

JENNIFER MARIE SCHOMAKER

Curriculum Vita

Department of Chemistry
University of Wisconsin–Madison
1101 University Avenue
Madison, Wisconsin 53706-1396

Tel: (608) 265-2261
Fax: (608) 265-4534
E-mail: schomakerj@chem.wisc.edu
Web: <http://schomaker.chem.wisc.edu>

PROFESSIONAL APPOINTMENTS

Professor of Chemistry 2018-current
University of Wisconsin, Madison, WI

Associate Professor of Chemistry 2015-2017
University of Wisconsin, Madison, WI

Assistant Professor of Chemistry 2009–2015
University of Wisconsin, Madison, WI

EDUCATION AND TRAINING

NIH Postdoctoral Research Associate 2007–2009
University of California Berkeley, CA
Advisors: Professors Robert G. Bergman and F. Dean Toste

Ph.D., Chemistry 2001-2006
Michigan State University East Lansing, MI
Advisor: Professor Babak Borhan

M.S., Chemistry 1994–1998
Central Michigan University Mt. Pleasant, MI
Advisor: Professor Thomas J. Delia

B.S., Chemistry (*summa cum laude*) 1990–1994
Saginaw Valley State University University Center, MI

ADDITIONAL PROFESSIONAL EXPERIENCE

Adjunct Professor of Chemistry 2006–2007
Diablo Valley College Pleasant Hill, CA

Adjunct Professor of Chemistry 1999–2001
Central Michigan University Mt. Pleasant, MI

Research Technologist 1992-1996
The Dow Chemical Company, Agricultural Chemicals Process Research Midland, MI

Cooperative Education student 1990-1992
The Dow Chemical Company, Organic Chemicals and Polymers Midland, MI

AWARDS AND HONORS

- Somojai Miller Visiting Professorship, UC-Berkeley 2019
- Vilas Faculty Mid-Career Award, UW-Madison 2018
- UW2020 Award: All-Optical Electrophysiology-Electrophysiology without Electrodes." Co-principal investigator 2018
- Kavli Fellow 2016
- Leo Paquette Legacy Symposium invited speaker, Ohio State University 2016
- Michigan State University Recent Alumni Award, College of Natural Science 2015
- American Chemical Society WCC Rising Star Award 2014
- Early Excellence profile in *Journal of Physical Organic Chemistry* 2013
- ACS Division of Organic Chemistry Early Academic Investigator Symposium 2013
- Michigan State University Distinguished Alumni Lecturer 2013
- Invited speaker for the inaugural Cal Meyers Memorial Organic Symposium 2013
- Invited speaker for Organic Chemistry Day, University of Missouri at Columbia 2013
- NSF-CAREER Award 2013-2018
- Sloan Research Fellow 2013-2015
- Thieme Chemistry Journal Award 2010
- Ruth L. Kirschstein National Research Service Award Research Training Grant (NIH) 2007–2009
- American Chemical Society, Division of Organic Chemistry Graduate Fellowship 2004
- Dow Chemical Company Foundation Graduate Fellowship 2004
- Michigan State University Distinguished Graduate Fellowship 2001-2005
- Central Michigan University Outstanding Thesis and Dissertation Award 1998
- Dow AgroSciences Inventor Award 1997
- Central Michigan University Graduate Research Fellowship 1996
- DowElanco Inventor's Award 1993-94, 1996
- Dow Chemical Michigan Division Research and Development Inventor Award 1993
- Dow Chemical Company Special Recognition Award, Agricultural Chemicals & Process 1992
- Dow Chemical Company Special Recognition Award, Organic Chemicals and Polymers 1991

PUBLICATIONS/BOOK CHAPTERS

Independent Publications

(** indicates undergraduate co-author)

Manuscripts in preparation

87. Dequina, H.; Eshon, J.; Raskop, W.; Fernández, I.; Schomaker, J. M. "Dehydropiperazine synthesis via aziridinium ylide intermediates." *manuscript in preparation*.

86. Reeves, R. D.; Vine, L. E.; Landwehr, E.; Schomaker, J. M. "Synthesis of densely functionalized cyclopentene building blocks via Pd-catalyzed tandem cross-coupling/cycloisomerizations of allenes." *manuscript in preparation*.

85. Mat Lani, A. S.; Roberts, J. M.; Hu, Y.; Kilgore, H.; Raines, R. T.; Schomaker, J. M. "Triple, Mutually Orthogonal Cycloadditions with Type I-III Dipoles through the Design of Electronically Activated SNO-OCTs." *Manuscript in preparation*.

84. Lu, L.; Ward, R. M.; Schomaker, J. M. "Visible-Light-Assisted, Catalyst-free Amidation of Allenes." *Manuscript in preparation*.

83. Gerstner, N. C.; Nicastrì, K. A.; Schomaker, J. M. "Strategies for the Syntheses of Pactamycin and Jogyamycin." *Manuscript in preparation*.

Published, submitted, or in press:

82. Reeves, R. D.; Kinkema, C. N.; Landwehr, E. M.; Vine, L. E.; Schomaker, J. M. "Stereoconvergent metal-catalyzed allene cycloisomerizations." *Submitted*.

81. Gerstner, N. C.; Schomaker, J. M. "Stereocontrolled Synthesis of the Aminocyclopentitol Core of Jogyamycin *via* an Ichikawa Rearrangement Reaction." *J. Org. Chem.* **2019**, <https://doi.org/10.1021/acs.joc.9b02249>.

80. Ju, M.; Guan, W.**; Schomaker, J. M.; Harper, K. C. "Sequential Reduction of Nitroalkanes Mediated by CS₂ and Amidine/Guanidine Bases: a Controllable Nef Reaction." *Org. Lett.* **2019**, <https://pubs.acs.org/doi/abs/10.1021/acs.orglett.9b02987>.

- Most-read articles for Nov. 2019.

79. Nicastrì, K.; Eshon, J.; Schmid, S. C.; Raskop, W.**; Guzei, I. A.; Fernández, I.; Schomaker, J. M. "Intermolecular [3+3] Ring-Expansion of Aziridines to Dehydropiperidines through the Intermediacy of Aziridinium Ylides." *ChemRxiv* preprint, **2019**, <https://doi.org/10.26434/chemrxiv.9961937.v1>.

78. Corbin, J.; Ketelboeter, D.**; Schomaker, J. M. "Biomimetic Imino-Nazarov cyclizations via eneallene aziridination." *J. Am. Chem. Soc.* **2019**, *in revision*.

77. Lu, L.; Ward, R. M.; Schomaker, J. M. "Mechanistic Aspects and Synthetic Applications of Radical Additions to Allenes." *Chem. Rev.* **2019**, *in press*.

76. Ju, M.†; Huang, M.†, Vine, L. F.; Roberts, J. M.; Dehghany, M.; Schomaker, J. M. "Tunable, catalyst-controlled syntheses of β- and γ-amino alcohol motifs enabled by silver complexes." *Nature Catalysis* **2019**, *2*, 899-908.

75. Scamp, R. J.; Sheffer, B.**; Schomaker, J. M. "Regioselective differentiation of vicinal methylene C-H bonds enabled by silver-catalyzed nitrene transfer." *Chem. Commun.* **2019**, *55*, 7362-7365.

74. Dehghany, M.; Eshon, J.; Roberts, J. M.; Schomaker, J. M. "Silver-catalyzed carbene, nitrene and silylene transfer reactions." in *Silver in Organic Synthesis* Wiley-VCH Verlag GmbH & Co.: Weinheim, **2019**, 439-532.

73. Eshon, J.; Foarta, F.; Landis, C. R.; Schomaker, J. M. "α-Tetrasubstituted aldehydes through electronic and strain-controlled branch-selective stereoselective hydroformylation." *J. Org. Chem.* **2018**, *83*, 10207-10220.

72. Eshon, J.; Gerstner, N. C.; Schomaker, J. M. "Oxidative allene amination for the synthesis of nitrogen-containing heterocycles." *Arkivoc* **2018**, 204-233.

71. Mat Lani, A. S.; Schomaker, J. M. "Site-selective, catalyst-controlled alkene aziridination." *Synthesis* issue in honor of Professor Scott Denmark's 65th birthday, **2018**, *50*, 4462-4470.

70. Schmid, S. C.; Guzei, I. A.; Fernandez, I.; Schomaker, J. M. "Ring expansion of bicyclic methylene-aziridines *via* concerted, near-barrierless [2,3]-Stevens rearrangements of aziridinium ylides." *ACS Catal.* **2018**, *8*, 7907-7914.

69. Tansukawat, N. D.; See, A. E.; Jiranuntarat, S.; Corbin, J. R.; Schomaker, J. M. "Method for the small-scale production of deuteriochloroform." *J. Org. Chem.* **2018**, *83*, 8739-8742.

68. Alderson, J. M.; Corbin, J. R.; Schomaker, J. M. "Investigation of transition metal-catalyzed

nitrene transfer reactions in water." *Bioorg. Med. Chem.* issue in honor of Professor Laura Kiessling's Tetrahedron Prize, **2018**, *26*, 5270-5273.

67. Liu, L.; Schomaker, J. M. "Allene Aziridination as a Tool for the Synthesis of Complex Amines." in *Advances in Transition-Metal Mediated Heterocyclic Synthesis*, Fernandez, I. Ed.; Elsevier, **2018**, pp. 231-283.

66. Vinokur, A. I.; Yakovenko, A.; Liu, L.; Schomaker, J. M.; Guzei, I. A. "An Enantiotropic Disorder-Partial Order Solid-State Transformation in a Molecular Solid Involving a Phase with $Z' = 12$." *Crystal Growth & Design* **2017**, *17*, 5984-5993.

65. "Inverting Steric Effects: Using 'Attractive' Non-Covalent Interactions to Direct Silver-Catalyzed Nitrene Transfer." Huang, M.; Yang, T.; Paretsky, J.; Berry, J.F.*; Schomaker, J.M.* *J. Am. Chem. Soc.* **2017**, *139*, 17376-17386.

64. "Synthetic Applications of Flexible SNO-OCT Strained Alkynes and their Use in Post-Polymerization Modifications." Burke, E.G.; Schomaker, J.M. *J. Org. Chem.* **2017**, *82*, 9038-9046.

63. "A Stereoselective Ring Expansion of the Synthesis of Highly-Substituted Methylene Azetidines." Schmid, S.C.; Schomaker, J.M. *Angew. Chem. Int. Ed.* **2017**, *56*, 12229-12233.

62. "Regioselective, Rh-catalyzed hydroformylation of 1,1,3-trisubstituted allenes using a BisDiazaPhos ligand." Eshon, J.; Landis, C.R.; Schomaker, J.M. *J. Org. Chem.* **2017**, *82*, 9270- 9278.

61. "Chemo- and enantioselective silver-catalyzed aziridinations." Ju, M.; Weatherly, C.D.; Guzei, I.A.; Schomaker, J.M. *Angew. Chem. Int. Ed.* **2017**, *56*, 9944-9948.

- Highlighted in *Synfacts* **2017**, 933.

60. "Diastereoselective Au-catalyzed Allene Cycloisomerizations to Highly Substituted Cyclopentenes." Reeves, R.D.; Phelps, A.M.; Raimbach, W.; Schomaker, J.M. *Org. Lett.* **2017**, *19*, 3394-3397.

59. "Fluorinated Amine Stereotriads via Allene Amination." Liu, L.; Gerstner, N.C.; Oxtoby, L.J.**; Guzei, I.A.; Schomaker, J.M. *Org. Lett.* **2017**, *19*, 3239-3242.

58. "Tunable, chemo- and site-selective nitrene transfer through the rational design of silver(I) catalysts." Alderson, J.M.; Corbin, J.R.; Schomaker, J.M. *Accs. Chem. Res.* **2017**, *50*, 2147-2158.

57. "Fine-tuning Strain and Electronic Activation of Strain-promoted 1,3-Dipolar Cycloaddition with Endocyclic Sulfamates in SNO-OCTs." Burke, E.G.; Gold, B.; Hoang, T.T.; Raines, R.T.; Schomaker, J.M. *J. Am. Chem. Soc.* **2017**, *139*, 8029-8037.

56. "Synthesis, Characterization and VT-NMR Studies of Silver(I) Complexes for Selective Nitrene Transfer." Huang, M.; Corbin, J.R.; Dolan, N.S.; Fry, C.G.; Vinokur, A.; Guzei, I.A.; Schomaker, J.M. *Inorg. Chem.* **2017**, *56*, 6725-6733.

55. "Tandem Oxidative Derivatization of Nitrene Insertion Products for the Highly Diastereoselective Synthesis of 1,3-Aminoalcohols." Alderson, J.M.; Schomaker, J.M. *Chem. Eur. J.* **2017**, *23*, 8571-8576.

54. "Tunable Differentiation of Tertiary C-H Bonds in Intramolecular Transition Metal-Catalyzed Nitrene Transfer Reactions." Corbin, J.R.; Schomaker, J.M. *Chem. Commun.* **2017**, *53*, 4346-49.

- Highlighted in D. F. Taber, *Organic Chemistry Highlights* **2018**, January 22. URL:

53. "Catalyst-controlled nitrene transfer by tuning metal:ligand ratios: Insight into the mechanisms of chemoselectivity." Weatherly, C.D.; Alderson, J.M.; Berry, J.F.; Hein, J.E.; Schomaker, J.M. *Organometallics* **2017**, *36*, 1649–1661.
52. "Catalyst-controlled and tunable, chemoselective silver-catalyzed intermolecular nitrene transfer: Experimental and computational studies." Dolan, N.S.; Scamp, R.J.; Yang, T.; Berry, J.F.; Schomaker, J.M. *J. Am. Chem. Soc.* **2016**, *138*, 14658.
51. "Heteroleptic Nickel Complexes for the Markovnikov-selective Hydroboration of Styrenes." Touney, E.E.**; Van Hoveln, R.; Buttke, C.T.**; Freidberg, M.D.**; Guzei, I.A.; Schomaker, J.M. *Organometallics* **2016**, *35*, 3436.
50. "Intermolecular [4 + 3] cycloadditions of allenes *via* bicyclic methyleneaziridines." Gerstner, N.; Adams, C.S.; Schomaker, J.M. *Angew. Chem. Int. Ed.* **2016**, *55*, 13240.
49. "General Catalyst for Site-Selective C(sp³)-H Bond Amination of Activated Secondary over Tertiary Alkyl C(sp³)-H Bonds." Scamp, R.J.; Jirak, J.G.; Guzei, I.A.; Schomaker, J.M. *Org. Lett.* **2016**, *18*, 3014.
48. "Ligand-Controlled Synthesis of Azoles *via* Ir-Catalyzed Reactions of Sulfoxonium Ylides with 2-Amino Heterocycles." Phelps, A.M.; Chan, V.S.; Napolitano, J.G.; Krabbe, S.; Schomaker, J.M.; Shekhar, S. *J. Org. Chem.* **2016**, *81*, 4158.
47. "Diastereoselective Synthesis of the Aminocyclitol Core of Jogyamycin *via* an Allene Aziridination Strategy." Gerstner, N.C.; Adams, C.S.; Grigg, R.D.; Tretbar, M.; Rigoli, J.W.; Schomaker, J.M. *Org. Lett.* **2016**, *18*, 284.
46. Phelps, A.M.; Alderson, J.M.; Schomaker, J.M. *Science of Synthesis* chapter "Metal-catalyzed cyclization reactions of allenes." Ed. Shengming Ma and Shuanhu Gao, **2016**, *in press*.
45. "Oxidative Allene Amination for the Synthesis of Azetidin-3-ones." Burke, E.G.; Schomaker, J.M. *Angew. Chem. Int. Ed.* **2015**, *54*, 12097.
- Highlighted in Synfacts **2015**, 1142.
44. "Development of N-Heterocyclic Carbene-Copper Complexes for 1,3-Halogen Migration." Schmid, S.C.; Van Hoveln, R.J.; Rigoli, J.W.; Schomaker, J.M. *Organometallics* **2015**, *34*, 4164.
43. "Formal Dyotropic Rearrangements in Organometallic Transformations." Croisant, M.F.; Van Hoveln, R.; Schomaker, J.M. invited review for *Eur. J. Org. Chem.* **2015**, *27*, 5897.
42. "Experimental and Computational Insights into the Mechanism of Cu-catalyzed 1,3-Halogen Migration." Van Hoveln, R.J.; Hudson, B.; Wedler, H.; Bates, D.M.; Le Gros, G.**; Tantillo, D.; Schomaker, J.M. *J. Am. Chem. Soc.* **2015**, *137*, 5346.
41. "Ligand-controlled, tunable silver-catalyzed C-H amination." Scamp, R.; Alderson, J.M.; Phelps, A.M.; Dolan, N.S.; Schomaker, J.M. *J. Am. Chem. Soc.* **2014**, *136*, 16720.
40. "1,3-Halogen migration as an entry to aryl coppers from an unintuitive starting material." Van Hoveln, R.; Schmid, S.; Schomaker, J.M. invited perspective for *Org. Biomol. Chem.* **2014**, *12*, 7655.

39. "Copper-Catalyzed Enantioselective Transfer of Bromine *via* 1,3-Halogen Migration." Van Hoveln, R.J.; Schmid, S.C.; Tretbar, M.; Buttke, C.**; Schomaker, J.M. *Chem. Sci.* **2014**, *5*, 4763.
- Top-ten most accessed article the month of publication.
 - Highlighted in *Org. Process Res. Dev.* **2014**, dx.doi.org/10.1021/op500329b.
38. "Complete Stereodivergence in the Synthesis of 2-Amino-1,3-diols *via* Allene Aziridination." Adams, C.S.; Grigg, R.D.; Schomaker, J.M. *Chem. Sci.* **2014**, *5*, 3046.
- 17th most-read article for April-June 2014.
37. "Aminosugar motifs *via* an allene aziridination strategy." Adams, C.S.; Grigg, R.D.; Schomaker, J.M. Invited paper for the "*Tetrahedron Young Investigator Symposium-in-Print*" in honor of Sarah Reisman, **2014**, *70*, 4128.
36. "The Synthesis and Reactivity of Strained Three-membered Heterocycles derived from Allenes." Adams, C.S.; Weatherly, C.D.; Burke, E.G.; Schomaker, J.M. Invited review for *Chem. Soc. Rev.* special issue on "Progress in Allene Chemistry", **2014**, *43*, 3136.
35. "Stereocontrolled Oxidation of Allenes to Aminodiols." Rigoli, J.W.; Guzei, I.A.; Schomaker, J.M. *Org. Lett.* **2014**, *16*, 1696.
- Highlighted in *Synfacts* **2014**, *10*, 608.
34. "Chemoselective Silver-Catalyzed Nitrene Insertion Reactions." Scamp, R.J.; Rigoli, J.W.; Schomaker, J.M. *Pure Appl. Chem.*, **2014**, *86*, 381.
33. "Tunable, Chemoselective Amination *via* Silver Catalysis." Rigoli, J.W.; Weatherly, C.D.; Alderson, J.; Vo, B.T.**; Schomaker, J.M. *J. Am. Chem. Soc.* **2013**, *135*, 17238.
- Top-ten most accessed article for the month of November 2013.
 - Highlighted in *Chemical & Engineering News* **2013**, *91*, 9.
32. "Stereodefined 1,3-Diamino-2-ols *via* Aminohydroxylation of Bicyclic Methylene Aziridines." Weatherly, C.D.; Schomaker, J.M. *Eur. J. Org. Chem.* **2013**, 3667.
31. "Divergent Reactivity of Allene-containing α -Diazoesters using Cu and Rh Catalysis." Phelps, A.M.; Dolan, N.S.**; Connell, N.T.; Schomaker, J.M. Invited paper for the "*Tetrahedron Young Investigator Symposium-in-Print*" in honor of Melanie Sanford, **2013**, *56*, 5614.
30. "Activating Group Recycling: A Fresh Approach to Arene Functionalization." Grigg, R.D.; Schomaker, J.M. Invited contribution to *Synlett*, **2013**, *24*, 401.
29. "Chemoselective Allene Aziridination *via* Ag(I) Catalysis." Rigoli, J.W.; Weatherly, C.D.; Vo, B.T.**; Neale, S.**; Meis, A.R.**; Schomaker, J.M. *Org. Lett.* **2013**, *15*, 290.
28. "Cu-catalyzed recycling of halogen activating groups *via* 1,3-halogen migration." Grigg, R.D.; Van Hoveln, R.; Schomaker, J.M. *J. Am. Chem. Soc.* **2012**, *134*, 16131.
- Top-ten most accessed article for the month of October 2012.
 - Highlighted: <http://www.sigmaaldrich.com/catalog/papers/22985198>
 - <http://www.organic-chemistry.org/Highlights/2013/09September.shtm>
 - <http://organometallicchemistrynews.blogspot.com/2012/12/copper-catalyzed-recycling-of-halogen.html>
27. "Beyond benzyl Grignards: Facile generation of benzyl 'carbanions' from styrenes." Grigg, R.D.; Rigoli, J.W.; Van Hoveln, R.; Neale, S.**; Schomaker, J.M. *Chem. Eur. J.* **2012**, *18*, 9391.

26. "Modular functionalization of allenes to aminated stereotriads." Adams, C.S.; Boralsky, L.A.; Guzei, I.A.; Schomaker, J.M. *J. Am. Chem. Soc.* **2012**, *134*, 10807.

- Highlighted in *Synfacts* **2012**, 994.

25. "Synthesis of 1,3-diaminated stereotriads via rearrangement of 1,4-diazaspiro[2.2]pentanes." Weatherly, C.D.; Rigoli, J.W.; Schomaker, J.M. *Org. Lett.* **2012**, *14*, 1704.

24. "1,4-Diazaspiro[2.2]pentanes as a platform for the synthesis of diamine-bearing stereotriads." Rigoli, J.W.; Boralsky, L.A.; Hershberger, J.C.; Meis, A.R.**; Guzei, I.A.; Schomaker, J.M. *J. Org. Chem.* **2012**, *77*, 2446.

23. "Synthesis of Propargylic and Allenic Carbamates via the C-H Amination of Alkynes." Rigoli, J.W.; Grigg, R.D.; Pearce, S.D.**; Schomaker, J.M. *Org. Lett.* **2012**, *14*, 280.

- Highlight online: <http://naturalproductman.wordpress.com/category/methodology/transition-metal/rhodium/page/3/>

22. "Organometallics Roundtable 2011." Gladysz, J.; Ball, Z.; Bertrand, G.; Blum, S.A.; Dong, V.M.; Dorta, R.; Hahn, F.E.; Humphrey, M.G.; Jones, W.D.; Klosin, J.; Manners, I.; Marks, T.J.; Mayer, J.M.; Rieger, B.; Ritter, J.C.; Sattelberger, A.P.; Schomaker, J.M.; Yam, V.W. *Organometallics* **2012**, *31*, 1.

- Highlighted online http://justlikecooking.blogspot.com/2012_02_01_archive.html

21. " α,β -Unsaturated imines via Ru-catalyzed coupling of allylic alcohols and amines." Rigoli, J.W.; Moyer, S.A.; Pearce, S.D.**; Schomaker, J.M. *Org. Biomol. Chem.* **2012**, *10*, 1746.

- Top 20 most-cited article for 2012-2013.

20. "C-H amination/cyclocarbonylation of allene carbamates: a versatile platform for the synthesis of α,β -unsaturated γ -lactams." Grigg, R.D.; Schomaker, J.M.; Timokhin, V. Invited paper for the "Tetrahedron Young Investigator Symposium-in-Print" in honor of F. Dean Toste, **2011**, *67*, 4318.

19. "Allene Functionalization via Bicyclic Methylene Aziridines." Boralsky, L.A.; Marston, D.; Grigg, R.D.; Hershberger, J.C.; Schomaker, J.M. *Org. Lett.* **2011**, *13*, 1924.

18. "Polymorphism of 5-(pyridin-2-ylmethylene)-3-phenyl-2-methylthio-3,5-dihydro-4H-imidazole-4-one." Guzei, I.A.; Gunn, E.M.; Spencer, L.C.; Schomaker, J.M.; Rigoli, J.W. *CrystEngComm*, **2011**, *13*, 3444.

Postdoctoral Publications

17. "Cobalt-Mediated, Enantioselective Synthesis of C2 and C1 Dienes." Boyd, W.C.; Crimmin, M.; Rosebrugh, L.**; Schomaker, J.M.; Bergman, R.G.; Toste, F.D. *J. Am. Chem. Soc.* **2010**, *132*, 16365.

- Highlighted in *Synfacts* **2011**, 183.

16. "Cobalt-Mediated [3+2]-Annulation Reaction of Alkenes with α,β -Unsaturated Ketones and Imines." Schomaker, J.M.; Toste, F.D.; Bergman, R.G. *Org. Lett.* **2009**, *11*, 3698.

15. "Cobalt Dinitrosoalkane Complexes in the C-H Functionalization of Olefins." Schomaker, J.M.; Boyd, W.C.; Stewart, I.C.; Toste, F.D.; Bergman, R.G. *J. Am. Chem. Soc.* **2008**, *130*, 3777.

- Highlighted in *Nature*

Graduate Student Publications

14. "Addition of Organometallic Reagents to Aziridine-2-Carboxyaldehydes: Selectivity with Different

Protecting Groups and Substitution Patterns." Kulshrestha, A.; Schomaker, J.M.; Holmes, D.; Staples, R.J.; Jackson, J.E.; Borhan, B. *Chem. Eur. J.* **2011**, *17*, 12326.

13. "Total Syntheses of Haterumalides NA and NC via a Chromium-Mediated Macrocyclization." Schomaker, J.M., Borhan, B. *J. Am. Chem. Soc.* **2008**, *130*, 12228.

- Highlighted in *Synfacts* **2009**, 362.

12. "Tetrasubstituted Pyrrolidines via a Tandem Aza-Payne/Hydroamination Reaction." Schomaker, J.M.; Geiser, A.R. **; Huang, R.; Borhan, B. *J. Am. Chem. Soc.* **2007**, *129*, 3794.

11. "Diastereomerically and Enantiomerically Pure 2,3-Disubstituted Pyrrolidines from 2,3-Aziridin-1-ols Using a Sulfoxonium Ylide: A One-Carbon Homologative Relay Ring Expansion." Schomaker, J.M.; Bhattacharjee, S.; Yan, J.; Borhan, B. *J. Am. Chem. Soc.* **2007**, *129*, 1996.

- Highlighted in *Synfacts* **2007**, 582.
- <http://www.organic-chemistry.org/abstracts/lit1/596.shtm>

10. "The Synthesis of Substituted Phenylpyrimidines via Suzuki Coupling Reactions." Delia, T.J.; Schomaker, J.M.; Kalinda, A. *J. Heterocyclic Chem.* **2006**, *43*, 127.

9. "One-Pot Regio- and Stereoselective Cyclization of 1,2,*n*-trials." Zheng, T.; Narayan, R.S.; Schomaker, J.M.; Borhan, B. *J. Am. Chem. Soc.* **2005**, *127*, 6946.

8. "2,4,6-Trifluoropyrimidine. Reactions with Nitrogen Nucleophiles." Delia, T.J.; Anderson, D.P.; Schomaker, J.M. *J. Heterocyclic Chem.* **2004**, *41*, 991.

7. "Synthesis of Diastereomerically and Enantiomerically Pure Substituted Tetrahydrofurans Using a Sulfoxonium Ylide." Schomaker, J.M.; Pulgam, V.R.; Borhan, B. *J. Am. Chem. Soc.* **2004**, *126*, 13600.

6. "Total Synthesis of (+)-Tanikolide Via Oxidative Lactonization." Schomaker, J.M., Borhan, B. *Org. Biomol. Chem.* **2004**, *2*, 621.

5. "Direct Lactonization of Alkenols via Osmium Tetroxide-Mediated Oxidative Cleavage." Schomaker, J.M.; Travis, B.R.; Borhan, B. *Org. Lett.* **2003**, *5*, 3089.

4. "Arylation of Halogenated Pyrimidines via a Suzuki Coupling Reaction." Schomaker, J.M.; Delia, T.J. *J. Org. Chem.* **2001**, *66*, 7125-7128.

3. "2,4,6-Trichloropyrimidine. Reaction with anilines." Schomaker, J.M.; Delia, T.J. *J. Heterocyclic Chem.* **2000**, *37(6)*, 1457-1462.

2. "2,4,6-Trichloropyrimidine. Reaction with sodium amide." Delia, T.J.; Meltsner, B.R.; Schomaker, J.M. *J. Heterocyclic Chem.* **1999**, *36*, 1259-1261.

1. "Inside the Career of a Chemical Technician." Schomaker, J.M. *American Careers* **1998**, 6-7.

PATENTS

7. Electronically Activated Strained Alkynes. Inventors: Schomaker, J. M.; Burke, E. G. WARF Ref P170043US02 US 20180201593 A1 20180719, issued June, **2019**.

6. Preparation of Novel Classes of Chiral Phosphine Ligands via Enantioselective Cu-catalyzed Halogenation. Inventors: Schomaker, J. M.; Grigg, R. D.; Van Hoveln, R. WARF No. P130268US02, issued December, **2014**.

5. Bicyclic Methylene Aziridines and Reactions Thereof. Inventors: Schomaker, J. M.; Boralsky, L.; Hershberger, J.; Rigoli, J.; Adams, C. WO Patent Appl. 2013-US-79511, Issued March 28, **2013**.

4. Synthesis of N-Heterocycles, β -Amino Acids and Allyl Amines via Aza-Payne Mediated Reaction of Ylides and Hydroxy Aziridines. Inventors: Borhan, B.; Schomaker, J.M.; Bhattacharjee, S.; Korthals, K. WO Patent Appl. 2009-US-12120, Issued January 8, **2009**.

3. Catalytic osmium-assisted oxidative cleavage of olefins Inventors: Borhan, B.; Travis, B.; Schomaker, J. WO Patent Appl. 2003-US-149299. Issued August 7, **2003**.

2. Process for preparing 2-chloro-3-alkoxy-4-alkylsulfonyl- benzoic acids and esters. Siddall, T. L.; Krumel, K. L.; Emonds, M. V. M.; Schomaker, J. M.; Zettler, M. W. U.S. Patent Appl. 6,211,403. Issued April 3, **2001**.

1. Process for preparing 1-alkyl-4-(2-chloro-3-alkoxy-4- alkylsulfonylbenzoyl)-5 hydroxypyrazole and related compounds. Siddall, T. L.; Edmonds, M. V. M.; Krumel, K. L.; Schomaker, J. M.; Zettler, M. W.; Shinkle, S. L.; Webster, J. D. U.S. Patent Appl. 6,015,911. Issued January 18, **2000**.

PRESENTATIONS (* = contributed by JMS, upcoming presentations in italics)

Seminars

<i>July, 2021</i>	Natural Products Gordon Research Conference	Andover, NH
<i>July, 2020</i>	Organometallics Gordon Research Conference	Newport, RI
<i>Jun 4, 2020</i>	Catalysis and Sensing for our Environment (CASE)	Isle of Skye, Scotland
<i>Mar 17, 2020</i>	Boehringer-Ingelheim	Ridgefield, CT
<i>Spring, 2020</i>	Barnard College	New York, NY
<i>Feb 14, 2020</i>	University of Kansas	Lawrence, KS
<i>Feb. 3, 2020</i>	3 rd International Symposium on Carbene/Nitrene Chem.	San Antonio, TX
<i>Nov 19, 2019</i>	Miller Institute	Berkeley, CA
<i>Nov 12, 2019</i>	University of California, San Francisco	San Francisco, CA
Nov 5, 2019	University of California, Berkeley	Berkeley, CA
Oct 18, 2019	South China University of Technology	Guangzhou, China
Oct 16, 2019	Nanjing University	Nanjing, China
Oct 14, 2019	Nankai University	Tianjin, China
Sept 27, 2019	University of Texas at San Antonio	San Antonio, TX
Sept 4, 2019	International Symposium on Synthesis and Catalysis	Evora, Portugal
Apr 11, 2019	University of Washington	Seattle, WA
Mar 30, 2019	Garvan-Olin Award Symposium in honor of Prof. Lisa McElwee-White	Orlando, FL
Jan 16, 2019	University of Toledo	Toledo, OH
Oct 26, 2018	POSTTECH	Pohang, S. Korea
Oct 24, 2018	Seoul National University	Seoul, South Korea
Oct 22, 2018	KAIST	Daejeon, S. Korea
May 29, 2018	Canadian Society of Chemistry	Edmonton, Alberta
Apr 9, 2018	University of Alberta	Edmonton, Alberta
Mar, 2018	Florida Heterocyclic Conference	Gainesville, FL
Feb 2, 2018	New York University	New York, NY
Nov 13, 2017	University of California	Berkeley, CA
Oct 26, 2017	University of Notre Dame	South Bend, IN
Oct 12, 2017	Grinnell College	Grinnell, IA
July 18, 2017	CCHF Virtual Symposium	Madison, WI
Mar 7, 2017	Inorganic Reaction Mechanisms GRC	Galveston, TX
Oct 24, 2016	Frontiers in Chemistry, Western Michigan University	Kalamazoo, MI
July 14, 2016	ACSEL 2016, keynote speaker	Jeju, South Korea
July 27, 2016	Stereochemistry Gordon Research Conference	Newport, RI

June 22, 2016	French-American Chemical Society (FACS) meeting	Santa Barbara, CA
May 6, 2016	Paquette Legacy Symposium, Ohio State University	Columbus, OH
Feb 24, 2016	University of California	Irvine, CA
Dec 19, 2015	Pacificchem	Honolulu, HI
July 1, 2015	OMCOS 18	Sitges, Spain
May 15, 2015	Rutgers University	New Brunswick, NJ
Apr 9, 2015	University of Illinois	Urbana-Champaign, IL
Feb 19, 2015	University of California	Los Angeles, CA
Jan 26, 2015	Medicinal and Bioorganic Chemistry Conference	Steamboat Springs, CO
Jan 22, 2015	University of Wisconsin	Madison, WI
Oct 30, 2014	University of Minnesota	Minneapolis, MN
Sept 26, 2014	University of Rochester	Rochester, NY
Sept 10, 2014	University of West Virginia	Morgantown, WV
Sept 8, 2014	Cornell University	Ithaca, NY
Aug 11, 2014	Young Investigator National Award Symposium	San Francisco, CA
Aug 12, 2014	ACS JOC/OL Symposium	San Francisco, CA
June 23, 2014	Reaction Mechanisms Conference	Davis, CA
Jun 15, 2014	Heterocycles Gordon Research Conference	Newport, RI
May 2, 2014	University of Iowa	Iowa City, IA
Apr 23, 2014	Princeton	Princeton, NJ
Apr 18, 2014	University of Texas	Austin, TX
Apr 16, 2014	California Institute of Technology	Pasadena, CA
Apr 11, 2014	University of California	Santa Barbara, CA
Apr 9, 2014	Scripps Research Institute	La Jolla, CA
Mar 27, 2014	University of Florida	Gainesville, FL
Mar 18, 2014	ACS Advances in C-H Functionalization Symposium	Dallas, TX
Mar 16, 2014	ACS George A. Olah Award Symposium	Dallas, TX
Mar 17, 2014	ACS WCC Rising Star Awards Symposium	Dallas, TX
Jan 9, 2014	Knox College	Galesburg, IL
Dec 6, 2013	University of Wisconsin	Stevens Point, WI
Nov 18, 2013	University of Pennsylvania	Philadelphia, PA
Nov 14, 2013	ACS Southeastern Regional Meeting	Atlanta, GA
Nov 12, 2013	University of Pittsburgh	Pittsburgh, PA
Nov 8, 2013	Carleton College	Northfield, MN
Oct 1, 2013	University of California, Berkeley	Berkeley, CA
Sept 9, 2013	Young Academic Investigators Award Symposium	Indianapolis, IN
Aug 14, 2013	"Kurthfest", University of California	Davis, CA
Aug 20, 2013	Eli Lilly	Indianapolis, IN
July 30, 2013	OMCOS 17	Fort Collins, CO
July 17, 2013	Organic Reactions/Process Gordon Research Conf.	Providence, RI
May, 2013	Dow Agrosiences	Zionsville, IN
Apr, 2013	University of Missouri Organic Chemistry Day	Columbia, MS
Apr 23, 2013	University of Michigan	Ann Arbor, MI
Apr 24, 2013	Michigan State University	East Lansing, MI
Apr 10, 2013	American Chemical Society National Meeting	New Orleans, LA
Apr, 2013	1st Annual Cal Meyers Research Symposium	Carbondale, IL
Nov 14, 2012	Bristol-Myers-Squibb Process Research	New Brunswick, NJ
Nov 13, 2012	Bristol-Myers-Squibb Discovery Research	Hopewell, NJ
Nov 8, 2012	Clemson University	Clemson, SC
Oct 5, 2012	Abbott Laboratories	Abbott Park, IL
July 9, 2012*	Organometallics Gordon Research Conference	Newport, RI
Jun 16, 2012	Robert G. Bergman 70 th Birthday Symposium	Berkeley, CA
Mar 27, 2012	American Chemical Society National Meeting	San Diego, CA

Mar 26, 2012	American Chemical Society National Meeting	San Diego, CA
Nov 18, 2011	Carroll University	Waukesha, WI
Oct 25, 2011	Saginaw Valley State University	University Center, MI
July 12, 2011	Organometallics Gordon Research Conference	Newport, RI
June 26, 2011	Heterocycles Gordon Research Conference	Newport, RI
June 6, 2011*	National Organic Symposium (poster talk)	Princeton, NJ
Feb 11, 2011*	Chicago Organic Symposium	Chicago, IL
Jan 30, 2011*	Conference on Medicinal & Bioorganic Chemistry	Steamboat Springs, CO
Mar 21, 2010	American Chemical Society National Meeting	San Francisco, CA
Nov, 2009	University of Wisconsin, Eau Claire	Eau Claire, WI
Sept 10, 2009	University of Wisconsin, Madison	Madison, WI
Feb 2009	Texas A&M	College Station, TX
Feb 2009	Ohio State University	Columbus, OH
Jan 2009	University of Pittsburgh	Pittsburgh, PA
Jan 2009	University of Texas	Austin, TX
Jan 2009	University of Oregon	Eugene, OR
Jan 2009	North Carolina State University	Raleigh, NC
Jan 2009	University of Wisconsin, Madison	Madison, WI
Jan 2009	University of North Carolina	Chapel Hill, NC
Jan 2009	University of Iowa	Iowa City, IA

Invited Workshops, Symposia, and Outreach presentations

Feb 2019	Kavli Frontiers in Science symposium, Chair	Irvine, CA
Feb 2019	Women in Scientific Education and Research	Madison, WI
July 2018	ACS PFLAGs	Madison, WI
Feb 2018	Kavli Frontiers in Science symposium	Irvine, CA
Nov 2016	Kavli Frontiers in Science symposium	Irvine, CA
Feb 2016	Work-life balance Balancing Work and Family panel	Madison, WI
Apr 2015	Alpha Chi Sigma Spring Induction banquet speaker	Madison, WI
Oct 2014	Women in Chemistry faculty panel, UW	Madison, WI
Sept 2014	Chemistry Opportunities speaker	Madison, WI
Aug 1, 2014	Telluride Summer Research Conference, Accelerating Reaction Discovery	Telluride, CO
Nov 14, 2013	65 th Southeast Regional ACS Meeting	Atlanta, GA
Jan 2013-14	National Academy of Sciences, Committee on Establishing and Promoting a Culture of Safety in Academic Laboratory Research	Washington, DC Boston, MA Berkeley, CA
Sept 9, 2013	246 th ACS National Meeting Division of Organic Chemistry Young Academic Investigators Award Symposium	Indianapolis, IN
Sept 2012	Chemistry Opportunities speaker	Madison, WI
Jan 23, 2012	National Academy of Sciences Conference on Graduate Education	Washington, DC
Aug 30, 2011	American Chemical Society, Organometallics Roundtable	Denver, CO
Apr 2011	NSF BCST panel "Sustainable Chemistry Basic Research"	Washington, DC
Sept 2011	Edgewood Campus School science demo	Madison, WI
Oct 2010	University of Wisconsin Chemistry Career Fair (PFLAGs)	Madison, WI
May 10, 2010	NIH New PI Mentoring Workshop	Dallas, TX
Jan 2010	Edgewood Campus School	Madison, WI
Dec 2009	Alpha Chi Sigma Induction Banquet	Madison, WI

Contributed Student Presentations (Student presenters underlined. *Undergraduate presenter)

Aug 2019	<u>Landwehr, E. M.*</u> ; Reeves, R. D.; Schomaker, J. M. "Palladium-catalyzed cycloisomerization of allenes to access densely functionalized cyclopentenes."
----------	---

258th ACS National Meeting & Exposition, San Diego, CA.

- Mar 2019 Mat Lani, A.; Schomaker J. "Orthogonal biolabeling using modified SNO- OCTs with tunable alkyne polarizability." 257th ACS National Meeting, Orlando, FL.
- Mar 2019 Reeves, R.; Schomaker, J. M. "Transition-metal mediated cycloisomerizations of allenes to afford highly substituted cyclopentenes." 257th ACS National Meeting, Orlando, FL.
- Mar 2019 Liu, L.; Ward, R.; Schomaker, J. M. "Visible-light-assisted and catalyst-free intramolecular hydroamidation of allenyl amides." 257th ACS National Meeting, Orlando, FL.
- Mar 2019 Ju, M.; Huang, M.; Vine, L. E.; Dehghany, M.; Schomaker, J. M. "Tunable, catalyst-controlled syntheses of β - and γ -amino alcohols enabled by silver complexes." 257th ACS National Meeting, Orlando, FL.
- Mar 2019 Guan, W.*; Ju, M.; Schomaker, J. M.; Harper, K. "Reductive Nef reaction mediated by CS₂ and amidine/guanidine bases." 257th ACS National Meeting, Orlando, FL.
- Aug 2018 Huang, M.; Schomaker, J. "Tunable, catalyst-controlled syntheses of β - and γ -amino alcohol motifs enabled by silver complexes." 256rd ACS National Meeting, Boston, MA.
- Aug 2018 Gold, B.; Aronoff, M.; Burke, E.; Hoang, T.; Schomaker, J.; Raines, R. "Optimizing 1,3-dipolar cycloadditions of diazoacetamides for chemical ligation." 256rd ACS National Meeting, Boston, MA.
- Apr 2018 Guan, W.*; Huang, M.; Schomaker, J.M. "Total synthesis of tau protein inhibitors via silver-catalyzed aziridination." UW-Madison Undergraduate Research Symposium.
- Apr 2018 Robitalle, R.*; Ju, M.; Schomaker, J.M. "Utilization of silver-catalyzed asymmetric intramolecular aziridination for de novo aminosugar synthesis." UW-Madison Undergraduate Research Symposium.
- Apr 2018 Oxtoby, L.*; Schomaker, J.M. "A route of eflornithine analogs via oxidative allene amination." Research in the Rotunda, Madison, WI (one of only 6 students selected from across all research disciplines at UW-Madison).
- Mar 2018 Corbin, J.R.; Schomaker, J.M. "Tunable differentiation of tertiary C-H bonds in intramolecular transition metal-catalyzed nitrene transfer reactions." 255th ACS National Meeting, New Orleans, LA.
- July 2017 Gerstner, N.C.; Schomaker, J.M. "Efforts towards the total synthesis of jogyamycin." Natural Products GRC, Andover, New Hampshire.
- Apr 2017 Ju, M.; Schomaker, J.M. "Chemo- and enantioselective Ag-catalyzed aziridinations." 253rd ACS National Meeting, San Francisco, CA.
- Apr 2017 Sheffer, B.*; Scamp, R.J.; Schomaker, J.M. "Regioselective benzosultam formation via silver-catalyzed nitrene insertion." 253rd ACS National Meeting, San Francisco, CA.
- Apr 2017 Oxtoby, L.*; Liu, L.; Gerstner, N.; Schomaker, J.M. "Investigating analogs of eflornithine, an irreversible inhibitor of ornithine decarboxylase." 253rd ACS National Meeting, San Francisco, CA.
- July 2016 Scamp, R.J.; Schomaker, J.M. "Silver-catalyzed, tunable C-H aminations." Organic Reactions and Processes GRC, Newport, RI.
- Aug 2015 Scamp R.J.; Johnston, R.C.; Hare, S.; Cheong, P.; Tantillo, D.J.; Schomaker, J.M. "Development of predictive models to elucidate the roles of ligand and substrate in tunable silver-catalyzed nitrene transfer." 250th ACS National Meeting, Boston, MA.
- Aug 2015 Gerstner, N.; Adams, C.; Schomaker, J.M. "Stereodivergence in intermolecular [4+3] cycloadditions of bicyclic methylene aziridines." 250th ACS National Meeting, Boston, MA.
- Aug 2015 Schmid, S.; Van Hoveln, R.; Rigoli, J.W.; Schomaker, J.M. "Development of N-heterocyclic carbene complexes for 1,3-halogen migration." 250th ACS National

Meeting, Boston, MA.

- Mar 2015 Alderson, J.M.; Phelps, A.M.; Scamp, R.; Dolan, N.S.; Schomaker, J.M. "Ligand-controlled, tunable silver-catalyzed C-H amination." 249th ACS National Meeting, Denver, CO.
- Mar 2015 Hudson, B.M.; Wedler, H.; Van Hoveln, R.; Bates, D.; Tantillo, D.J.; Schomaker, J.M. "Computational mechanistic investigation of a Cu(I)-catalyzed 1, 3-halogen migration." 249th ACS National Meeting, Denver, CO.
- Aug 2014 Dolan, N.S.; Phelps, A.M.; Alderson, J.M.; Schomaker, J.M. "Selective silver-catalyzed amination using different silver/ligand geometries." 248th ACS National Meeting, San Francisco, CA.
- Aug 2014 Van Hoveln, R.; Schmid, S.C.; Le Gros, G.L.; Schomaker, J.M. "Asymmetric copper-catalyzed 1,3-halogen migration and mechanistic insights." 248th ACS National Meeting, San Francisco, CA.
- Jul 2014 Adams, C.S.; Grigg, R.D.; Gerstner, N.; Schomaker, J.M. "Controlled stereodivergence in the synthesis of O/N/O stereotriads via allene aziridination." Stereochemistry Gordon Research Conference, Newport, RI.
- Jun 2014 Weatherly, C.D.; Schomaker, J.M. "Mechanistic studies of dynamic silver catalysis." Organic Processes and Reactions Gordon Research Conference, Providence, RI.
- Mar 2014 Buttke, C.T.**; Rigoli, J.W.; Schomaker, J.M. "Synthesis of novel anthracyclines with doxorubicin-like activity via highly diastereoselective dihydroxylation of bicyclic methylene aziridines." 247th ACS National Meeting, Dallas, TX.
- Mar 2014 Dolan, N.S.; Phelps, A.M.; Schomaker, J.M. "Intermolecular, silver-catalyzed aziridination and C-H insertion." 247th ACS National Meeting, Dallas, TX.
- Sept 2013 Adams, C.S.; Grigg, R.D.; Schomaker, J.M. "Controlled stereodivergence in the synthesis of O/N/O stereotriads via allene aziridination." 246th ACS National Meeting, Indianapolis, IN.
- Sept 2013 Phelps, A.M.; Schomaker, J.M. "Fully-substituted cyclopentanes via Au-catalyzed cyclization of allenes." 246th ACS National Meeting, Indianapolis, IN.
- Jul 2013 Rigoli, J.W.; Weatherly, C.D.; Vo. B.T.; Neale, S.; Meis, A.R.; Schomaker, J.M. "Chemoselective allene aziridination and C-H amination via Ag(I) catalysis." Organic Processes and Reactions Gordon Research Conference, Providence, RI.
- Jul 2013 Grigg, R.D.; Schomaker, J.M. "Allene aziridination as a strategy for stereotriad construction: Applications in target-oriented synthesis." Organic Processes and Reactions Gordon Research Conference, Providence, RI.
- Apr 2013 Dolan, N.S.**; Phelps, A.M.; Schomaker, J.M. "Formation and further reactivity of allene-containing macrocycles." 245th ACS National Meeting, New Orleans, LA.
- Apr 2013 Grigg, R.D.; Schomaker, J.M. "Allene aziridination as a strategy for stereotriad construction: Applications in target-oriented synthesis." 245th ACS National Meeting, New Orleans, LA.
- Apr 2013 Weatherly, C.D.; Rigoli, J.W.; Schomaker, J.M. "New methods for the stereoselective synthesis of 1,3-diamino-2-ols via allene oxidation." 245th ACS National Meeting, New Orleans, LA.
- Apr 2013 Rigoli, J.W.; Weatherly, C.D.; Vo. B.T.; Neale, S.; Meis, A.R.; Schomaker, J.M. "Chemoselective allene aziridination and C-H amination via Ag(I) catalysis." 245th ACS National Meeting, New Orleans, LA.
- Apr 2013 Phelps, A.M.; Dolan, N.S.; Connell, N.T.; Schomaker, J.M. "Divergent reactivity of allene-containing diazo compounds under rhodium and copper catalysis." 245th ACS National Meeting, New Orleans, LA.

- Apr 2013 Van Hoveln, R.J.; Grigg, R.D.; Schomaker, J.M. "Copper-mediated 1,3-halogen migration." 245th ACS National Meeting, New Orleans, LA.
- Apr 2013 Buttke, C.**; Schomaker, J.M.; Van Hoveln, R.J.; Grigg, R.D. "Functionalization of styrene derivatives by Ni(II) and Cu(I) systems." 245th ACS National Meeting, New Orleans, LA.
- Apr 2012 Connell, N.T.; Phelps, A.M.; Schomaker, J.M. "Divergent reactivity of allenic diazomalonates via catalyst control." 4th Annual Chicago Organic Symposium, Chicago, IL.
- Mar 2012 Adams, C.S.; Boralsky, L.A.; Schomaker, J.M. "Flexible synthesis of C-X/C-N/C-Y stereotriads from allenes." 243rd ACS National Meeting, San Diego, CA.
- Mar 2012 Weatherly, C.D.; Rigoli, J.W.; Schomaker, J.M. "Synthesis of 1,3-diamino-2-ol via allene oxidation." 243rd ACS National Meeting, San Diego, CA.
- Mar 2012 Rigoli, J.W.; Boralsky, L.A.; Weatherly, C.D.; Hershberger, J.C.; Schomaker, J.M. "Synthesis of 1,4-diazaspiro[2.2]pentanes as reactive intermediates for the rapid preparation of novel stereotriads." 243rd ACS National Meeting, San Diego, CA.
- Mar 2012 Grigg, R.D.; Rigoli, J.W.; Neale, S.; Schomaker, J.M. "Hydrocarboxylation of styrenes via transition metal-free CO₂ carboxylation." 243rd ACS National Meeting, San Diego, CA.
- Mar 2012 Meis, A.R.**; Rigoli, J.W.; Boralsky, L.A.; Weatherly, C.D.; Schomaker, J.M. "Synthesis and reactivity of 1,4-diazaspiro[2.2]pentanes." 243rd ACS National Meeting, San Diego, CA.
- Mar 2012 Schomaker, J.M.; Grigg, R.D.; Rigoli, J.W.; Moyer, S.A.; Neale, S. "New methods for the addition of small, gaseous molecules to unsaturated hydrocarbons." 243rd ACS National Meeting, San Diego, CA.
- Aug 2011 Hershberger, J.C.; Schomaker, J.M. "Synthesis of palladapyrrolidinones and allene functionalization via methylene aziridines." 242nd ACS National Meeting, Denver, CO.
- Jun 2011 Hershberger, J.C.; Boralsky, L.A.; Marston, D.; Grigg, R.D.; Schomaker, J.M. "Multiple carbon-heteroatom bonds *via* allene functionalization." National Organic Symposium, Princeton, NJ.
- Feb 2011 Hershberger, J.C.; Boralsky, L.A.; Marston, D.; Grigg, R.D.; Schomaker, J.M. "Multiple carbon-heteroatom bonds *via* allene functionalization." 3rd Annual Chicago Organic Symposium, Chicago, IL.
- Jan 2011 Boralsky, L.A.; Marston, D.; Grigg, R.D.; Hershberger, J.C.; Schomaker, J.M. "Allene functionalization via bicyclic methylene aziridines (MAs) and 1,4-diazaspiro[2,2]pentanes (DASPs)." Medicinal and Bioorganic Conference (MBCF), Steamboat Springs, CO.
- Mar 2010 Unzue, A.**; Schomaker, J.M.; Sun, J.T.; Boralsky, L.A. "Progress towards asymmetric carbonylative ring expansion reactions." 239th ACS National Meeting, San Francisco, CA.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

American Association for the Advancement of Science, Member	2017-present
Alpha Chi Sigma faculty member	2009-present
American Chemical Society, Member	1992-present

TEACHING

Chem 345	Intermediate Organic Chemistry	Fall 2012-2019
Chem 346	Intermediate Organic Chemistry Laboratory	Fall 2009-2011
Chem 841	Graduate Organic Synthesis	Spring 2009-2011
Chem 605	Structure Determination Using Spectroscopic Methods	Spring 2012-2019

SERVICE ACTIVITIES

Departmental

2019 Faculty Recruiting Committee
2019 Graduate Student Orientation weekend, Joining a Research Group panel
2018-present Department Finance Committee
2016 Organic Faculty Search Committee
2014 Organic Faculty Search Committee
2013-2018 Organic division graduate advising
2013-2016 IC-Mass Spec Instrumentation Committee
2012-present Chemistry Department Fellowship Committee
2011 Alpha Chi Sigma Alumni Scholarship Panel
2011, 2013 Contributed to NIH-SIG instrumentation grant for a new ESI-TOF mass spec
2009-2013 Recruiting Weekend Committee
2009-2011 Chem Connections speaker
2010 Chemical Biology Interface Training Program Mentor
2009-2011 NMR Instrumentation Committee
2009-2013 Chemistry Department Catalysis Center Steering Committee
2009-2011 Chemistry Department Diversity Committee
2009-2018 Chemistry Department Graduate Admissions Committee
2009 Contributed to the NSF-CRIF funded Catalysis Center Proposal

University

2017-present L&S Curriculum Committee
2017 Hilldale Scholar mentor
2017 McNair Scholar mentor
2017 UW2020 (contributor) *Acquisition of State-of-the-Art Solid-State NMR*
UW ICTR Novel Methods Pilot Grant Award. PI: Dr. Michael Hoffman
Computational Platform for Drug Target and Therapeutic Discovery
2014 Small Molecule Screening Facility Advisory Board
2013-15 Faculty Senate
2010

National/International

2019-current Associate Editor, *Organic Chemistry Frontiers*
2018-19 Kavli Frontiers of Science Organizing Committee Chair
2018-present ACS Division of Organic Chemistry Alternate Councilor
Mar 2019 NIH F32 Postdoctoral Fellowship review panel
2018-present Organic Reactions Editorial Board member
2018 NIH GM-SBCA review panel
2017 Kavli Frontiers of Science Organizing Committee
2017 Mentor for NIH Mentoring Workshop for Assistant Professors of Chemistry
2017-present Organic Letters Editorial Board member
2017 NSF grant review panel
2016 NSF Review panel
2016 NIH GM-SBCB review panel ad hoc member
2016 NIH GM-SBCA review panel ad hoc member
2015 NSF Review panel
2014-2018 External Advisory Board, Michigan Technological University, Dept. of
Chemical Engineering, Houghton, MI
2014 NIH GM-SBCB and GM-SBCA review panel ad hoc member
2013-14 National Academy of Sciences, Committee on Establishing and Promoting a
Culture of Safety in Academic Laboratory Research
2013 NSF Review panel
Jan 2012 National Academy of Sciences Panel on Graduate Education

Aug 2011
Apr 2011
Mar 2011
2009-present

Organometallics Roundtable Discussion

NSF BCST meeting on Sustainable Chemistry Basic Research

Organic Letters Editorial Advisory Board Group meeting

Regular reviewer for almost 30 journals in chemical synthesis and catalysis: *Dalton Transactions, Catalysis Science & Technology, Tetrahedron Letters, Organic Letters, Journal of Organic Chemistry, Journal of Organometallic Chemistry, Organic & Biomolecular Chemistry, Journal of the American Chemical Society, Synthesis, Science, Angewandte Chemie, Chemical Science, Chemical Communications, Advanced Synthesis and Catalysis, Beilstein Journal of Organic Chemistry, Tetrahedron, ACS Catalysis, Science, Chemistry European Journal, Chemical Society Reviews, Nature Chemistry, Nature Catalysis, Organometallics, Synlett, Chemical Reviews, Accounts of Chemical Research, Chem, Organic Chemistry Frontiers, European Journal of Organic Chemistry.*

CURRENT GRADUATE STUDENTS/POST-DOCS

Minxue Huang (M.S. Case Western Reserve)	2014-current
Minsoo Ju (B.S. University of Wisconsin-Madison)	2014-current
Ryan Reeves (B.S. Boise State University)	2014-current
Josephine Eshon (with Landis group, B.S. Texas A&M)	2015-current
Josh Corbin (B.S. University of Virginia)	2015-current
Jessica Roberts (M.S. University of Arizona)	2016-current
Mahzad Dehghany (M.S. University of Tehran)	2017-current
Logan Vine (B.S. Willamette University)	2017-current
Robert Ward (M.S. University of Toronto)	2017-current
Kate Nicastrì (B.S. Holy Cross)	2017-current
Hillary Dequina (B.S. Northeastern)	2018-current
Bob Hu (B.S. Holy Cross)	2018-current
Emily Zerull (B.S. Calvin College)	2018-current
Medena Noikham (Mahidol University, exchange student)	2019-current
Dr. Corey Jones (Ph.D. Michigan State University)	2019-current

CURRENT UNDERGRADUATE STUDENTS

Eleanor Landwehr	2017-current
Danielle Bender	2018-current
William Raskop	2018-current
Abby Ragan	2019-current

FORMER POST-DOCS AND VISITING SCHOLARS

Dr. John C. Hershberger (Ph.D., University of Kansas)	Assistant Professor, Arkansas State
Dr. V. Timokhin (Ph.D., Lviv Polytechnic)	Research Associate, UW-Madison
Dr. Maik Tretbar (Ph.D., Univ. of Hamburg)	Sr. Scientist, Immunic Therapeutics Gmb
Dr. Jon Paretsky (Ph.D., UC-Irvine)	Research Scientist at Georgia-Pacific LLC
Dr. Zhibin Xu (2013-14)	Beijing Institute of Technology
Aria Vahdani (Januvia Pharma, 2018)	Ph.D. student, Michigan State University

FORMER GRADUATE STUDENTS

Dr. R. David Grigg, Ph.D. 2014	Dow Chemical Company
Dr. Jared Rigoli, Ph.D. 2014	Dow AgroSciences, Intel
Dr. Ryan Van Hoveln, Ph.D. 2015	Assistant Professor, Indiana State University
Dr. Cale Weatherly, Ph.D. 2015	Post-doc, Amos Smith, UPenn, Exemplify Biopharma
Dr. Chris Adams, Ph.D. 2015	Intel Corporation
Dr. Alicia Phelps, Ph.D. 2015	PPG
Dr. Ryan Scamp, Ph.D. 2017	Post-doc, Jon Ellman, Yale, Chemocentryx
Dr. Eileen Burke, Ph.D. 2017	Post-doc, Jeremiah Johnson, MIT, 3M
Dr. Julie Alderson, Ph.D. 2017	PPG
Dr. Steven C. Schmid, Ph.D. 2017	Post-doc, Aprahamian (Dartmouth), Hoyer (Minnesota)
Dr. Nels C. Gerstner, Ph.D. 2019	Post-doc, Miller group, UC-Berkeley
Dr. Lu Lui, Ph.D. 2019	

FORMER MASTERS STUDENTS

Dagmara Marston (2009-2011)	University of Oregon Zebrafish Facility
Luke Boralsky (2009-2012)	Rigel Pharmaceuticals
Rachel Dao (2009-2011)	Chemist, DuPont
Sara Moyer (2010-2012)	Villanova School of Law
Nate Connell (2010-2012)	UW-Madison School of Medicine

James Jirak (2013-2015)
Nicholas Dolan (undergrad/M.S. 2012-2015)
Caitlin Utt (2017-2019)
Amirah Mat Lani (undergrad/M.S. 2016-2019)

Millipore Corporation
Ph.D. student, Francis group, Berkeley
Blueprint Medicines, Boston, MA
Ph.D. student, National Singapore Univ.

FORMER UNDERGRADUATE STUDENTS

Dr. Andrea Unzue (2009-10)	Ph.D. with Christina Nevado, University of Zürich, Merck
Dr. Alan Meis (2009-11)	Ph.D. Steven Martin, UT-Austin, Corteva
Dr. Patrick Pentek (2009-10)	Pharm.D. Concordia College
Sam Neale (2010-11)	University of Bristol exchange student
Ally Esch (2010)	
Amanda Assen (2010)	
Brian Vo	University of Idaho
Dominick Patterman	
Jahzy Jazherah	Ph.D. with Prof. C. Hackenberger, Freie Universität Berlin
Michael Freidberg	Ph.D. student with Prof. C. Vanderwal, UC-Irvine
Carl Buttke	Music director, St. Paul's, Madison, WI
Garrett Wheeler, REU student	Ph.D., Choi group, UW-Madison
Josh Taylor	Stanford School of Medicine
Thomas Hemmings	University of Bristol exchange student
Jack Wright	University of Bristol exchange student
Allen Moltzan	
Huanyan Zhang	
Fiach Meany	University of Dublin exchange student
Eric Touney	Ph.D. student, Pronin group, UC-Irvine
Corbin Livingston, REU student	Ph.D. student, Odom group, Michigan State University
Gabe Le Gros	Dental school, University of Michigan
Chase Bruggeman	Entering Ph.D. program at Michigan State University
Brad Sheffer	
Eric Lang	Chemist, AbbVie, North Chicago, IL
Bethany Koerner	Chemist, Cargill
Margeaux Hagemann	
Emily Dzurka, REU	Ph.D. student, Borhan group, Michigan State University
Will Raimbaich	University of Bristol exchange
Stephanie Greed	University of Leeds exchange student
Kik Toonchue	Mahidol University, Bangkok, Thailand exchange student
Anthony Gomez	Beckman Instruments
Luke Oxtoby	Ph.D. student, Engel group, The Scripps Research Institute
Ryan Robotille	
Weiyang Guan	Ph.D. student, Cornell
Devin Ketelboeter	Ph.D. student, Florida State University

RESEARCH FUNDING

Current

NIH R01GM111412-06

09/01/19-8/31/24

Synthetic approaches to complex amines that inhibit protein synthesis by impacting the ribosome

This project focuses on the development of a unified approach towards the synthesis of complex amines occurring in molecules with antimalarial, antibiotic and antitumor activities.

NIH 1R01GM132300-01

07/01/19-6/30/24

Versatile complex amine synthesis via aziridinium ylides and 2-amido-allyl cations
The goal of this project is to develop unified strategies for the synthesis of diverse N-heterocycles from simple building blocks using aziridinium ylides and 2-amidoallyl cations as key intermediates.

NIH 1R21GM131662-01 01/01/19-1/30/21
co-PI with Prof. Baron Chanda, Neuroscience
Synthetic design of an all-optical electrophysiology system
The goal of this project is to design new pore and carrier ionophores to tune membrane potential for better optical electrophysiology measurements.

UW-2020 (co-PI with Chanda, Goldsmith, Rogers) 6/1/18-5/30/20
All-Optical Electrophysiology- Electrophysiology without electrodes

CHE-1664374 6/01/17-5/31/20
National Science Foundation
Designer Silver Catalysts for Tunable C=C and C-H Bond Amination
This project aims to develop new silver catalysts for chemo-, site- and stereoselective C-H bond aminations.

Pending

CHE-1664374 (renewal submitted in Sept. 2019) 06/01/20-05/31/23
National Science Foundation
Designer Silver Catalysts for Tunable C=C and C-H Bond Amination
This project aims to develop new silver catalysts for chemo-, site- and stereoselective C-H bond aminations.

UW-Madison Graduate School Fall Competition (submitted Sept. 2019) 01/01/20-12/31/20

NIH Equipment Supplement Funded 7/2019

Completed

NIH R01GM111412 9/01/14-7/31/19
New Synthetic Strategies for Molecules that Target the Ribosome Project renewed

American Chemical Society New Directions Award 07/01/17-08/31/19
Strategies for aldoxime and ketoxime umpolung: Versatile syntheses of amines and heterocycles The goal of this project is to employ oximes as convenient building blocks for the synthesis of complex amines.

Wisconsin Alumni Research Foundation 07/01/18-06/30/19
Allenes as three-carbon synthons for the synthesis of neuroprotective terpenoids and their analogs

AbbVie 01/01/18-12/31/18
Investigations of Nef Reactions Mediated by CS₂ and DBU
This project will study the mechanism of a mild method converting nitroalkenes to aldehydes and ketones, with the aim of replacing CS₂ in the process.

NIH Equipment Supplement Prep HPLC

CHE-1254397 7/01/13-6/30/18
National Science Foundation

CAREER: New Catalysts and Methods for Amine Synthesis via Stereoselective Allene Aziridination The goal of this project is to change the way the synthetic community approaches the preparation of complex and densely functionalized amine motifs for use in the construction of pharmacologically important molecules and probes for biological questions.

Sloan Research Fellowship	9/15/13-9/14/15
American Chemical Society, New Directions Award <i>New approaches to alkene functionalization via dehydrogenative metalation catalyzed by first-row transition metals</i>	9/1/13-8/31/15
AbbVie <i>Mechanism of Ir-catalyzed N-H insertion</i>	9/1/14-3/31/15
UW-Madison Graduate School Fall Competition <i>Silver catalysts for tunable C-H amination via nitrene transfer</i>	5/1/14-4/30/15
DuPont Collaborative Research and Licensing Group	unrestricted
ACS PRF (Doctoral New Investigator Program) <i>Development of New Homogeneous Catalysts for the Activation of Nitrous Oxide</i>	9/1/10-8/31/12
UW-Madison Graduate School Fall Competition <i>Flexible Methods for the Synthesis of Bioactive Molecules</i>	7/1/12-6/30/13
UW-Madison Graduate School Fall Competition <i>New Catalytic Methods for the Conversion of CO₂ into Value-added Compounds</i>	7/1/11-6/30/12