

CV of Dr. Jérôme Waser

Full Professor in Organic Chemistry

Laboratory of Catalysis and Organic Synthesis (LCSO)

Ecole Polytechnique Fédérale de Lausanne, EPFL-SB-ISIC-LCSO

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Born in Sierre, Valais, Switzerland

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Education

- 2006-2007 Stanford University, chemistry, Stanford, California, USA
Postdoctoral fellow, adviser: *Prof. Barry M. Trost*
- 2002-2006 Swiss Federal Institute of Technology (ETH), chemistry, Zurich, Switzerland
Ph. D., adviser: *Prof. Erick M. Carreira*, degree in 2006
- 1997-2001 Swiss Federal Institute of Technology (ETH), chemistry, Zurich, Switzerland
Diploma (master) work, adviser: *Prof. Erick M. Carreira*, in 2001
“Diplom” (master degree) in 2001

Academic Positions

- 2019- Full Professor in Organic Chemistry, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland.
- 2014-2019 Associate Professor in Organic Chemistry, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland.
- 2007-2014 Assistant Professor in Organic Chemistry, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland.

Research Experience

- Since 2007 Development of *Umpolung* strategies based on the use of hypervalent iodine reagents. Alkynylation of C-H bonds, X-H bonds and olefins using palladium and gold catalysts as well as metal-free methods. Extension to the Umpolung of cyanides, azides and indoles. Use of hypervalent iodine reagents in photoredox catalysis. Cyclization and annulation reactions based on the opening of small rings for the synthesis of complex nitrogen-rich molecules. Total synthesis of bioactive alkaloids. In situ tethering method for the selective functionalization of olefins and alkynes. Full description at: <https://www.epfl.ch/labs/lcso/research/>.
- 2006-2007 Postdoctoral studies with *Prof. Barry M. Trost*: “Total Synthesis of (-)-Pseudolaric Acid B.” Multi-step synthesis of a natural product with promising antifungal and

antitumor activity. Use of transition metal catalysts for a rapid and atom-economical access to the complex core structure of the pseudolaric acids.

- 2002-2005 Ph. D. with *Prof. Erick M. Carreira*: “Hydrazines and Azides via the Metal-Catalyzed Hydrohydrazination and Hydroazidation of Olefins.” Development of novel cobalt and manganese catalysts for the amination of non-activated olefins using silanes and electrophilic nitrogen sources, including synthesis and screening of metal complexes, optimization and mechanistic studies, as well as the examination of the reaction scope.
- 2001 Diploma (master) work with *Prof. Erick M. Carreira* under the direction of *Christian Fischer*: “Advances Towards the Total Synthesis of the Clathramides: Diastereoselective Addition of (Trimethylsilyl)cyanide to a Fused Five-five Ring System.” Multi-step synthesis of marine natural products.
- 2000 Internship (3 months) in Lonza AG, Visp VS, under the direction of *Dr. Y. Bessard*: Methoxycarbonylation of aromatic compounds and diverse short syntheses.
- 2000 Advanced laboratory course (4 months) in the group of *Prof. D. Seebach*, under the direction of *A. Heckel*: Synthesis of TADDOL derivatives for the catalysis of the *Diels-Alder* reaction.
- 1997-2001 Studies in chemistry with specialization in organic chemistry and analytical chemistry.

Awards/Prizes

- 2024 Teaching award of the section of chemistry and chemical engineering at EPFL
- 2017 ERC Consolidator Grant 2017
- 2016 Springer Heterocyclic Chemistry Award
- 2014 Werner Prize 2014 of the Swiss Chemical Society
- 2014 Member, Young Academy of Europe
- 2013 ERC Starting Grant 2013
- 2012 Silver Medal, European Young Chemist Award 2012
- 2011 Prix A.F. Schl fli 2011 of the Swiss Academy of Sciences
- 2009 Thieme Journal Award 2009
- 2005 Selection for the “Roche Symposium for Leading Chemists of the Next Decade”
- 1997 Award for the best scientific “Matura” of the “Kollegium Spiritus Sanctus”

Funding/Fellowships

- 2024 Swiss National Science Foundation *NCCR Catalysis phase II* research projects
- 2022 Swiss National Science Foundation Research Grant, number: N  200020_212129 ”*Strained Rings: Extended Chemical Space and New Reactivity*”
- 2020 Swiss National Science Foundation *NCCR Catalysis phase I* research projects
- 2018 Swiss National Science Foundation Research Grant, number: N  200020_182798 ”*Exploiting Strained Bonds for Innovative Chemical Synthesis*”
- 2017 ERC-CON-Grant 2017, “*SeleCHEM: Overcoming the Selectivity Challenge in Chemistry and Chemical Biology via Innovative Tethering Strategies*”
<https://www.epfl.ch/labs/lcso/research/selechem/>

- 2017 Swiss National Science Foundation Sinergia Research Grant, number: N° CRSII5_171026 (Together with the group of Prof. Alexander Adibekian at the University of Geneva, ” *Identification of Targets of Bioactive Compounds using Hypervalent Iodine Reagents* ”
- 2016 Swiss National Science Foundation Research Grant, number: N° 200021_165788, ” *Strained Rings: New Applications in Catalysis and Synthesis*”
- 2015 Swiss National Science Foundation Conference Grant, number: N° 20CO21_164201, ”5th *International Conference on Hypervalent Iodine Chemistry*”
- 2015 Swiss National Science Foundation Research Grant, number: N° 200021_159920, ”*Multi-Functionalization and Domino Reactions for Accessing Molecular Complexity*”
- 2013 Roche Unrestricted Research Grant: “*Synthesis and Functionalization of Heterocycles*”
- 2013 Swiss National Science Foundation Research Grant, number: 200020_149494, ” *Annulation Reactions: Stereoselective Access to Nitrogen-Rich Building Blocks for the Synthesis of Bioactive Compounds*”
- 2013 ERC-STG-Grant 2013, “*iTools4MC: Hypervalent Iodine Reagents: A Tool Kit for Accessing Molecular Complexity*”
- 2013 Academic host for Dr. Reto Frei, Recipient of the IIF Marie Curie Fellowship: “*CasDKP: Synthesis of Diketopiperazine Based Bioactive Compounds via Palladium Cascade Alkynylation Reactions*”
- 2012 Roche Unrestricted Research Grant: “*Synthesis and Functionalization of Heterocycles*”
- 2012 NCCR (National Center of Competence in Research) in Chemical Biology Grant
- 2011 Scientific Exchange Program NMS-CH Fellowship, Fellow: Mr. Gergely Laszlo Tolnai: “*Acetylene Chemistry for the Construction and Functionalization of Heterocycles: New tools for the Synthesis of Natural Products, Drugs and Organic Materials*”
- 2011 Roche Unrestricted Research Grant: “*Synthesis and Functionalization of Heterocycles*”
- 2011 Swiss State Grant (Secrétariat d’état à l’éducation et à la recherche), number: C10.0116, in the framework of COST action CM0804 ”*Total Synthesis of Gonioma and Aspidosperma Alkaloids: New Anticancer Agents*”
- 2011 Swiss National Science Foundation Research Grant, number: 200021_119810, ” *New Catalytic C-C Bond Forming Reactions: Asymmetric Alkynylation of Enolates*”
- 2010 Roche Unrestricted Research Grant: “*Synthesis and Functionalization of Heterocycles*”
- 2010 ESF-COST Conference Grant
- 2010 Academic host for Dr. Fides Benfatti, Recipient of the IEF Marie Curie Fellowship: “*VVINCAncer: Novel vinca alkaloids analogs as anticancer agents: a multidisciplinary quest*”
- 2010 Swiss National Science Foundation Research Grant, number: 200021_129874, ” *Cyclization Reactions: New Access towards Active Substances against Cancer and Neurologic Diseases*”
- 2009 JSP Fellowship of the 44th Bürgenstock Conference
- 2008 Swiss National Science Foundation Research Grant, number: 200021_119810, ” *New Catalytic C-C Bond Forming Reactions*”

2007	Roche Research Foundation postdoctoral fellowship
2006	Swiss National Science Foundation postdoctoral fellowship
2004	Roche Research Foundation fellowship
1997	“Bourse d’étude et prêt d’honneur du Canton du Valais”

Affiliation

2014-2019	Young Academy of Europe
2008-	Société Vaudoise des Sciences Naturelles (member of the scientific committee 2008-2015)
2007-	American Chemical Society
2007-	Gesellschaft Deutscher Chemiker
2007-	Swiss Academy of Sciences
2007-	Swiss Chemical Society

Teaching (<https://www.epfl.ch/labs/lcso/teaching/>)

2024-	Advanced master course EPFL: <i>Asymmetric Catalysis for Fine Chemical Synthesis</i> (10-30 students, 28 h).
2019-	Bachelor course EPFL: <i>Chimie Générale Avancée II</i> (30-85 students, 56 h).
2018-	Bachelor course EPFL: <i>Chimie Générale Avancée I</i> (80-140 students, 20 h).
2016-2022	Master course UNIGE/NCCR chemical biology: <i>Current Topics in Chemical Biology and Biochemistry</i> (6-15 students, 2-4 h).
2012-2017	Bachelor course EPFL: <i>Atomes, Ions, Molécules et Fonctions</i> (100-250 students, 20 h).
2011-	Doctoral course EPFL: <i>Frontiers in Organic Chemistry</i> (6-11 students, 10 h + 36 h workshop, jointly with Prof. Xile Hu).
2010-2018	Bachelor course EPFL: <i>synthèse asymétrique</i> (12-46 students, 28 h).
2010-2023	Advanced master course EPFL: <i>Catalytic Asymmetric Reactions in Organic Synthesis</i> (6-20 students, 28 h).
2007-2010	Master course EPFL: <i>Structure and Reactivity</i> (15-25 students, 28 h).

Management and Administration

2023-	Coordination of the Specialization in Catalysis and Sustainable Chemistry/Chemical Engineering (SCGC, EPFL)
2023-	Member of the EPFL Committee of Academic Evaluation (CEAE)
2022-	Member of the EPFL Open Science Strategic Committee (OSSC)
2021-2024	Member of the doctoral school commission of chemistry (EDCH)
2020-	Co-director of the NCCR Catalysis (Sustainable Chemical Processes Through Catalyst Design): https://www.nccr-catalysis.ch/

- 2018-2019 Member of the "bureau" of the Conference of Section Directors of EPFL (CDS)
- 2015-2019 Member of the Conference of Section Directors of EPFL (CDS)
- 2015-2019 Director of the Section of Chemistry and Chemical Engineering (SCGC)
- 2015-2019 Member of the direction of the Faculty of Basic Sciences (FSB)
- 2015-2019 Member of the Steering Committee of the Institute of Chemical Sciences and Engineering (ISIC)
- 2014-2015 Member of the task force for the reformation of teaching and education at EPFL
- 2014-2015 Member of the master admission committee of EPFL
- 2013-2019 Member of the academic commission of the section of chemistry and chemical engineering
- 2008-2019 Member of the teaching commission of the section of chemistry and chemical engineering
- 2008-2011 Re-organization and coordination of organic chemistry teaching at EPFL (bachelor and master level)
- 2007- Director of the Laboratory of Catalysis and Organic Synthesis, Supervisor of one permanent scientist, 19 postdoctoral fellows, 42 PhD theses (29 completed), 18 master theses, 5 apprentices and 2 administrative assistants.

Conference Organization and Outreach

- 2021 Co-chairman with Prof Bill Morandi (ETHZ) of the Swiss Summer School in Catalysis in Les Diablerets, 80 attendees, <https://summer-school21.scg.ch/>.
- 2018- Member of the organization committee of the Bürgenstock Conference. Takes place yearly in Brunnen, Switzerland with 120 attendees. Responsible for the Juniors Scientists Participation fellowships (JSP) (<https://bc25.scg.ch/>)
- 2017 Broad audience introduction about chemistry at the Radio Rouge FM (<https://www.facebook.com/rougefm/videos/vb.248457349395/10155259922434396/?type=2&theater>)
- 2016 Presentation of synthetic chemistry experiments during the EPFL open days (<http://archiveweb.epfl.ch/portesouvertes.epfl.ch/>)
- 2016- Member of the international scientific committee for the International Conference on Hypervalent Iodine Chemistry (ICHIC) conferences
- 2016 Chairman of the 5th International Conference on Hypervalent Iodine Chemistry (ICHIC 2016, Les Diablerets, Switzerland, 80 attendees, <http://isic3.epfl.ch/ICHIC2016/>).
- 2013 Co-Chairman of the Swiss Summer School in Synthesis and Catalysis in Villars
- 2012 Co-Chairman of the symposium "*Current Challenges in Catalysis and Synthesis*" EPFL and University of Geneva, Switzerland
- 2009-2013 Organization of broad audience conferences in chemistry for the SVSN (Société Vaudoise des Sciences Naturelles). In charge of special activities for the year of chemistry 2011 at EPFL.
- 2007- Co-Organizer of the Organic Chemistry Seminar Series at EPFL (15-20 speakers a year) and the Institute seminars

Reviewing and Editorial Activities

- 2024 – Editor for the volume "*Hypervalent Halogens in Organic Synthesis*" for *Science of Synthesis*, Thieme.
- 2021 – Co-Editor-in-Chief with Prof. Eva Hevia of *Helvetica Chimica Acta*, Journal of Wiley and the Swiss Chemical Society:
<https://onlinelibrary.wiley.com/journal/15222675>
- 2011 – Expert for ERC (European Research Commission, starting, consolidator and advanced grants), SNF (Swiss National Science Foundation), DFG (Deutsche Forschungsgemeinschaft), Boehringer Ingelheim Stiftung, ANR (Agence Nationale de la Recherche), Volkswagen Stiftung (Germany), La Caixa Foundation, Tier 1 Grant of the Nanyang Technological University Singapore, Doctoral Fellowship Program of the Austrian Academy of Sciences, Jean-Marie Lehn Foundation, ACS Petroleum Research Fund, FWO Research Foundation Flanders, Israel Science Foundation, Foundation for Polish Science and National Research, Development and Innovation Office, Hungary.
- 2010 – Expert for >20 PhD defenses outside EPFL.
- 2007 – Active reviewer for the following peer-reviewed journals: *Angewandte Chemie*, *Journal of the American Chemical Society*, *Chemical Science*, *Science*, *Nature Chemistry*, *Chem*, *Nature Communications*, *Nature Catalysis*, *Chemical Reviews*, *Organic Letters*, *Chemistry-A European Journal*, *Journal of Organic Chemistry*, *Chemical Communications*, *Chemical Society Reviews*, *Advanced Synthesis and Catalysis*, *Synlett*, *ACS Chemical Biology*, *ACS Medical Chemistry Letters*, *Organic Frontiers*, *Organic and Biomolecular Chemistry*, *Tetrahedron*, *Tetrahedron Letters*, *European Journal of Organic Chemistry*, *Journal of Organometallic Chemistry*, *Helvetica Chimica Acta*.

Publications

1. Peer-Review Journal Articles

- (194) "Photocatalyzed Azidofunctionalization of Alkenes via Radical-Polar Crossover"
Palamini, P., Schoepfer, A. A.; Waser, J.* *Angew. Chem., Int. Ed.* **2025**, 64, e202420455.
Raw data: <https://doi.org/10.5281/zenodo.14277719>.
- (193) "Diastereoselective Synthesis of N-Heterocycle Substituted Cyclobutanes via Michael Addition onto Cyclobutenes"
Robert, E. G. L.; Waser, J.* *Chem. Eur. J.* **2024**, 30, e202403986.
Raw data: <https://doi.org/10.5281/zenodo.13831798>.
- (192) "Homologation of Alkenyl Carbonyls via a Cyclopropanation/Light-Mediated Selective C-C Cleavage Strategy"
Nguyen, T. V. T.; Brownsey, D. K.; Bossonnet, A.; Wodrich, M. D.; Waser, J.* *Angew. Chem., Int. Ed.* **2024**, 63, e202417719.
Raw data: <https://doi.org/10.5281/zenodo.14007120>.
- (191) "Forging 1,1'-Bicyclopropenyls by Synergistic Au/Ag Dual-Catalyzed Cyclopropenyl Cross-Coupling"
Li, X.; Waser, J.* *J. Am. Chem. Soc.* **2024**, 146, 29712-29719.
Raw data: <https://doi.org/10.5281/zenodo.13831798>.
- (190) "Enamine Synthesis via Regiocontrolled 6-endo-dig and 5-exo-dig Tethered Carboamination of Propargylic Alcohols"
Sole-Avila, H.; Purins, M.; Eichenberger, L.; Waser, J.* *Angew. Chem., Int. Ed.* **2024**, 63, e202411383.
Raw data: <https://doi.org/10.5281/zenodo.13134128>.
- (189) "Platinum-Catalyzed Isomerization of Cyclopropenes to 1,3-Dienes"
Smyrnov, V.; Homassel, A.; Choudhury, L.; Waser, J.* *Helv. Chim. Acta* **2024**, 107, e2024000105.
Raw data: <https://doi.org/10.5281/zenodo.12662944>.
- (188) "Ficini Reaction with Acrylates for the Stereoselective Synthesis of Aminocyclobutanes"
Robert, E. G. L.; Waser, J.* *Chem. Eur. J.* **2024**, 30, e202401810.
Raw data: <https://doi.org/10.5281/zenodo.11544630>.
- (187) "Reaction-Agnostic Featurization of Bidentate Ligands for Bayesian Ridge Regression of Enantioselectivity"
Schoepfer, A. A.; Laplaza, R.; Wodrich, M. D.; Waser, J.*; Corminboeuf, C.* *ACS catal.* **2024**, 14, 9302-9312.
Code: <https://github.com/lcmd-epfl/rafbl>.
- (186) "Hypervalent Iodine Amino Acid Building Blocks for Bioorthogonal Peptide Macrocyclization"
Liu, X.-Y.; Mykhailenko, O.; Faraone, A.; Waser, J.* *Angew. Chem., Int. Ed.* **2024**, 63, e202404747.
Raw data: <https://doi.org/10.5281/zenodo.11373418>.
- (185) "Photocatalytic Decarboxylative Functionalization of Cyclopropenes via Cyclopropenium Cation Intermediates"
Smyrnov, V.; Waser, J.* *Angew. Chem., Int. Ed.* **2024**, 63, e202404265.
Raw data: <https://doi.org/10.5281/zenodo.11263698>.
- (184) "Lewis Acid Catalyzed [4+2] Annulation of Bicyclobutanes with Dienol Ethers for the Synthesis of Bicyclo[4.1.1]octanes"

- Nicolai, S.*; Waser, J.* *Chem. Sci.* **2024**, ASAP.
Raw data: <https://doi.org/10.5281/zenodo.11264090>.
- (183) “Accessing elusive σ -type cyclopropenium cation equivalents through redox gold catalysis”
Li, X.; Wodrich, M. D.; Waser, J.* *Nat. Chem.* **2024**, 16, 901-912.
Raw data: <https://doi.org/10.5281/zenodo.10674147>.
- (182) “Organic Dye Photocatalyzed Synthesis of Functionalized Lactones and Lactams via a Cyclization–Alkynylation Cascade”
Cavalli, D.; Waser, J.* *Org. Lett.* **2024**, 26, 4235-4239.
Raw data: <https://doi.org/10.5281/zenodo.11186146>.
- (181) “SOMOphilic alkyne vs radical-polar crossover approaches: The full story of the azido-alkynylation of alkenes”
Borrel, J.; Waser, J.* *Beilstein J. Org. Chem.* **2024**, 20, 701-713.
- (180) “Benzylic C(sp³)–H Azidation: Copper vs Iron Catalysis”
Renteria-Gomez, A., Torres-Ochoa, R. O.; Palamini, P., Simonet-Davin, R., Wang, Q.; Waser, J.*; Zhu, J.* *Helv. Chim. Acta* **2024**, 107, e202400004.
- (179) “Interrupted Polonovski Strategy for the Synthesis of Functionalized Amino Acids and Peptides”
Marty, C., Allouche, E. M. D., Waser, J.* *Org. Lett.* **2024**, 26, 456-460.
Raw data: <https://doi.org/10.5281/zenodo.10251357>.
- (178) “Synthesis of Fluorescent Cyclic Peptides via Gold(I)-Catalyzed Macrocyclization”
Liu, X-Y; Cai, W.; Ronceray, N.; Radenovic, A.; Fierz, B.; Waser, J.* *J. Am. Chem. Soc.* **2023**, 145, 26525-26531.
Raw data: <https://doi.org/10.5281/zenodo.10124981>.
- (177) “Photocatalyzed $[2\sigma + 2\sigma]$ and $[2\sigma + 2\pi]$ Cycloadditions for the Synthesis of Bicyclo[3.1.1]heptanes and 5- or 6-Membered Carbocycles”
Nguyen, T. V. T.; Bossonnet, A.; Wodrich, M. D.; Waser, J.* *J. Am. Chem. Soc.* **2023**, 145, 25411-25421.
Raw data: <https://doi.org/10.5281/zenodo.8435698>.
- (176) “Acyl-Ethynylbenziodoxolone (acyl-EBX): Access to Ketene Dithioarylacetal”
Palamini, P.; Borrel, J.; Djaid, M.; Delattre, M.; Waser, J.* *Org. Lett.* **2023**, 25, 7535-7539.
Raw data: <https://doi.org/10.5281/zenodo.8366598>.
- (175) “One-pot synthesis of functionalized bis(trifluoromethylated)benziodoxoles from iodine(i) precursors”
Milzarek, T. M.; Ramirez, N. P., Liu, X. Y.; Waser, J.* *Chem. Commun.* **2023**, 59, 12637-12640.
Raw data: <https://doi.org/10.5281/zenodo.8390247>.
- (174) “Cysteine-Cysteine Cross-Conjugation of both Peptides and Proteins with a Bifunctional Hypervalent Iodine-Electrophilic Reagent”
Koutsopetras, I.; Mishra, A. K.; Benazza, R.; Hernandez-Alba, O.; Cianfèrani, S.; Chaubet, G., Nicolai, S.; Waser, J.* *Chem. Eur. J.* **2023**, 29, e202302689.
- (173) “Semipinacol Rearrangement of Cyclopropenylcarbinols for the Synthesis of Highly Substituted Cyclopropanes”
Smyrnov, V.; Waser, J.* *Org. Lett.* **2023**, 25, 6999-7003.
Raw data: <https://doi.org/10.5281/zenodo.8321825>.
- (172) “Iron-Catalyzed Synthesis of α -Azido α -Amino Esters via the Alkylazidation of Alkenes”
Palamini, P.; Allouche, E. M. D.; Waser, J.* *Org. Lett.* **2023**, 25, 6791-6795.
Raw data: <https://doi.org/10.5281/zenodo.8183015>.

- (171) “Azido-alkynylation of alkenes through radical-polar crossover”
Borrel, J.; Waser, J.* *Chem. Sci.* **2023**, 14, 9452-9460.
Raw data: <https://doi.org/10.5281/zenodo.8239023>.
- (170) “Photochemical [2+2] Cycloaddition of Alkynyl Boronates”
Liashuk, O. S.; Grygorenko, O. O.; Volovenko, Y. M.; Waser, J.* *Chem. Eur.* **2023**, 29, e202301650.
Raw data: <https://doi.org/10.5281/zenodo.8099632>.
- (169) “Synthesis of Trifluoromethylated Alkenes: Hypervalent Iodine Meets High-Valent Copper”
Milzarek, T. M.; Waser, J.* *Angew. Chem., Int. Ed.* **2023**, 62, e202306128.
Raw data: <https://doi.org/10.5281/zenodo.8020620>.
- (168) “Peptide-Hypervalent Iodine Reagent Chimeras: Enabling Peptide Functionalization and Macrocyclization”
Liu, X.-Y.; Ji, X.; Heinis, C.; Waser, J.* *Angew. Chem., Int. Ed.* **2023**, 62, e202306036.
Raw data: <https://zenodo.org/record/8020620>.
- (167) “Copper (I)-BOX Catalyzed Asymmetric 3-Component Reaction for the Synthesis of Trifluoromethylated Propargylic Ethers and Anilines”
Ramirez, N. P.; Waser, J.* *Angew. Chem., Int. Ed.* **2023**, 62, e202305776.
Raw data: <https://doi.org/10.5281/zenodo.7991566>.
- (166) “Synthesis of propargyl silanes from terminal alkynes via a migratory Sonogashira reaction”
Purins, M.; Eichenberger, L.; Waser, J.* *Chem. Commun.* **2023**, 59, 7931-7934.
Raw data: <https://doi.org/10.5281/zenodo.7982434>.
- (165) “Donor-Acceptor Aminocyclobutane Monoesters: Synthesis and Silylium-Catalyzed (4+2) Annulation with Indoles”
Robert, E. G. L.; Pirenne, V.; Wodrich, M. D.; Waser, J.* *Angew. Chem., Int. Ed.* **2023**, 62, e202302420.
Raw data: <https://doi.org/10.5281/zenodo.7834061>.
- (164) “Exploring Photoredox-Catalyzed (Re)functionalizations with Core-Modified Benziodoxolones”
Amos, S. G. E.; Le Vaillant, F.; Waser, J.* *Helv. Chim. Acta.* **2022**, e202200161.
- (163) “Substrate-controlled C–H or C–C alkynylation of cyclopropanes: generation of aryl radical cations by direct light activation of hypervalent iodine reagents”
Nguyen, T. V.T.; Wodrich, M. D.; Waser, J.* *Chem. Sci.* **2022**, 13, 12831-12839.
Raw data: <https://doi.org/10.5281/zenodo.7123955>.
- (162) “Tyrosine bioconjugation with hypervalent iodine”
Declas, N.; Maynard, J. R. J.; Menin, L.; Gasilova, N.; Götze, S.; Sprague, J. L.; Stallforth, P.; Matile S.; Waser, J.* *Chem. Sci.* **2022**, 13, 12808-12817.
Raw data: <https://doi.org/10.5281/zenodo.7074420>.
- (161) “Copper-Catalyzed Alkynylation of Hydrazides: An Easy Access to Functionalized Azadipeptides”
Le Du, E.; Borrel, J.; Waser, J.* *Org. Lett.* **2022**, 24, 6614-6618.
Raw data: <https://doi.org/10.5281/zenodo.7019663>.
- (160) “(4+3) Annulation of Donor-Acceptor Cyclopropanes and Azadienes: Highly Stereoselective Synthesis of Azepanones”
Nicolai, S.*; Waser, J.* *Angew. Chem., Int. Ed.* **2022**, 61, e202209006.
Raw data: <https://zenodo.org/record/6901619>.
- (159) “Pd(II)-Catalyzed Aminoacetoxylation of Alkenes Via Tether Formation”

- Rossolini, T.; Das, A.; Nicolai, S.; Waser, J. *ACS Catal.* **2022**, *12*, 7565-7570.
Raw data: <https://doi.org/10.5281/zenodo.6634788>.
- (158) “*Palladium-Catalyzed trans-Hydroalkoxylation: Counterintuitive Use of an Aryl Iodide Additive to Promote C–H Bond Formation*”
Das, A.; Buzzetti, L.; Purins, M.; Waser, J. *ACS Catal.* **2022**, *12*, 7565-7570.
Raw data: <https://doi.org/10.5281/zenodo.6634788>.
- (157) “*Synthesis of Polycyclic Aminoal Heterocycles via Decarboxylative Cyclisation of Dipeptide Derivatives*”
Robert, E. G. L.; Le Du, E.; Waser, J. *Chem. Commun.* **2022**, *58*, 3473-3476.
Thematic collection: Pioneering Investigators 2022.
Raw data: <https://doi.org/10.5281/zenodo.5940081>.
- (156) “*N-terminal selective C-H azidation of proline-containing peptides: a platform for late-stage diversification*”
Allouche, E. M. D.; Simonet-Davin, R.; Waser, J. *Chem. Eur. J.* **2022**, *28*, e202200368.
Raw data: <https://doi.org/10.5281/zenodo.5975486>.
- (155) “*Asymmetric Cyclopropanation and Epoxidation via a Catalytically Formed Chiral Auxiliary*”
Purins, M.; Waser, J. *Angew. Chem.* **2022**, *134*, e202113925; *Angew. Chem., Int. Ed.* **2022**, *61*, e202113925.
Raw data: <https://doi.org/10.5281/zenodo.5848181>.
- (154) “*Tosyloxybenziodoxolone: A Platform for Performing the Umpolung of Alkynes in One-Pot Transformations*”
Borrel, J.; Waser, J. *Org. Lett.* **2022**, *24*, 142-146.
Raw data: <https://zenodo.org/record/5767223>.
- (153) “*Direct Photoexcitation of EthynylBenziodoxolones: An Alternative to Photocatalysis for Alkynylation Reaction*”
Amos, S. G. E.; Cavalli, D.; Le Vaillant, F.; Waser, J. *Angew. Chem.* **2021**, *133*, 18107-18112; *Angew. Chem., Int. Ed.* **2021**, *60*, 23827-23834.
Raw data: <https://zenodo.org/record/5205584>.
- (152) “*Diamine Synthesis via the Nitrogen-Directed Azidation of σ - and π -C-C Bonds*”
Wang, M. M.; Nguyen, T. V. T.; Waser, J. *J. Am. Chem. Soc.* **2021**, *143*, 11969-11975.
Raw data: <https://zenodo.org/record/5142191>.
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- (57) “*Cobalt-Catalyzed Hydrohydrazination of Dienes and Enynes: Access to Allylic and Propargylic Hydrazides*”
Waser, J.; González-Gómez, J. C.; Nambu H.; Huber, P.; Carreira, E. M. *Org. Lett.* **2005**, 7, 4249-4252.
- (56) “*Cobalt-Catalyzed Hydroazidation of Olefins: Convenient Access to Alkyl Azides*”
Waser, J.; Nambu, H.; Carreira, E. M. *J. Am. Chem. Soc.* **2005**, 127, 8294-8295.
- (55) “*Catalytic Hydrohydrazination of a Wide Range of Alkenes with a Simple Mn Complex*”
Waser, J.; Carreira, E. M. *Angew. Chem.* **2004**, 116, 4191-4194; *Angew. Chem., Int. Ed.* **2004**, 43, 4099-4102.
- (54) “*Convenient Synthesis of Alkylhydrazides by the Cobalt-catalyzed Hydrohydrazination Reaction of Olefins and Azodicarboxylates*”
Waser, J.; Carreira, E. M. *J. Am. Chem. Soc.* **2004**, 126, 5676-5677.
- (53) “*Synthetic Process Development and Scale Up of Palladium-Catalyzed Alkoxyacylation of Chloropyridines*”
Crettaz, R.; Waser, J.; Bessard, Y. *Org. Process Res. Dev.* **2001**, 5, 572-574.

2. Peer-Review Journal Articles with Minor Contribution

- (52) “*Photochemical Functionalization of Heterocycles with EBX Reagents; C-H Alkynylation versus Deconstructive Ring Cleavage*”
Voutyritsa, E.; Garreau, M.; Kokotou, M. G.; Triandafillidi, I.; Waser, J.; Kokotos, C. G. *Chem. Eur. J.* **2020**, 26, 14453-14460.
- (51) “*Tandem Photoredox and Copper-Catalyzed Decarboxylative C(sp³)-N Coupling of Anilines and Imines Using an Organic Photocatalyst*”
Barzano, G.; Mao, R.; Garreau, M.; Waser, J.; Hu, X. *Org. Lett.* **2020**, 22, 5412-5416.
- (50) “*Triazene-Activated Donor-Acceptor Cyclopropanes: Ring-Opening and (3 + 2) Annulation Reactions*”
Suleymanov, A. A.; Le Du, E.; Dong, Z.; Muriel, B.; Scopelliti, R.; Fadaei-Tirani, F.; Waser, J.; Severin, K. *Org. Lett.* **2020**, 22, 4517-4522.
- (49) “*Gold-Catalyzed Domino Cyclization-Alkynylation Reactions with EBX Reagents: New Insights into the Reaction Mechanism*”

- Ghari, H.; Li, Y.; Roohzadeh, R.; Caramenti, P.; Waser, J.; Ariaftard, A. *Dalton Transactions* **2017**, 46, 12257-12262.
- (48) "Ethynyl benziiodoxolones: functional terminators for cell-penetrating poly(disulfide)s" Morelli, P.; Martin-Belloch, X.; Tessier, R.; Waser, J.; Sakai, N.; Matile, S. *Polym. Chem.* **2016**, 7, 3465-3470.
- (47) "1-Alkynyltriazenes as Functional Analogues of Ynamides" Perrin, F. G.; Kiefer, G.; Jeanbourquin, L.; Racine, S.; Perrotta, D.; Waser, J.; Scopelliti, R.; Severin, K. *Angew. Chem.* **2015**, 127, 13591-13594; *Angew. Chem., Int. Ed.* **2015**, 54, 13393-13396.
- (46) "Proteome-Wide Profiling of Targets of Cysteine-reactive Small Molecules by using Ethynyl Benziiodoxolone Reagents" Abegg, D.; Frei, R.; Cerato, L.; Hari, D.P.; Wang, C.; Waser, J.; Adibekian, A. *Angew. Chem.* **2015**, 127, 11002-11007; *Angew. Chem., Int. Ed.* **2015**, 54, 10852-10857.
- (45) "Photocatalytic Redox Reactions for In-Source Peptide Fragmentation" Qiao, L.; Bi, H.; Busnel, J. M.; Waser, J.; Yang, P.; Girault, H. H.; Liu, B. *Chem Eur. J.* **2009**, 15, 6711-6717.

3. Review Articles

- (44) "Merging the Reactivity of (Pseudo)cyclic Hypervalent Iodine Reagents and Carbenes or Carbenoids" Ramirez, N. P.; Waser, J.; *Synthesis* **2024**, 56, 3815-3828.
- (43) "NCCR Catalysis at a Glance: A National Research Program on Sustainable Chemistry" Lagadec, M. F.; Mitchell, S.; Waser, J.; Perez-Ramirez, J. *Chimia* **2024**, 78, 384.
- (42) "Silylium-Catalyzed Activation of Donor- Acceptor Strained Rings and Annulation with Indoles" Robert, E. G. L.; Waser, J. *Chimia* **2024**, 78, 234.
- (41) "NCCR Catalysis- Sustainable Production of Chemicals" Perez-Ramirez, J.; Waser, J.; Lagadec, M. F.; Mitchell, S.; Gamp, L. *Chimia* **2023**, 77, 101.
- (40) "X-Ray and NMR Structural Data of Ethynylbenziiodoxolones (EBXs) Reagents and Their Analogues" Le Du, E.; Ramirez, N. P.; Nicolai, S.; Scopelliti, R.; Fadaei-Tirani, F.; Wodrich, M. D.; Hari, D. P.; Waser, J. *Helv. Chim. Acta* **2023**, e202200175.
- (39) "Recent progress in alkynylation with hypervalent iodine reagents" Le Du, E.; Waser, J. *Chem. Commun.* **2023**, 59, 1589-1604.
- (38) "Pd-catalyzed functionalization of alkenes and alkynes using removable tethers" Das, A.; Waser, J. *Tetrahedron* **2022**, 128, 133135.
- (37) "Azidation with Hypervalent Iodine Reagents" Simonet-Davin, R.; Waser, J. *Synthesis*. **2022**, 10.1055/a-1966-4974.
- (36) "Activation of Aminocyclopropanes via Radical Intermediates" Wang, M.-M.; Nguyen, T. V. T.; Waser, J. *Chem. Soc. Rev.* **2022**, 51, 7344-7357.
- (35) "Radical Alkynylations with EthynylBenziiodoxolones: from Photocatalysis to Direct Excitation" Amos, S. G. E.; Waser, J. *Chimia* **2022**, 76, 312.
- (34) "Hypervalent Iodine-Mediated Late-Stage Peptide and Protein Functionalization" Allouche, E. M. D.; Grinhagena, E.; Waser, J. *Angew. Chem.* **2022**, 134, e202112287; *Angew. Chem., Int. Ed.* **2022**, 61, e202112287.

- (33) “Umpolung of Electron-Rich Heteroarenes with Hypervalent Iodine Reagents”
Pal, P.; Waser, J.; Raj, K. N. *Heterocycles* **2021**, 103, 555-591.
- (32) “Palladium-Catalyzed Functionalization of Olefins and Alkynes: From Oxyalkynylation to Tethered Dynamic Kinetic Asymmetric Transformations (DYKAT)”
Nicolai, S.; Orcel, U.; Muriel, B.; Greenwood, P. D. G.; Buzzetti, L.; Purins, M.; Waser, J. *Synlett* **2021**, 32, 472-487.
- (31) “Vinylbenziodoxol(on)es: Synthetic Methods and Applications”
Declas, N.; Pisella, G.; Waser, J. *Helv. Chim. Acta* **2020**, 103, e2000191.
- (30) “Catalytic Enantioselective Ring-Opening Reactions of Cyclopropanes”
Pirenne, V.; Muriel, B.; Waser, J. *Chem. Rev.* **2020**, 121, 227-263.
- (29) “Photocatalysis with organic dyes: facile access to reactive intermediates for synthesis”
Amos, S. G. E.; Garreau, M.; Buzzetti, L.; Waser, J. *Beilstein J. Org. Chem.* **2020**, 16, 1163-1187.
- (28) “An Alternative One-Electron Oxidation Strategy to Access Hypervalent Iodine Reagents”
Ceballos, J.; Garreau, M.; Waser, J. *CHEM* **2019**, 5, 2287-2289.
- (27) “Alkynylation of Radicals: Spotlight on the “Third Way” to Transfer Triple Bonds”
Le Vaillant F.; Waser, J. *Chem. Sci.* **2019**, 10, 8909-8923.
- (26) “Cyclic Hypervalent Iodine Reagents: Enabling Tools for Bond Disconnection via Reactivity Umpolung”
Hari, D. P.; Caramenti, P.; Waser, J. *Acc. Chem. Res.* **2018**, 51, 3212-3225.
- (25) “Decarboxylative Alkynylation and Cyanation of Carboxylic Acids using Photoredox Catalysis and Hypervalent Iodine Reagents”
Le Vaillant, F.; Waser, J. *Chimia* **2017**, 71, 226-230.
- (24) “In situ tether formation from amines and alcohols enabling highly selective Tsuji–Trost allylation and olefin functionalization”
Orcel, U.; Waser, J. *Chem. Sci.* **2017**, 8, 32-39.
- (23) “Benziodoxol(on)e Reagents as Tools in Organic Synthesis: The Background behind the Discovery at the Laboratory of Catalysis and Organic Synthesis”
Waser, J. *Synlett* **2016**, 27, 2761-2773.
- (22) “Cyclic Hypervalent Iodine Reagents for Atom-Transfer Reactions: Beyond Trifluoromethylation”
Li Y.; Hari, D. P.; Vita, M. V.; Waser, J. *Angew. Chem.* **2016**, 128, 4512-4531; *Angew. Chem., Int. Ed.* **2016**, 55, 4436-4454.
- (21) “Cyclic Hypervalent Iodine Reagents and Iron Catalysis: the Winning Team for Late-Stage C-H Azidation”
Vita, M. V.; Waser, J. *Angew. Chem.* **2015**, 127, 5380-5382; *Angew. Chem., Int. Ed.* **2015**, 54, 5290-5292.
- (20) “Taming Hypervalent Bonds and Strained Rings for Catalysis and Synthesis”
de Nanteuil, F.; Li, Y.; Vita, M. V.; Frei, R.; Serrano, E.; Racine, S.; Waser, J. *Chimia*. **2014**, 68, 516-521.
Invited article for the awarding of the Werner Prize.
- (19) “Cyclization and annulation reactions of nitrogen-substituted cyclopropanes and cyclobutanes”
de Nanteuil, F.; De Simone, F.; Frei, R.; Benfatti, F.; Serrano, E.; Waser, J. *Chem. Commun.* **2014**, 50, 10912-10928.
Invited feature article.

- (18) “*Gold-Catalyzed Alkynylation: Acetylene-Transfer instead of Functionalization*”
Brand, J. P.; Li, Y.; Waser, J. *Israel. J. Chem.* **2013**, 53, 901-910.
Invited contribution to the special issue on gold catalysis (Editor: A. S.K Hashmi).
- (17) “*Asymmetric Organocatalysis Meets Hypervalent Iodine Chemistry for the α -Functionalization of Carbonyl Compounds*”
Fernández González, D.; Benfatti, F.; Waser, J. *Chemcatchem* **2012**, 4, 955-958.
- (16) “*Indole Alkaloids Synthesis via a Selective Cyclization of Aminocyclopropanes*”
De Simone, F.; Waser, J. *Chimia* **2012**, 66, 233-236.
- (15) “*Electrophilic Alkynylation: The Dark Side of Acetylene Chemistry*”
Brand, J.P.; Waser, J.; *Chem. Soc. Rev.* **2012**, 41, 4165-4179.
- (14) “*Cyclopropanes and Hypervalent Iodine Reagents: High Energy Compounds for Applications in Synthesis and Catalysis*”
Fernández González, D.; De Simone, F.; Brand, J. P.; Nicolai, S.; Waser, J.; *Chimia* **2011**, 65, 649-651.
- (13) “*Cyclization of Aminocyclopropanes in Indole Alkaloids Synthesis*”
De Simone, F.; Waser, J.; *Synlett* **2011**, 589-593.
- (12) “*Benziodoxole-Based Hypervalent Iodine Reagents for Atom-Transfer Reactions*”
Brand, J. B.; Fernández González, D.; Nicolai, S.; Waser, J. *Chem. Commun.* **2011**, 47, 102-115. Invited feature article to the “Emerging Investigator Issue”.
- (11) “*Cyclization and Cycloaddition Reactions of Cyclopropyl Carbonyls and Imines*”
De Simone, F.; Waser J. *Synthesis* **2009**, 3353-3374.
- (10) “*Cyclization of Cyclopropyl Carbonyls and the Homo-Nazarov Reaction*”
De Simone, F.; Waser J. *Chimia* **2009**, 63, 162-167.

4. Book Chapters and Conference Reports

- (9) “*Donor-Acceptor Cyclopropanes with an Amino Group as Donor*”
Wang, M.-M.; Waser, J.; in *Donor-Acceptor Cyclopropanes in Organic Synthesis*, Ed. Banerjee, P.; Biju, A. T. Wiley VCH, Weinheim **2024**, ISBN: 978-3-527-34987-6.
- (8) “*1-Azido-3,3-dimethyl-3-(1H)-1,2-benziodoxole*”
Simonet-Davin, R.; Waser, J.; *Electronic Encyclopedia of Reagents for Organic Synthesis*, John Wiley & Sons **2020**, DOI: 10.1002/047084289X.rm02312.
- (7) “*Hypervalent Halogen Compounds: Alkynylations and Vinylations*”
Hari, D. P.; Nicolai, S.; Waser, J.; in *PATAI'S Chemistry of Functional Groups*, Eds. Marek, I.; Olofsson, B., John Wiley & Sons, Ltd. **2018**, DOI: 10.1002/9780470682531.pat0951.
- (6) “*Alkynylation with Hypervalent Iodine Reagents*”
Waser, J.; in *Topics in Current Chemistry, Current Developments in Hypervalent Iodine Chemistry*, Ed. Wirth, T., Springer **2015**, DOI: 10.1007/128_2015_660.
- (5) “*7. Synthesis of Saturated Heterocycles via Metal-Catalyzed Formal Cycloaddition Reactions that Generate a C–N or C–O Bond*”
Waser, J.; in *Topics in Heterocyclic Chemistry, Vol. 32 Synthesis of Heterocycles via Metal-Catalyzed Reactions that Generate one or More Carbon Heteroatom Bonds*, Ed. Wolfe, J. P., Springer **2013**, p. 225-270.
- (4) “*SILYL ETHYNYL BENZIODOXOLONE REAGENTS*”
Fernández González, D.; Nicolai, S.; Waser, J.; *Electronic Encyclopedia of Reagents for Organic Synthesis*, John Wiley & Sons **2012**, DOI: 10.1002/047084289X.rm01503.

Update in 2019: DOI: 10.1002/047084289X.rm01503.pub2.

- (3) “*Synthesis of (3-Chlorobutyl)benzene by the Cobalt-Catalyzed Hydrochlorination of 4-Phenyl-1-butene*”
Gaspar, B.; Waser, J.; Carreira, E. M. *Organic Syntheses* **2010**, 87, 88.
- (2) “*Azides by Olefin Hydroazidation Reactions*”
Waser J; Carreira, E. M. in *Organic Azides: Syntheses and Applications*, Bräse, S.; Banert, K. eds, Wiley, 2010, Ch. 4, p. 95-112.
- (1) “*The 44th EUCHEMS Conference on Stereochemistry (Bürgenstock Conference 2009)*”
Cramer, N.; Waser J. *Chimia* **2009**, 63, 512-515.

Invited Lectures in Conferences, University and Industry

- (122) “*Weak Bonds and Photochemistry: The Winning Team*”
PhotoReAct final conference, Amsterdam, the Netherlands, December 2, 2024.
- (121) “*A Journey in Strained Rings Activation*”
Thinking out of the ring workshop, Lorentz Center, Leiden, the Netherlands, May 28, 2024.
- (120) “*Hypervalent iodine reagents for peptides and proteins modification*”
Attilio Corbella International Summer School on Organic Synthesis (ISOS), Gargnano, Italy, June 19, 2023.
- (119) “*Gain by Strain: Synthetic Opportunities from Weak Bonds*”
University of Jerusalem, Jerusalem, Israel, March 20, 2023.
- (118) “*New Reactivity of Strained Rings and Hypervalent Bonds for Synthesis and Chemical Biology*”
Technion, Haifa, Israel, March 19, 2023.
- (117) “*Weak Bonds Leading the Quest for New Synthons in (Bio)organic Chemistry*”
Ariel University, Ariel, Israel, March 15, 2023.
- (116) “*The Selectivity Challenge: From Inert Alkenes to Multifunctionalized Biomolecules*”
University of Geneva, Switzerland, October 20, 2022.
- (115) “*Weak Bonds Leading the Quest for New Synthons in (Bio)organic Chemistry*”
ICIQ Tarragona, Spain, October 14, 2022.
- (114) “*Tethering: From Alkene Functionalization to Peptide Stapling*”
University of Münster, Münster Germany, October 6, 2022.
- (113) “*Strained Rings, Hypervalent Bonds, Tethers: Reactivity Design for Synthesis*”
BOSS XVII, 17th Belgian Organic Synthesis Symposium, Namur, Belgium, July 7, 2022.
- (112) “*Hypervalent Iodine Reagents for Peptides and Proteins Modification*”
8th Modern Solid Phase Peptide Synthesis & Its Applications Symposium, Australian Peptide Conference, Gold Coast Queensland, Australia (online), May 6, 2022.
- (111) “*Photomediated Reactions of Hypervalent Iodine Reagents and Strained Rings*”
Photo-Cat Symposium, Belgium (online), September 20, 2021.
- (110) “*Merging Hypervalent Iodine and Photoredox Chemistry for Reaction Discovery*”
EuroTech Chemistry and Chemical Engineering Series (online), June 23, 2021.
- (109) “*Catalytic Multi-Functionalizations with Hypervalent Iodine Reagents*”
EurJOC Virtual Event: Modern Organic Synthesis (online), April 29, 2021.
- (108) “*New Reactions with Cyclic Hypervalent Iodine Reagents*”

- International Virtual Symposium on Advances in Chemical Sciences, Diamond Harbour Women's University, India (online), September 21, 2020.
- (107) *“Gain by Strain: Synthetic Opportunities from Weak Bonds”*
University Claude Bernard Lyon, Lyon, France, December 12, 2019.
- (106) *“New Reactivity of Strained Rings and Hypervalent Bonds for Synthesis and Chemical Biology”*
TU Munich, Munich, Germany, November 28, 2019.
- (105) *“Exploiting the Reactivity of Hypervalent Bonds and Strained Rings for Reaction Discovery”*
University of Copenhagen, Copenhagen, Denmark, October 17, 2019.
- (104) *“Strained Rings and Hypervalent Bonds: Enabling New Disconnections for Organic Synthesis”*
Université de Strasbourg, Strasbourg, France, September 26, 2019.
- (103) *“Strained Rings and Hypervalent Bonds: Enabling New Disconnections for Organic Synthesis”*
Université de Haute-Alsace, Mulhouse, France, September 25, 2019.
- (102) *“Hypervalent Iodine Reagents: A Wonderful Toolbox for Organic Synthesis”*
Paul Walden Symposium 2019, Riga, Latvia, September 19, 2019.
- (101) *“New Reactions with Hypervalent Iodine Reagents via One- or Two- Electron Processes”*
University of Alicante, Alicante, Spain, July 19, 2019.
- (100) *“New reactions with Hypervalent Iodine Reagents and Strained Rings: from Small Molecules to Proteins”*
University of Geneva, Geneva, Switzerland, June 28, 2019.
- (99) *“Pushing the Limits of Umpolung with Hypervalent Iodine Reagents”*
Hypervalent Iodine Conference, Nankai University, Tianjin, China, March 9, 2019.
- (98) *“Catalysis with Strained Rings and Hypervalent Bonds”*
Tianjin University, Tianjin, China, March 8, 2019.
- (97) *“Applications of Cyclic Hypervalent Iodine Reagents: From Catalysis to Chemical Biology”*
Universidade de Santiago, Santiago de Compostela, Spain, February 26, 2019.
- (96) *“Hypervalent Iodine Reagents for the Functionalization of Diazo Compounds and Radicals”*
University of Montreal, Montreal, Canada, September 26, 2018.
- (95) *“C-H Functionalization with Hypervalent Iodine Reagents with and without Transition Metal Catalysts”*
COST CHAOS meeting, ICIQ Tarragona, Spain, September 20, 2018.
- (94) *“Benziodoxol(on)e Reagents: Trifluoromethylation, Alkynylation -What is Next?”*
6th International Conference on Hypervalent Iodine Chemistry, ICHIC 2018, Cardiff, Wales, July 3, 2018.
- (93) *“Strained Rings, Hypervalent Bonds, Tethers: New Disconnections for Organic Synthesis”*
Georg-August-Universität Göttingen, Göttingen, Germany, February 5, 2018.
- (92) *“Catalytic Reactions with Cyclic Hypervalent Iodine Reagents”*
Frontiers in Organic Synthesis and Catalysis, IISER Kolkata, Kolkata, India, January 10, 2018
- (91) *“Cyclic Hypervalent Iodine Reagents: A Treasure of Reactivity for Organic Synthesis”*

- International Conference on Chemistry for Human Development (ICCHD-2018), Heritage Institute of Technology, Kolkata, India, January 8, 2018.
- (90) "*Heterocycle and Alkaloid Synthesis using Cyclopropanes and Hypervalent Iodine Reagents*"
Davies Collison Cave plenary lecture, 38th RACI Symposium, University of Perth, Perth, Australia, December 6, 2017.
- (89) "*Alkynylation of Thiols, Radicals and Carbenes with Hypervalent Iodine Reagents*"
Davies Collison Cave plenary lecture, 38th RACI Symposium, University of Adelaide, Adelaide, Australia, December 4, 2017.
- (88) "*Electrophilic Alkynylation with and without Hypervalent Iodine Reagents*"
Davies Collison Cave plenary lecture, 38th RACI Symposium, University of Melbourne, Melbourne, Australia, December 1, 2017.
- (87) "*Cyclic Hypervalent Iodine Reagents: Alkynylation and Beyond*"
Davies Collison Cave plenary lecture, 38th RACI Symposium, University of Sydney, Sydney, Australia, November 29, 2017.
- (86) "*Ring-Strain and Hypervalent Bonds: From Synthesis to Chemical Biology*"
Davies Collison Cave plenary lecture, 38th RACI Symposium, University of Queensland, Brisbane, Australia, November 27, 2017.
- (85) "*Ring-Strain and Hypervalent Bonds: A Treasure of Reactivity for Reaction Discovery*"
Westfälische Wilhelms-Universität Münster, Münster, Germany, October 26, 2017.
- (84) "*Functionalization with Hypervalent Iodine Reagents: From Small Organic Compounds to Biomolecules*"
Austrian Chemical Days 2017, Salzburg, Austria, September 25, 2017.
- (83) "*Nitrogen-Substituted Strained Ring in Cyclization and Annulation Reactions*"
Regio Symposium 2017, Liestal, Switzerland, September 8, 2017.
- (82) "*A Toolbox of Hypervalent Iodine Reagents for Organic Synthesis*"
Regio Symposium 2017, Liestal, Switzerland, September 6, 2017.
- (81) "*Strained Rings, Hypervalent Bonds, Tethers: Reactivity Design for Reaction Discovery*"
Peking University, Beijing, China, June 30, 2017.
- (80) "*A Toolbox of Hypervalent Iodine Reagents for Metal Catalysis*"
19th IUPAC International Symposium on Organometallic Chemistry Directed Towards Organic Synthesis (OMCOS), Jeju Island, Korea, June 28, 2017.
- (79) "*A Toolbox of Hypervalent Iodine Reagents for Organic Synthesis*"
ERC Chemistry Day, University of Pavia, Pavia, Italy, May 22, 2017.
- (78) "*Strained Rings, Hypervalent Bonds, Tethers: New Disconnections for Organic Synthesis*"
Firmenich, Geneva, April 12, 2017.
- (77) "*Alkynylation with Hypervalent Iodine Reagents: From Catalysis to Chemical Biology*"
University of California Berkeley, USA, April 7, 2017.
- (76) "*Modulating the Reactivity of Hypervalent Iodine Reagents and Carbonyl Tethers with the Trifluoromethyl Group*"
253rd American Chemical Society National Meeting, San Francisco, USA, April 3, 2017.
- (75) "*Tethers and Hypervalent Bonds: Enabling Tools for Organic Synthesis*"
ICIQ Tarragona, Spain, March 17, 2017.
- (74) "*Strained Rings, Hypervalent Bonds, Tethers: Reactivity Design for Reaction Discovery*"

Syngenta Crop Protection AG, Stein Switzerland, February 23, 2017.

- (73) "*Ethynylbenziodoxol(on)es (EBX): Versatile Hypervalent Iodine Reagents for Electrophilic Alkynylation*"
21st International Conference on Organic Synthesis, IIT Bombay, Mumbai, India, December 13, 2016.
- (72) "*Alkynylation of Diazo Compounds and Olefins with and without Hypervalent Iodine Reagents*"
Pre-ICOS Symposium, IISER Bhopal, Bhopal, India, December 10, 2016.
- (71) "*Cyclic Hypervalent Iodine Reagents: Applications in Catalysis and Synthesis*"
COST meeting on C-H Activation in Organic Synthesis (CHAOS), Vienna University of Technology, Vienna Austria, September 27, 2016.
- (70) "*Benziodoxoles: Heterocyclic Hypervalent Iodine Reagents with Exceptional Reactivity in Catalysis and Synthesis*"
Symposium on Advances in Heterocyclic Organic Chemistry (SAHOC) 2016, University of Sheffield, Sheffield, UK, September 1, 2016.
- (69) "*Exploiting the Reactivity of Strained Rings and Hypervalent Bonds for the Synthesis of Heterocycles*"
Springer Heterocyclic Chemistry Award Lecture, 27th European Colloquium on Heterocyclic Chemistry, Amsterdam, the Netherlands, July 6, 2016.
- (68) "*Strained Rings and Hypervalent Bonds: New Disconnections for Organic Synthesis*"
TU Braunschweig, Braunschweig, Germany, May 23, 2016.
- (67) "*Electrophilic Alkynylation with Hypervalent Iodine Reagents*"
University of Paris Sud, Orsay, France, October 15, 2015.
- (66) "*Exploiting the Reactivity of Weak Bonds to Enable Non-Conventional Disconnections*"
University of Geneva, Switzerland, September 17, 2015.
- (65) "*Electrophilic Alkynylation and Annulation Reactions of Strained Rings*"
13th Rencontre de Chimie Organique, Paris, France, June 5, 2015.
- (64) "*Taming Hypervalent Bonds and Strained Rings for Catalysis and Synthesis*"
Friedrich-Schiller-University Jena, Germany, February 11, 2015.
- (63) "*Strained Rings and Hypervalent Iodine Reagents: New Disconnections for Organic Synthesis*"
Belgian Sigma Aldrich Symposium, Blankenberge, Belgium, December 4, 2014.
- (62) "*Catalysis with Hypervalent Bonds and Strained Rings*"
University of Stockholm, Sweden, October 23, 2014.
- (61) "*Strained Rings and Hypervalent Bonds: A Treasure of Reactivity for Reaction Discovery*"
University of Vienna, Austria, October 9, 2014.
- (60) "*Cyclic Hypervalent Iodine Reagents: A Treasure of Reactivity for Catalysis and Synthesis*"
Molecular Complexity in Modern Chemistry, Moscow, Russia, September 16, 2014.
- (59) "*Strained Rings and Hypervalent Bonds: New Disconnections for Organic Synthesis*"
Kyoto University, Kyoto, Japan, July 11, 2014.
- (58) "*Taming Hypervalent Bonds and Strained Rings for Catalysis and Synthesis*"
Kitasato University, Tokyo, Japan, July 9, 2014.
- (57) "*Hypervalent Iodine Reagents and Strained Rings: Non-Conventional Disconnections of Chemical Bonds*"
Tokyo University, Tokyo, Japan, July 8, 2014.

- (56) "*Benziodoxol(on)es: A Treasure of Reactivity for Catalysis and Synthesis*"
4th International Conference on Hypervalent Iodine Chemistry, Narita, Chiba, Japan, July 4, 2014.
- (55) "*Exploiting the Reactivity of Hypervalent Bonds and Strained Rings for Reaction Discovery*"
Institute of Microbial Chemistry (BIKAKEN), Tokyo, Japan, July 1, 2014.
- (54) "*Taming Hypervalent Bonds and Strained Rings for Catalysis and Synthesis*"
Spring Meeting of the Swiss Chemical Society, Fribourg, Switzerland, April 24, 2014.
Werner award lecture.
- (53) "*Hypervalent Bonds and Strained Rings: A Treasure for Catalysis and Synthesis*"
Spring Meeting of the French Chemical Society, Paris, France, March 25, 2014.
- (52) "*Hypervalent Iodine Reagents and Strained Rings: Non-Conventional Disconnections of Chemical Bonds*"
Université de Strasbourg-Institut de Chimie-UMR 7177, February 14, 2014.
- (51) "*Hypervalent Iodine Reagents: New Tools for the Synthesis of Alkynes*"
Symposium Osaka University-EPFL-Nitto Denko, University of Osaka, Japan, December 3, 2013.
- (50) "*Electrophilic Acetylenes and Aminocyclopropanes: From Catalysis to Alkaloid Synthesis*"
University of Glasgow, Glasgow, UK, November 15, 2013.
- (49) "*Nitrogen-Substituted Strained Rings: From Catalysis to Natural Products Synthesis*"
Symposium in traditional Chinese medicine and drug discovery, Shanghai Institute of Materia Medica, Shanghai, China, October 25, 2013.
- (48) "*Electrophilic Alkynylation of Olefins and Annulation Reactions of Strained Rings*"
Shanghai Institute of Organic Chemistry, Shanghai, China, October 23, 2013.
- (47) "*Hypervalent Iodine Reagents for Electrophilic Alkynylation*"
Beijing Symposium 2013 on "New Frontiers in Organic Chemistry: New Reagents, New Reactions", Beijing, China, October 10, 2013.
- (46) "*Electrophilic Alkynylation: the Dark Side of Acetylene Chemistry*"
GECO 54, Le Cornic, France, August 26, 2013.
- (45) "*Electrophilic Alkynylation with and without Metal Catalysts*"
15th Asian Chemical Congress, August 20, 2013, Singapore
- (44) "*Electrophilic Alkynylation of Olefins and Annulation Reactions of Strained Rings*"
Division of Chemistry and Biological Chemistry, Nanyang Technological University, Singapore, August 19, 2013.
- (43) "*Electrophilic Alkynylation: the Dark Side of Acetylene Chemistry*"
Erick M. Carreira 50th Birthday Symposium, ETH Zurich, Switzerland, July 4, 2013.
- (42) "*Taming Hypervalent Bonds and Strained Rings for Catalysis and Synthesis*"
Department of Chemistry Giacomo Ciamician, University of Bologna, June 28, 2013.
- (41) "*Electrophilic Alkynylation of Olefins and Annulation Reactions of Aminocyclopropanes*"
Department of Chemistry, University of Toronto, Toronto, Canada, June 7, 2013.
- (40) "*Nitrogen-Substituted Small Rings: from Catalysis to Alkaloid Synthesis*"
Department of Chemistry, University of Western Ontario, London, Canada, June 6, 2013.
- (39) "*Electrophilic Alkynylation of Olefins and Annulation Reactions of Aminocyclopropanes*"
Department of Chemistry, McGill University, Montreal, Canada, June 5, 2013.

- (38) *“Nitrogen-Substituted Small Rings: from Catalysis to Alkaloid Synthesis”*
Département de Chimie, Université du Québec à Montréal, Montreal, Canada, June 4, 29, 2013.
- (37) *“Electrophilic Alkynylation of Olefins and Annulation Reactions of Aminocyclopropanes”*
Department of Chemistry, University of Montreal, Canada, June 3, 2013.
- (36) *“Direct Electrophilic Alkynylation with Hypervalent Iodine Reagents”*
96th Canadian Society for Chemistry Conference (CSC), Quebec, Canada, May 29, 2013.
- (35) *“Catalysis and Synthesis with Cyclopropanes and Electrophilic Acetylenes”*
Institute of Chemistry, Eötvös Loránd University, Hungary, February 11, 2013.
- (34) *“Ethynylbenziodoxolones: Hypervalent Iodine Reagents for Electrophilic Alkynylation”*
6th International Meeting on Halogen Chemistry, HALCHEM VI, December 10, 2012, Bangalore, India.
- (33) *“Catalysis with Electrophilic Acetylenes and Cyclopropanes”*
Institut de Chimie Moléculaire de Reims, Reims, France, November 7, 2012.
- (32) *“Aminocyclopropanes and Electrophilic Acetylenes: from Catalysis to Alkaloid Synthesis”*
Institute de Chimie, Université de Neuchâtel, Switzerland, November 5, 2012.
- (31) *“Cyclopropanes and Electrophilic Acetylenes: from Catalysis to Synthesis”*
Max-Planck Institut für Kohlenforschung, Mühlheim, Germany, October 30, 2012.
- (30) *“Electrophilic Acetylenes and Cyclopropanes for the Synthesis and Functionalization of Heterocycles”*
Actelion Pharmaceuticals Ltd, Allschwill, Switzerland, October 29, 2012.
- (29) *“Ring strain and Hypervalent Bonds: a Treasure for Catalysis and Synthesis”*
University of British Columbia, Vancouver, Canada, October 12, 2012.
- (28) *“Catalysis with Aminocyclopropanes and Electrophilic Acetylenes”*
University of California, Los Angeles, USA, October 11, 2012.
- (27) *“Cyclopropanes and Hypervalent Iodine Reagents: Exploiting Small Rings and Weak Bonds in Catalysis and Synthesis”*
University of California, Irvine, USA, October 10, 2012.
- (26) *“Catalysis with Electrophilic Acetylenes and Cyclopropanes”*
Stanford University, Stanford, USA, October 9, 2012.
- (25) *“Donor-Acceptor Substituted Aminocyclopropanes and Electrophilic Acetylenes: From Catalysis to Alkaloid Synthesis”*
Colorado State University, Ford Collins, USA, October 8, 2012.
- (24) *“Catalysis with Cyclopropanes and Hypervalent Iodine Reagents”*
University of Utah, Salt Lake City, USA, October 5, 2012.
- (23) *“Electrophilic Alkynylation Reagents and Aminocyclopropanes: from Catalysis to Alkaloid Synthesis”*
Yale University, New Haven, USA, October 3, 2012.
- (22) *“From Catalysis to Natural Product Synthesis: Exploiting the Reactivity of Electrophilic Acetylenes and Cyclopropanes”*
Boston College, Boston, USA, October 2, 2012.
- (21) *“Metal-Catalyzed Electrophilic Alkynylation and Annulation Reactions of Aminocyclopropanes”*
Boston University, Boston, USA, October 1, 2012.

- (20) "*Catalytic Electrophilic Alkynylation Reactions: the Dark Side of Acetylene Chemistry*"
7th Asian European Symposium on Metal-Mediated Efficient Organic Synthesis, Tarragona, Spain, July 24, 2012.
- (19) "*Electrophilic Acetylenes and Aminocyclopropanes: Applications in Catalysis*"
Institut für Organische und Biomolekulare Chemie, Georg-August-Universität Göttingen, Germany, July 9, 2012.
- (18) "*Catalysis with Aminocyclopropanes and Hypervalent Iodine Reagents*"
Organisch-Chemisches Institut, Ruprecht-Karls-Universität Heidelberg, Heidelberg, Germany, May 21, 2012.
- (17) "*Electrophilic Alkynylation of C-H and C=C Bonds and Annulation Reactions of Aminocyclopropanes*"
Institut für Organische Chemie und Biochemie, Albert-Ludwigs-Universität, Freiburg, Germany, January 9, 2012.
- (16) "*Acetylenes and Cyclopropanes: Bottom-Up Approach to Master Dimensionality*"
119. Annual Congress of the Swiss Academy of Sciences (SCNAT), November 18, 2011.
Schläfli award 2011 lecture.
- (15) "*Ethynyl Benziiodoxolone (EBX) Reagents for the Alkynylation of Olefins and Activated Carbonyls*"
23. Conference on Advances in Organic Synthesis (CAOS23), Hradec Kralove, Czech Republic, June 29, 2011.
- (14) "*Organo- and Metal- Catalysis with Aminocyclopropanes and Alkynyl Hypervalent Iodine Reagents*"
Institute of Organic Chemistry, RWTH Aachen, Aachen, Germany, May 31, 2011.
- (13) "*From Catalysis to Natural Product Synthesis: Exploiting the Reactivity of Hypervalent Iodine Reagents and Cyclopropanes*"
Department Chemie, Universität zu Köln, Köln, Germany, May 30, 2011.
- (12) "*Donor-Acceptor Aminocyclopropanes and Alkynyl Hypervalent Iodine Reagents: From Catalysis to Alkaloid Synthesis*"
Fachbereich Chemie, Philipps Universität Marburg, Marburg, Germany, May 16, 2011.
- (11) "*Catalytic Reactions using Cyclopropanes and Alkynyl Hypervalent Iodine Reagents: Synthesis and Functionalization of Heterocycles*"
Basel Chemical Society, Basel, Switzerland, April 28, 2011.
- (10) "*Catalytic Methods Using Donor-Acceptor Aminocyclopropanes and Alkynyl Hypervalent Iodine Reagents*"
Institut für Chemie und Biochemie, Freie Universität Berlin, April 26, 2011.
- (9) "*Cyclopropanes and Hypervalent Iodine: Small Rings and Weak Bonds for the Synthesis of Alkaloids and Acetylenes*"
Institut de chimie et biochimie, Université de Lyon, Lyon, France, April 21, 2011.
- (8) "*Cyclization of Activated Cyclopropanes and Catalytic Alkynylation Reactions: Synthesis and Functionalization of Heterocycles*"
F. Hoffmann-La Roche Ltd, Basel, Switzerland, November 22, 2010.
- (7) "*Alkynyl Benziiodoxolones and Cyclopropanes: Umpolung of Acetylenes and Synthesis of Alkaloids*"
Department de Chimie Organique, Université de Genève, October 21, 2010.
- (6) "*Cyclization of Aminocyclopropanes: Total Synthesis and Bioactivity of Goniomitine*"
2nd Young Investigators Workshop, Regensburg, Germany, August 28, 2010.

- (5) *“Alkynyl Benziodoxolone Reagents and Activated Cyclopropanes: Catalytic Reactions and Application in the Total Synthesis of Goniomitine”*
Institut de Chimie des Substances Naturelles (ICSN), CNRS, Gif-sur-Yvette, France, June 16, 2010.
- (4) *“Catalytic Alkynylations with Hypervalent Iodine and Cyclizations of Activated Cyclopropanes”*
Institut de Chimie et des Matériaux d’Orsay (ICMMO, UMR 8182), University of Paris-Sud, Orsay, France, June 15, 2010.
- (3) *“Hypervalency and Ring Strain: Non-Conventional Reactivity for the Synthesis of Alkynes and Heterocycles”*
Institut parisien de chimie moléculaire (UMR 7201), Université Pierre et Marie Curie, Paris, France, June 14, 2010.
- (2) *“New C-C Bond Forming Reactions: Acetylene-Transfer and Homo-Nazarov Reactions”*
Lonza AG, Visp, Switzerland, November 30, 2009.
- (1) *“New C-C Bond Forming Reactions: Homo-Nazarov and Acetylene-Transfer Reactions”*
Ecole Nationale Supérieure de Chimie de Montpellier, Montpellier, France, October 9, 2009.