

Prof. Dr. Jan Streuff — Curriculum Vitae

Address for Correspondence:

Prof. Dr. Jan Streuff
Department of Chemistry - BMC
Box 576
SE-75123 Uppsala
Sweden

Phone (office): +4618 471 3801
E-mail: jan.streuff@kemi.uu.se
Web: <https://streuff.weebly.com>



Personal Data

Name: **Streuff, Jan**
Date of Birth: June 20th, 1980
Place of Birth: Leverkusen, Germany
Nationality: German

Language Skills: German (mother language)
English (fluent)
Spanish (intermediate)
French (intermediate)
Swedish (basics)

ResearcherID: [M-5320-2019](#)

ORCID: [0000-0002-8320-4353](#)

[Google Scholar Profile](#)

Education and Professional Experience

since 05/2021	Professor of Organic Chemistry, Uppsala University, Sweden
04/2020-09/2020	Visiting Professor (W2), University of Stuttgart, Germany
12/2015-04/2021	Privatdozent, University of Freiburg, Germany
08/2015-04/2021	Heisenberg fellow of the Deutsche Forschungsgemeinschaft
04/2015-07/2015	Visiting Professor (W3), University of Freiburg, Germany
01/2010-11/2015	Independent Group Leader, University of Freiburg, Germany
04/2008-10/2009	Postdoctoral Scholar with Prof. Dr. Brian M. Stoltz California Institute of Technology, Pasadena, USA
03/2005-03/2008	Doctoral Research with Prof. Dr. Kilian Muñiz University of Strasbourg, France and University of Bonn, Germany
08/2004-01/2005	Diploma Research with Dr. Kilian Muñiz, University of Bonn, Germany
09/2003-12/2003	Internship with Prof. Dr. José J. Marrero Tellado University of La Laguna, Spain
07/2000-08/2000	Internship at Bayer AG, Leverkusen, Germany
04/2000	Start of Chemistry Studies at University of Bonn, Germany

University Degrees and Titles

04/2021	Professor of Organic Chemistry, Uppsala University, Sweden
11/2015	Habilitation (<i>venia legendi</i>), University of Freiburg, Germany
03/2008	Doctorate in Organic Chemistry (excellent), University of Strasbourg, France
01/2005	Diploma in Chemistry, University of Bonn, Germany

Research Interests

- Homogeneous catalyzed cleavage of non-activated C-C and C-heteroatom bonds
- Catalyst controlled radical reactions and reductive umpolung reactions
- Design and synthesis of metallocene catalysts
- Mechanistic studies of complex catalysis systems and development of reactivity models
- Synthesis of heterocyclic building blocks and natural products

Awards and Fellowships

- 2018 Eugen-Graetz-Prize of the University of Freiburg
2015 Heisenberg-Fellowship/-Position of the Deutsche Forschungsgemeinschaft (DFG)
2015 Dozentenpreis of the Fonds der Chemischen Industrie (FCI)
2014 ADUC-Award for Habilitands
2013 Dr. Otto-Röhm Award of the Dr. Otto Röhm Foundation
2013 Bürgenstock Conference JSP Fellowship
2012 Thieme Chemistry Journal Award
2010 Liebig Fellowship of the Fonds der Chemischen Industrie
2009 DSM Awards finalist
2008 DAAD (German Academic Exchange Service) postdoctoral scholarship
2007 Conference scholarship for the participation at GDCh Science Forum, Ulm
2005 Karl-Ziegler travel stipend from GDCh
2004 Theodor-Laymann-Stipend, Bonn University

Teaching History:1st cycle courses:

- Introductory Organic Chemistry (1KB472, with tutorial seminars and labs)
- Industrial Organic Chemistry (1KB414, with tutorial seminars)
- Organic and General Chemistry 1 (with demonstration experiments and tutorial seminars)
- Organic and General Chemistry 2 (with demonstration experiments and tutorial seminars)
- Organic Chemistry for Students of Biology, Mol. Medicine, Pharmacy
- Reaction Mechanisms (with tutorial seminars)

2nd cycle courses:

- Organic Chemistry III (1KB445, with tutorial seminars and labs)
- Aromatics and Heteroaromatics (with tutorial seminars)
- Organic Radical Chemistry
- Application of Asymmetric Synthesis and Catalysis (online course)

combined 2nd/3rd cycle course:

- Advanced Synthesis (continuous course on total synthesis and organic reaction mechanisms)

Academic ActivitiesConference Organization:

- Co-organizer of the Holmquist Symposium, Uppsala University, since 2022
- Co-organizer of the *Day of Research* at the Faculty of Chemistry and Pharmacy at Freiburg University, 2018
- Co-organizer of the biannual meeting of the fellows of the Fonds der Chemischen Industrie at Freiburg University, 2012

Reviewing for Journals and Grants:

- Reviewer for >30 journals including *Angew. Chem. Int. Ed.*, *J. Am. Chem. Soc.*, *Chem. Commun.*, *ACS Catal.*, *Org. Lett.*, *Chem. Eur. J.*, *J. Org. Chem.*, *Nat. Commun.*, *Nat. Rev. Chem.*
- Reviewer for the Deutsche Forschungsgemeinschaft (DFG)
- Reviewer for the Humboldt-Foundation
- Reviewer for the Boehringer Ingelheim Foundation
- Reviewer and examiner of numerous dissertations and doctoral exams, external examiner and referee for theses and defenses at foreign institutions and universities (opponent)

Other:

- Author of articles for the RÖMPP Chemistry Encyclopedia (roempp.thieme.de), 2017–2021
- Member of the Gesellschaft Deutscher Chemiker (GDCh, www.gdch.de)
- Member of the Swedish Chemical Society (www.kemisamfundet.se)

List of Publications in Peer-Reviewed Journals:

51. "Reductive Umpolung and Defunctionalization Reactions Through Higher-Order Titanium(III) Catalysis" J. Streuff, *Synlett* **2023**, 34, 314–326.
50. "A Guide to Low-Valent Titanocene Complexes as Tunable Single-Electron Transfer Catalysts for Applications in Organic Chemistry" T. Hilche, S. L. Younas, A. Gansäuer, J. Streuff, *ChemCatChem* **2022**, 14, e202200530.
49. "Catalytic Asymmetric β -Oxygen Elimination" C. Matt, A. Orthaber, J. Streuff, *Angew. Chem. Int. Ed.* **2022**, 61, e202114044.
48. "Kinetic Analysis Uncovers Hidden Autocatalysis and Inhibition Pathways in Titanium(III)-Catalyzed Ketone-Nitrile Coupling" S. L. Younas, J. Streuff, *ACS Catal.* **2021**, 11, 11451–11458. (open access)
47. "A Titanium-Catalyzed Reductive α -Desulfonylation" C. Kern, J. Selau, J. Streuff, *Chem. Eur. J.* **2021**, 27, 6178–6182. (open access)
46. "Zirconium Catalyzed Remote Defunctionalization of Alkenes" C. Matt, C. Kern, J. Streuff, *ACS Catal.* **2020**, 10, 6409–6413.
45. "Titanocene Catalysts with Modifiable C_2 -Symmetric Chiral Ligands" S. Wiesler, S. L. Younas, D. Kratzert, J. Streuff, *J. Organomet. Chem.* **2020**, 919, 121327.
44. "Titanium(III) Catalyzed Reductive Decyanation of Geminal Dinitriles by a Non-Free Radical Mechanism" J. Weweler, S. L. Younas, J. Streuff, *Angew. Chem. Int. Ed.* **2019**, 58, 17700–17703.
43. "Synthesis of α,ω -Bis-Enones by the Double Addition of Alkenyl Grignard Reagents to Diacid Weinreb Amides" S. Wiesler, M. A. Bau, T. Niepel, S. L. Younas, H.-T. Luu, J. Streuff, *Eur. J. Org. Chem.* **2019**, 6246–6260.
42. "Reductive C-O, C-N, and C-S Cleavage by a Zirconium Catalyzed Hydrometalation/ β -Elimination Approach" C. Matt, F. Kölblin, J. Streuff, *Org. Lett.* **2019**, 21, 6983–6988.
41. "Strategies for the Synthesis of Chiral Carbon-Bridged Group IV ansa-Metallocenes" M. A. Bau, S. Wiesler, S. L. Younas, *Chem. Eur. J.* **2019**, 25, 10531–10545.
40. "Development, Scope, and Applications of Titanium(III) Catalyzed Cyclizations to Aminated N-Heterocycles", L. H. Leijendekker, J. Weweler, T. M. Leuther, D. Kratzert, J. Streuff, *Chem. Eur. J.* **2019**, 25, 3382–3390.
39. "Development of an Efficient Synthesis of rac-3-Demethoxyerythratidinone via a Titanium(III) Catalyzed Imine-Nitrile Coupling", H.-T. Luu, J. Streuff, *Eur. J. Org. Chem.* **2019**, 139–149.
38. "A Unified Approach to Customized Chiral Carbon-Bridged ansa-Metallocenes", S. Wiesler, M. A. Bau, S. L. Younas, H.-T. Luu, D. Kratzert, J. Streuff, *Chem. Eur. J.* **2018**, 24, 16532–16536.
37. "Understanding titanium-catalysed radical-radical reactions: A DFT study unravels the complex kinetics of ketone-nitrile couplings", J. Streuff, D. Himmel, S. L. Younas, *Dalton Trans.* **2018**, 47, 5072–5082.
36. "Catalytic Reductive Synthesis and Direct Derivatization of Unprotected Aminoindoles, Aminopyrroles and Iminoindolines", L. H. Leijendekker, J. Weweler, T. M. Leuther, J. Streuff, *Angew. Chem. Int. Ed.* **2017**, 56, 6103–6106.
35. "Direct conjugate alkylation of α,β -unsaturated carbonyls by Ti^{III} -catalysed reductive umpolung of simple activated alkenes", P. Bichovski, T. M. Haas, M. Keller, J. Streuff, *Org. Biomol. Chem.* **2016**, 14, 5673–5682.

34. "Mechanism of the Ti^{III} -Catalyzed Acyloin-Type Umpolung: A Catalyst-Controlled Radical Reaction", J. Streuff, M. Feurer, G. Frey, A. Steffani, S. Kacprzak, J. Weweler, L. H. Leijendekker, D. Kratzert, D. A. Plattner, *J. Am. Chem. Soc.* **2015**, *137*, 14396–14405.
33. "Metal-Catalyzed β -Functionalization of Michael-Acceptors through Reductive Radical Addition Reactions", J. Streuff, A. Gansäuer, *Angew. Chem. Int. Ed.* **2015**, *54*, 14232–14242.
32. "A Titanium(III)-Catalyzed Reductive Umpolung Reaction for the Synthesis of 1,1-Disubstituted Tetrahydroisoquinolines", H.-T. Luu, S. Wiesler, G. Frey, J. Streuff, *Org. Lett.* **2015**, *17*, 2478–2481.
31. "Titanium-Catalyzed Reductive Umpolung Reactions with a Metal-Free Terminal Reducing Agent", G. Frey, J. N. Hausmann, J. Streuff, *Chem. Eur. J.* **2015**, *21*, 5693–5696.
30. "Synthesis of Bridged Benzazocines and Benzoxocines by a Titanium-Catalyzed Double Reductive Umpolung Strategy", P. Bichovski, T. M. Haas, D. Kratzert, J. Streuff, *Chem. Eur. J.* **2015**, *21*, 2339–2342.
29. "Amidato complexes of ruthenium, rhodium and iridium from concise N-H bond activation: exploration in catalysis", R. M. Romero, L. Fra, A. Lishchynski, C. Martínez, J. Streuff, K. Muñiz, *Tetrahedron* **2015**, *71*, 4465–4472.
28. "Reductive Umpolung Reactions with Low-Valent Titanium Catalysts", J. Streuff, *Chem. Rec.* **2014**, *14*, 1100–1113.
27. "Brominations with Pr_4NBr_9 as a solid reagent with high reactivity and selectivity", T. M. Beck, H. Haller, J. Streuff, S. Riedel, *Synthesis* **2014**, *46*, 740–747.
26. "The cross-selective titanium(III)-catalysed acyloin reaction", M. Feurer, G. Frey, H.-T. Luu, D. Kratzert, J. Streuff, *Chem. Commun.* **2014**, *50*, 5370–5372.
25. "Organische Chemie. Von Jonathan Clayden, Nick Greeves und Stuart Warren", J. Streuff, *Angew. Chem.* **2014**, *126*, 2848–2849. (book review)
24. "Convenient Titanium(III)-Catalyzed Synthesis of Cyclic Aminoketones and Pyrrolidinones – Development of a Formal [4+1] Cycloaddition", G. Frey, H.-T. Luu, P. Bichovski, M. Feurer, J. Streuff, *Angew. Chem. Int. Ed.* **2013**, *52*, 7131–7134.
23. "The Electron-Way: Metal-Catalyzed Reductive Umpolung Reactions of Saturated and α,β -Unsaturated Carbonyl Derivatives", J. Streuff, *Synthesis* **2013**, *45*, 281–307.
22. "An Update on Catalytic Strategies for the Synthesis of α -Hydroxyketones", J. Streuff, *Synlett* **2013**, *24*, 276–280.
21. "Enantioselective Titanium(III)-Catalyzed Reductive Cyclization of Ketonitriles", J. Streuff, M. Feurer, P. Bichovski, G. Frey, U. Gellrich, *Angew. Chem. Int. Ed.* **2012**, *51*, 8661–8664.
20. "Metal-Free Diamination of Alkenes Employing Bromide Catalysis", P. Chávez, J. Kirsch, C. H. Hövelmann, J. Streuff, M. Martínez-Belmonte, E. C. Escudero-Adán, E. Martin, K. Muñiz, *Chem. Sci.* **2012**, *3*, 2375–2382.
19. "Palladium-Catalyzed Intramolecular Diamination of Acrylic Esters Using Sulfamates as Nitrogen Source", P. Chávez, J. Kirsch, J. Streuff, K. Muñiz, *J. Org. Chem.* **2012**, *77*, 1922–1930.
18. "A Titanium(III)-Catalyzed Redox Umpolung Reaction for the Reductive Cross-Coupling of Enones with Acrylonitriles", J. Streuff, *Chem. Eur. J.* **2011**, *17*, 5507–5510.
17. "Metal-ligand bifunctional activation and transfer of N-H bonds", K. Muñiz, A. Lishchynskiy, J. Streuff, M. Nieger, E. C. Escudero-Adán, M. M. Belmonte, *Chem. Commun.* **2011**, *47*, 4911–4913.
16. "Rapid synthesis of an electron-deficient *t*-BuPHOX ligand: cross-coupling of aryl bromides with secondary phosphine oxides", N. T. McDougal, J. Streuff, H. Mukherjee, S. C. Virgil, B. M. Stoltz, *Tetrahedron Lett.* **2010**, *51*, 5550–5554.

15. "A palladium-catalysed enolate alkylation cascade for the formation of adjacent quaternary and tertiary stereocentres", J. Streuff, D. E. White, S. C. Virgil, B. M. Stoltz, *Nature Chem.* **2010**, 2, 192–196.
14. "Synthesis of Diamino Carboxylic Esters by Palladium-Catalyzed Oxidative Intramolecular Diamination of Acrylates", K. Muñiz, J. Streuff, P. Chávez, C. H. Hövelmann, *Chem. Asian J.* **2008**, 3, 1248–1255.
13. "First palladium- and nickel-catalyzed oxidative diamination of alkenes: Cyclic urea, sulfamide, and guanidine building blocks", K. Muñiz, C. H. Hövelmann, J. Streuff, E. Campos-Gomez, *Pure Appl. Chem.* **2008**, 80, 1089–1096.
12. "Direct synthesis of bicyclic guanidines through unprecedented palladium(II) catalysed diamination with copper chloride as oxidant", C. H. Hövelmann, J. Streuff, L. Brelot, K. Muñiz, *Chem. Commun.* **2008**, 2334–2336.
11. "Intramolecular diamination of alkenes with palladium(II)/copper(II) bromide and IPy₂BF₄: The role of halogenated intermediates", K. Muñiz, C. H. Hövelmann, E. Campos-Gómez, J. Barluenga, J. M. González, J. Streuff, M. Nieger, *Chem. Asian J.* **2008**, 3, 776–788.
10. "Oxidative Diamination of Alkenes with Urea as Nitrogen Sources: Mechanistic Pathways in the Presence of a High Oxidation State Palladium Catalyst", C. H. Hövelmann, J. Streuff, K. Muñiz, *J. Am. Chem. Soc.* **2008**, 130, 763–773.
9. "Comments on the Role of High Oxidation Catalyst States in the Selective Palladium Catalyzed 1,2-Difunctionalization of Alkenes", K. Muñiz, C. H. Hövelmann, J. Streuff, *Latv. Kim. Z.* **2007**, 4, 3.
8. "Exploring the Nickel-Catalyzed Oxidation of Alkenes: A Diamination by Sulfamide Transfer", K. Muñiz, J. Streuff, C. H. Hövelmann, A. Núñez, *Angew. Chem. Int. Ed.* **2007**, 46, 7125–7127.
7. "Palladium(II)-Catalyzed Intramolecular Diamination of Unfunctionalized Alkenes", J. Streuff, C. H. Hövelmann, M. Nieger, K. Muñiz, *J. Am. Chem. Soc.* **2005**, 127, 14586–14587.
6. "A Convenient and Highly Productive Aminohydroxylation Protocol Employing an Osmium-Diamine Catalyst", K. Muñiz, I. Almodovar, J. Streuff, M. Nieger, *Adv. Synth. Catal.* **2006**, 348, 1831–1835.
5. "Enantioselective Diamination of Alkenes by Use of a Bisimidoosmium Reagent with the Aid of Chiral Catalysts", I. Almodovar, C. H. Hövelmann, J. Streuff, M. Nieger, K. Muñiz, *Eur. J. Org. Chem.* **2006**, 3, 704–712.
4. "Synthesis of Small Tripeptide Molecules through a Catalysis Sequence Comprising Metathesis and Aminohydroxylation", J. Streuff, M. Nieger, K. Muñiz, *Chem. Eur. J.* **2006**, 12, 4362–4371.
3. "2-Amino ketones from osmium-catalysed oxidations of alkenes", K. Muñiz, A. Villar, C. H. Hövelmann, J. Streuff, R. Vicente, M. Nieger, *J. Mol. Catal. A* **2006**, 251, 277–285.
2. "First asymmetric aminohydroxylation of acrylamides", J. Streuff, B. Osterath, M. Nieger, K. Muñiz, A. Villar, C. H. Hövelmann, *Tetrahedron Asymmetry* **2005**, 16, 3492–3496.
1. "Efficient synthesis of fumaric amides through cross-metathesis of acrylic amides with the NHC Grubbs ruthenium catalyst", J. Streuff, K. Muñiz, *J. Organomet. Chem.* **2005**, 690, 5973–5978.

Other Publications:

3. "Titanium(III)-Catalyzed Reductive Umpolung: A New Concept for Unconventional Carbon-Carbon Bond Formations", J. Streuff, *Habilitation Thesis*, Albert-Ludwigs-Universität Freiburg, **2015**.
2. "Bifunctional N-H Activation and Oxidative Transition Metal Catalysed Diamination of Alkenes", J. Streuff, *PhD Thesis*, **2008**.
1. "Zur Regio- und Diastereoselektivität der Osmium-katalysierten Aminohydroxylierung von chiralen, α,β -ungesättigten Carbonsäureamiden", J. Streuff, *Diploma Thesis*, **2005**.

List of Scientific Lectures:

55. BIGS Chemistry Summer School, Bonn, Germany, **2022**
54. Second National Meeting of the Swedish Chemical Society, Linköping, Sweden, **2022**
53. University of Stockholm (SU), Sweden, **2022**
52. Celsius-Linnaeus Symposium, Uppsala University, Sweden, **2021**
51. University of Uppsala, Sweden, **2020**
50. University of Paderborn, Germany, **2020**
49. University of Stuttgart, Germany, **2020**
48. University of Stuttgart, Germany, **2019**
47. 39th Regio Symposium, Mittelwihr, France, **2019**
46. University of Göttingen, Germany, **2019**
45. Chemiedozententagung, University of Koblenz-Landau, Germany **2019**
44. Technical University of Dresden, Germany, **2018**
43. Day of Research, University of Freiburg, Germany, **2018**
42. University of Regensburg, Germany, **2018**
41. Chemiedozententagung, University of Jena, Germany, **2018**
40. Free University of Berlin, Germany, **2018**
39. University of Mainz, Germany, **2017**
38. 1st International Symposium on Catalysis for Sustainable Chemical Synthesis, Freiburg, Germany, **2017**
37. University of St Andrews, Scotland, **2017**
36. Institut Català d'Investigació Química (ICIQ), Tarragona, Spain, **2017**
35. Chemiedozententagung, University of Marburg, Germany, **2017**
34. University of Innsbruck, Austria, **2016**
33. Boehringer Ingelheim Pharma GmbH&Co.KG, Ingelheim, Germany, **2016**
32. University of Kaiserslautern, Germany, **2016**
31. Day of Research, University of Freiburg, Germany, **2016**
30. University of Wuppertal, Deutschland, **2016**
29. Chemiedozententagung, University of Heidelberg, Germany, **2016**
28. University of Zürich, Switzerland, **2016**
27. Bayer CropScience, Frankfurt, Germany, **2015**
26. University of Basel, Switzerland, **2015**
25. OMCOS 18, Sitges, Spain, **2015**
24. Chemiedozententagung, University of Regensburg, Germany, **2015**
23. University of Ulm, Germany, **2014**
22. Karlsruhe Institute of Technology (KIT), Germany, **2014**
21. Sino-German Symposium on Frontiers of Chemistry, Berlin, Germany, **2014**
20. Technical University of Munich, Germany, **2014**
19. University of Göttingen, Germany, **2014**
18. EUCHEM Conference on Organic Free Radicals, Prague, Czech Republic, **2014**
17. University of Constance, Germany, **2014**
16. Chemiedozententagung, University of Paderborn, Germany, **2014**
15. ADUC-Award Lecture, University of Paderborn, Germany, **2014**
14. University of Granada, Spain, **2013**
13. University of Bonn, Germany, **2013**
12. University of Marburg, Germany, **2013**
11. FCI Fellows Meeting, University of Freiburg, Germany, **2013**
10. Bioorganic Symposium, University of Münster, Germany, **2013**
9. Day of Research, University of Freiburg, Germany, **2013**
8. Bayer Pharma, Wuppertal, Germany, **2013**
7. University of Düsseldorf, Germany, **2013**
6. Chemiedozententagung, Free University of Berlin, Germany, **2013**
5. Steinheim Talks, Bad Homburg, Germany, **2012**
4. Bioorganic Symposium, Karlsruhe Institute of Technology (KIT), Germany, **2011**
3. Day of Research, University of Freiburg, Germany, **2011**
2. DSM Awards, Vitznau, Switzerland, **2009**
1. BASF-SE, Ludwigshafen, Germany, **2008**