaction Environments by Inline ATR-IR Spectroscopy
Chemistry – A European Journal, **2020**, 26, 9851-9854
DOI: [10.1002/chem.201905478](https://doi.org/10.1002/chem.201905478)
16. J. Tu, D. Svatunek, S. Parvez, H.J. Eckvahl, M. Xu, R. Peterson, K.N. Houk, R.M. Franzini
Isonitrile-responsive and Bioorthogonally Removable Tetrazine Protecting Groups
Chemical Science, **2020**, 11, 169-179
DOI: [10.1039/C9SC04649F](https://doi.org/10.1039/C9SC04649F)
17. E.J.L. Stéen, J.T. Jørgensen, K. Johann, K. Nørregaard, B. Sohr, D. Svatunek, A. Birke, V. Shalgunov, P.E. Edem, R. Rossin, C. Seidl, F. Schmid, M.S. Robillard, J.L. Kristensen, H. Mikula, M. Barz, A. Kjær, M.M. Herth
Trans-cyclooctene-functionalized PeptoBrushes with improved reaction kinetics of the tetrazine ligation for pretargeted nuclear imaging
ACS Nano, **2020**, 14, 568-584
DOI: [10.1021/acsnano.9b06905](https://doi.org/10.1021/acsnano.9b06905)
18. S. Kramer, D. Svatunek, I. Alberg, B. Gräfen, S. Schmitt, L. Braun, A.H.A.M. van Onzen, R. Rossin, K. Koynov, H. Mikula, R. Zentel
HPMA-Based Nanoparticles for Fast, Bioorthogonal iEDDA Ligation
Biomacromolecules, **2019**, 20, 3786-3797
DOI: [10.1021/acs.biomac.9b00868](https://doi.org/10.1021/acs.biomac.9b00868)
19. J. Weber, D. Svatunek, S. Krauter, G. Tegl, C. Hametner, P. Kosma, H. Mikula
2-O-Benzoyloxycarbonyl protected glycosyl donors: a revival of carbonate-mediated anchimeric assistance for diastereoselective glycosylation
Chemical Communications, **2019**, 55, 12543-12546
DOI: [10.1039/C9CC07194F](https://doi.org/10.1039/C9CC07194F)
20. D. Svatunek, K.N. Houk
autoDIAS: A Python Tool for an Automated Distortion/Interaction Activation Strain Analysis
Journal of Computational Chemistry, **2019**, 40, 2509-2515
DOI: [10.1002/jcc.26023](https://doi.org/10.1002/jcc.26023)
21. J. Tu, D. Svatunek, S. Parvez, A.C. Liu, B.J. Levandowski, H.J. Eckvahl, R.T. Peterson, K.N. Houk, R.M. Franzini
Stable, Reactive and Orthogonal Tetrazines: Dispersion Forces Promote the Cycloaddition with Isonitriles
Angewandte Chemie International Edition, **2019**, 58, 9043-9048
DOI: [10.1002/anie.201903877](https://doi.org/10.1002/anie.201903877)

22. B.J. Levandowski, D. Svatunek, B. Sohr, H. Mikula, K.N. Houk
Secondary Orbital Interactions Enhance the Reactivity of Alkynes in Diels–Alder Cycloadditions
Journal of the American Chemical Society, **2019**, 141, 2224–2227
DOI: [10.1021/jacs.8b13088](https://doi.org/10.1021/jacs.8b13088)
23. D. Svatunek, N. Houszka, T.A. Hamlin, F.M. Bickelhaupt, H. Mikula
Chemoselectivity of Tertiary Azides in Strain-Promoted Alkyne-Azide Cycloadditions
Chemistry – A European Journal, **2019**, 25, 754–758
DOI: [10.1002/chem.201805215](https://doi.org/10.1002/chem.201805215)
24. T.A. Hamlin, D. Svatunek, S. Yu, L. Ridder, I. Infante, L. Visscher, F.M. Bickelhaupt
Elucidating the Trends in Reactivity of Aza-1,3-Dipolar Cycloadditions
European Journal of Organic Chemistry, **2019**, 2–3, 378–386
DOI: [10.1002/ejoc.201800572](https://doi.org/10.1002/ejoc.201800572)
25. S. Yu, H.M. de Bruijn, D. Svatunek, T.A. Hamlin, F.M. Bickelhaupt
Factors Controlling the Diels–Alder Reactivity of Hetero-1,3-Butadienes
ChemistryOpen, **2018**, 7, 995–1004
DOI: [10.1002/open.201800193](https://doi.org/10.1002/open.201800193)
26. D. Svatunek, C. Denk, H. Mikula
A computational model to predict the Diels–Alder reactivity of aryl/alkyl-substituted tetrazines
Monatshefte für Chemie – Chemical Monthly, **2018**, 149, 833
DOI: [10.1007/s00706-017-2110-x](https://doi.org/10.1007/s00706-017-2110-x)
27. E.P. Yankov, R.I. Bakalska, E. Horkel, D. Svatunek, V.B. Delchev
Experimental and theoretical study of the excited-state tautomerism of 6-azauracil in water surroundings
Chemical Physics, **2018**, 515, 663–671
DOI: [10.1016/j.chemphys.2018.07.022](https://doi.org/10.1016/j.chemphys.2018.07.022)
28. S. Kronister, D. Svatunek, C. Denk, H. Mikula
Acylation-Mediated ‘Kinetic Turn-On’ of 3-Amino-1,2,4,5-tetrazines
Synlett, **2018**, 29, 1297–1302
DOI: [10.1055/s-0036-1591764](https://doi.org/10.1055/s-0036-1591764)
29. C. Denk, M. Wilkovitsch, P. Skrinjar, D. Svatunek, S. Mairinger, C. Kuntner, T. Filip, J. Fröhlich, T. Wanek, H. Mikula
[¹⁸F]Fluoroalkyl azides for rapid radiolabeling and (Re)investigation of their potential towards in vivo click chemistry
Organic and Biomolecular Chemistry, **2017**, 15, 5976–5982
DOI: [10.1039/C7OB00880E](https://doi.org/10.1039/C7OB00880E)
30. M. Wang, D. Svatunek, K. Rohlfing, Y. Liu, H. Wang, B. Giglio, H. Yuan, Z. Wu, Z. Li, J. Fox
Conformationally Strained *trans*-Cyclooctene (sTCO) Enables the Rapid Construction of ¹⁸F-PET Probes via Tetrazine Ligation
Theranostics, **2016**, 6, 887–895
DOI: [10.7150/thno.14742](https://doi.org/10.7150/thno.14742)
31. D. Svatunek, C. Denk, V. Rosecker, B. Sohr, C. Hametner, G. Allmaier, J. Fröhlich, H. Mikula
Efficient low-cost preparation of *trans*-cyclooctenes using a simplified flow setup for photoisomerization
Monatshefte für Chemie – Chemical Monthly, **2016**, 147, 579–585
DOI: [10.1007/s00706-016-1668-z](https://doi.org/10.1007/s00706-016-1668-z)

32. C. Denk, D. Svatunek, S. Mairinger, J. Stanek, T. Filip, D. Matscheko, J. Fröhlich, C. Kuntner, T. Wanek, H. Mikula
Design, Synthesis, and Evaluation of a Low-Molecular-Weight ¹¹C-Labeled Tetrazine for Pretargeted PET Imaging Applying Bioorthogonal in Vivo Click Chemistry
Bioconjugate Chemistry, **2016**, *27*, 1707-1712
DOI: [10.1021/acs.bioconjchem.6b00234](https://doi.org/10.1021/acs.bioconjchem.6b00234)
33. C. Denk, D. Svatunek, T. Filip, T. Wanek, D. Lumpi, J. Fröhlich, C. Kuntner, H. Mikula
Development of a ¹⁸F-Labeled Tetrazine with Favorable Pharmacokinetics for Bioorthogonal PET Imaging
Angewandte Chemie International Edition, **2014**, *53*, 9655-9659
DOI: [10.1002/anie.201404277](https://doi.org/10.1002/anie.201404277)
34. H. Mikula, D. Svatunek, P. Skrinjar, E. Horkel, C. Hametner, J. Fröhlich
DFT study of the Lewis acid mediated synthesis of 3-acyltetramic acids
Journal of Molecular Modeling, **2014**, *20*, 2181
DOI: [10.1007/s00894-014-2181-0](https://doi.org/10.1007/s00894-014-2181-0)
35. H. Mikula, J. Weber, D. Svatunek, P. Skrinjar, G. Adam, R. Krska, C. Hametner, J. Fröhlich
Synthesis of Zearalenone-16-β,D-Glucoside and Zearalenone-16-Sulfate: A Tale of Protecting Resorcylic Acid Lactones for Regiocontrolled Conjugation
Beilstein Journal of Organic Chemistry, **2014**, *10*, 1129-1134
DOI: [10.3762/bjoc.10.112](https://doi.org/10.3762/bjoc.10.112)
36. H. Mikula, D. Svatunek, D. Lumpi, F. Glöcklhofer, C. Hametner, J. Fröhlich
Practical and Efficient Large-Scale Preparation of Dimethyldioxirane
Organic Process Research & Development, **2013**, *17*, 313-316
DOI: [10.1021/op300338q](https://doi.org/10.1021/op300338q)

PATENTS

1. J. Fox, Z. Li, Y. Liu, M.T. Taylor, D. Svatunek, K. Rohlfing, M. Wang, Z. Wu, R. Vannam, J.W. Chin, S. Wallace
Conformationally strained trans-cycloalkenes for radiolabeling
US20200188540A1

CONFERENCE PAPERS

1. R.G. Vázquez, U.M. Battisti, J. Jørgensen, V. Shalgunov, C. Poulie, L. Hvass, I. Petersen, D. Svatunek, J. Kristensen, H. Mikula, A. Jensen, S. Lindegren, H. Jensen, A. Kjær, M. Herth
Theranostic tetrazines: radiosynthesis and evaluation of aromatic ¹⁸F/²¹¹At pair highly reactive tetrazines for pretargeted bioorthogonal PET imaging and targeted alpha-therapy
Nuclear Medicine and Biology, **2022**, *108*, S55-S56
2. R.G. Vázquez, U.M. Battisti, D.L. Stares, I.N. Petersen, F. Crestey, D. Svatunek, H. Mikula, J.L. Kristensen, A. Kjær, M. Herth
Direct Aromatic ¹⁸F-labeling of Tetrazines: A Rapid and Convenient Entry to Tetrazines for Pretargeted PET Imaging
Journal of Nuclear Medicine, **2020**, *61* (supplement 1), 134
3. J. Steen, K. Nørregård, K. Johann, J. Jørgensen, D. Svatunek, A. Birke, P. Edem, R. Rossin, C. Seidl, F. Schmid, M. Robillard, H. Mikula, J. Kristensen, M. Barz, A. Kjær, M. Herth
O-79 Trans-cyclooctene-functionalized PeptoBrushes with improved reaction kinetics of the tetrazine ligation for pretargeted nuclear imaging
Journal of Labelled Compounds and Radiopharmaceuticals, **2019**, *62* (S1), S5-S122

4. J. Steen, C. Denk, J. Jørgensen, K. Nørregard, R. Rossin, M. Wilkovitsch, D. Svatunek, P. Edem, C. Kuntner, T. Wanek, M. Robillard, J. Kristensen, A. Kjær, H. Mikula and M. Herth
O-08 Pretargeted PET imaging using a dual click ¹⁸F-labeling strategy
Journal of Labelled Compounds and Radiopharmaceuticals, **2019**, 62 (S1), S5-S122
5. J. Steen, C. Denk, K. Norregaard, J. Jorgensen, R. Rossin, D. Svatunek, P. Edem, M. Robillard, A. Kjaer, J. Kristensen, H. Mikula, M. Herth
Towards the Dual Click ¹⁸F-labeling of Antibodies
Journal of Nuclear Medicine, **2018**, 59 (supplement 1), 1144-1144
6. D. Svatunek, C. Denk, M. Wilkovitsch, T. Wanek, T. Filip, C. Kuntner-Hannes, J. Fröhlich, H. Mikula
A17 ¹⁸F labeled azidoglucose derivatives as “click” agents for pretargeted PET imaging
EJNMMI research, **2016**, 6 (supplement 1)
7. C. Denk, D. Svatunek, T. Wanek, S. Mairinger, J. Stanek, T. Filip, J. Fröhlich, H. Mikula, C. Kuntner-Hannes
A18 Bioorthogonal tools for PET imaging: development of radiolabeled 1,2,4,5-Tetrazines
EJNMMI research, **2016**, 6 (supplement 1)
8. C. Denk, D. Svatunek, B. Sohr, H. Mikula, J. Fröhlich, T. Wanek, C. Kuntner-Hannes, T. Filip
A20 Investigation of Small [¹⁸F]-Fluoroalkylazides for Rapid Radiolabeling and In Vivo Click Chemistry
EJNMMI research, **2016**, 6 (supplement 1)
9. M. Wang, D. Svatunek, K. Rohlfing, Y. Liu, H. Wang, B. Giglio, H. Yuan, Z. Wu, J. Fox, Z. Li
Tetrazine s-TCO ligation: A simple approach to improve probe’s blood circulation?
Journal of Nuclear Medicine, **2016**, 57 (supplement 2), 1090
10. M. Wang, D. Svatunek, K. Rohlfing, Y. Liu, H. Wang, B. Giglio, H. Yuan, Z. Wu, J. Fox, Z. Li
Conformationally strained trans-cyclooctene (sTCO) enables the rapid construction of 18F-PET probes via tetrazine ligation
Journal of Nuclear Medicine, **2016**, 57 (supplement 2), 1096

TALKS AT INTERNATIONAL CONFERENCES

1. **The reactivity of cyclopropene fused dibenzocyclooctynes in bioorthogonal cycloadditions**
Virtual Conference on Chemistry and its Applications **2020**
08/1-31/2020
2. **autoDIAS: a python tool for an automated distortion/interaction activation strain analysis**
Virtual Conference on Theoretical Chemistry **2020**
07/27-29/2020
3. **Bioorthogonal Cycloadditions of Isonitriles**
18. Österreichische Chemietage **2019**, Linz, Austria
09/24-27/2019
4. **The reactivity of bis-tetrazines in bioorthogonal Diels-Alder reactions**
17. Österreichische Chemietage **2017**, Salzburg, Austria
09/24-28/2017
5. **¹⁸F labeled azidoglucose derivatives as “click” agents for pretargeted PET imaging**
20th Austrian workshop on Carbohydrates and Glycoconjugates, Vienna, Austria
02/11-12/2016

6. **¹⁸F labeled azidoglucose derivatives as “click” agents for pretargeted PET imaging**
32nd International Austrian Winter Symposium, Zell am See, Austria
01/20-23/2016
7. **Advanced synthesis of glycoconjugates and oligosaccharides**
International Forum-Competition of Young Researchers, St. Petersburg, Russia
04/24-26/2013

POSTER PRESENTATIONS AT INTERNATIONAL CONFERENCES (SELECTED)

I was the presenter of 12 posters at international conferences and an author on 12 additional posters. Below a selection of the most important posters:

1. D. Svatunek
Rational Design of Bioorthogonal Reactants using Energy Decomposition Methods
Austrian Research and Innovation Talks - ARIT 2020 (virtual)
09/17/2020
2. D. Svatunek, A. Murnauer, K. Lang, K. N. Houk
The reactivity of cyclopropene fused dibenzocyclooctynes in bioorthogonal cycloadditions
EMBO - Chemical Biology 2020 (virtual)
09/3-5/2020
3. D. Svatunek, M. Wilkovitsch, L. Hartmann, K. N. Houk, H. Mikula
Distortion controlled reactivity of 2-Pyridyl-1,2,4,5-tetrazines
46th National Organic Chemistry Symposium, University of Indiana, Bloomington, IN, USA
06/23-27/2019
4. B. Sohr, D. Svatunek, H. Mikula
Chemical Probes for Intracellular Hypoxia Targeting
International Chemical Biology Symposium (ICBS) 2018, Vancouver, Canada
09/24-27/2018
5. D. Svatunek, N. Houszka, T. A. Hamlin, F. M. Bickelhaupt, H. Mikula
Bioorthogonal Dual-Labeling
EMBO Workshop: Chemical Biology 2018, Heidelberg, Germany
08/29-09/01/2018

GRANTS

In total, I acquired 480,600 € in research funding.

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|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2022-2025 | ESPRIT Programme of the FWF for the project „ Distortion/Interaction Analysis in Explicit Surroundings “ (ESP-2)
Amount: 287,700 € |
| 2021-2022 | Theodor Körner Preis of the Theodor Körner funds for the project „In vivo Chemie für die Krebstherapie“
Amount: 5,000€ |
| 2018-2021 | Research grant by the Hochschuljubiläumsfonds der Stadt Wien for the project „ Biokompatible Cycloadditionen unter der Theoretischen Lupe “ (H-331849/2018)
Amount: 7,000 € |

- 2018-2021 **Schrödinger** Programme of the FWF for the project „**Cyclopentadiene Derivatives for Bioorthogonal Cycloadditions**“ (J 4216)
Amount: 167,300 €
- 2018 **Christiana Hörbiger Preis** of TU Wien: 5,600 €
- 2014-2015 **Marshall Plan Fellowship** of the Austrian Marshall Plan Foundation for the project „**Bioorthogonal Chemistry – Inverse Electron Demand Diels–Alder Reaction**“
Amount: 8,000 €
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TEACHING & SUPERVISION

During my doctoral studies at TU Wien, I taught the “**Synthesis Laboratory Course**” (163.145, 2014-2016) and the “**Advanced Laboratory Course in Synthetic Chemistry**” (163.116, 2015). Currently I am teaching “**Begleitseminar - Organische Chemie I**” (163.193, 2022), “**Advanced Laboratory Course in Synthetic Chemistry**” (163.116, 2021), “**Synthesis Laboratory Course**” (163.145, 2022), and the “**Computational Organic Chemistry**” part of the “**Methods in organic synthesis**” course (163.160, 2021-2022).

I have supervised three undergraduates at UCLA and nine Bachelor theses at TU Wien. I have been co-supervisor for several master thesis at TU Wien and PhD and visiting scholars at UCLA.

Supervised undergraduates at UCLA:

Hannah Eckvahl (2018-2020), Zhuoting Tan (2019-2020), Quan Tran (2020)

Supervised bachelor theses at TU Wien:

Martin Nittmann (2021), Lea Hartmann (2018), Andrea Schiefer (2017), Astrid Schiefer (2017), Heidi Fittner (2016), Felix Happenhofer (2016), Alwin Meledeth (2016), Nicole Houszka (2015), Yazgan Mete (2013)

PROFESSIONAL SERVICE

As a member of the computational organic chemistry and bioorthogonal chemistry community I perform peer-review on these topics. I am an active peer-reviewer for prestigious journals such as the Journal of the American Chemical Society (ACS), Nature Synthesis, Organic & Biomolecular Chemistry (RSC), and Physical Chemistry Chemical Physics (RSC). I am a member of the “theoretical physical organic chemistry” group organized by Judy Wu (University of Houston) and Dean Tantillo (UC Davis).