

# JENNIFER MARIE SCHOMAKER

## *Curriculum Vita*

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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](mailto:schomakerj@chem.wisc.edu)  
Web: <http://schomaker.chem.wisc.edu>

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### **PROFESSIONAL APPOINTMENTS**

Professor of Chemistry University of Wisconsin, Madison, WI	2018-current
Associate Professor of Chemistry University of Wisconsin, Madison, WI	2015-2017
Assistant Professor of Chemistry University of Wisconsin, Madison, WI	2009–2015

### **EDUCATION AND TRAINING**

NIH Postdoctoral Research Associate University of California Advisors: Professors Robert G. Bergman and F. Dean Toste	2007–2009 Berkeley, CA
Ph.D., Chemistry Michigan State University Advisor: Professor Babak Borhan	2001-2006 East Lansing, MI
M.S., Chemistry Central Michigan University Advisor: Professor Thomas J. Delia	1994–1998 Mt. Pleasant, MI
B.S., Chemistry Saginaw Valley State University	1990–1994 University Center, MI

### **ADDITIONAL PROFESSIONAL EXPERIENCE**

Adjunct Professor of Chemistry Central Michigan University	1999–2001 Mt. Pleasant, MI
Research Technologist The Dow Chemical Company, Agricultural Chemicals Process Research	1992-1996 Midland, MI
Cooperative Education student The Dow Chemical Company, Organic Chemicals and Polymers	1990-1992 Midland, MI

## AWARDS AND HONORS

- UW Vilas Associate Award 2023
- American Chemical Society Mid-Career Cope Scholar Award 2022
- Alexander von Humboldt Friedrich Wilhelm Bessel Research Award 2021
- ACS Green Chemistry Institute Pharmaceutical Roundtable grant 2021
- Elected to the American Association for the Advancement of Science (AAAS) 2021
- Fellow, Royal Society of Chemistry (FRSC) 2021
- MAVEN Senior Scientist 2021
- UW Romnes Faculty Fellowship Award 2021
- Somojai Miller Visiting Professorship Award, 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
- 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)

*In preparation.*

122. Bartolomeu-Halicki, P. C.; Kim, J. H.; Griffin, A. F.\*\*; Schomaker, J. M.; Rohde, K. Novel inhibitors of mycolic acid synthesis as TB drug candidates.

121. Dai, Z.-Y.; Schomaker, J. M. Iron-catalyzed, regio- and stereoselective azidoamidations of 1,3-dienes.

120. Yu, H.; Lee, K.; Schomaker, J. M. A new synthetic strategy towards S, N, and O-heterocyclooctynes facilitates bioconjugation and bioorthogonal labeling.

119. Schroeder, E. Z.; Liu, C.; Hu, Y.; Griffin, A. F.\*\*; Schomaker, J. M. Chemo-selective silver-catalyzed nitrene transfer for the synthesis of azepine and cyclic carbamimidate derivatives.

118. Dehghany, M.; Pavaleni, G.; Kailing, J. W.; Duke, O. M.; Fernandez, I.; Schomaker, J. M. Divergent Reactivity of Aziridinium Ylides: Synthesis of Diversifiable Piperidines and Azetidines.

*Published or submitted.*

117. Trinh, A. T.; Fue, Y.; Zappia, S. A.\*\*; Hu, D. B.; Guzei, I. A.; Liu, P.; Schomaker, J. M. Chemo- and Enantioselective Intramolecular Silver-Catalyzed Aziridinations of Carbamimidates. **2023**, *Submitted to ChemRxiv*.

116. Gerstner, N. G.; Nicastrì, K. A.; Schomaker, J. M. A Tandem Ichikawa/Winstein Rearrangement Approach Towards the Aminocyclopentitol Core of Jogyamycin. **2023**, *Submitted to ChemRxiv*.

115. Zerull, E. E. Fu, Y. Kim, J. Liu, W. Liu, P.; Schomaker, J. M. Scope and computational insights into enantioselective C-H amination through silver-catalyzed nitrene transfer. **2023**, *Submitted to ChemRxiv*.

114. Ward, R. M.; Hu, Y.; Tu, N.; Schomaker, J. M. Solvent effects on the chemo- and site-selectivity of transition metal-catalyzed heterogeneous nitrene transfer reactions: Alternatives to chlorinated solvents. *ChemSusChem* **2023**, doi.org/10.1002/cssc.202300964.

113. Lee, K.; Seo, K.; Dehghany, M.; Hu, Y.; Trinh, A.; Schomaker, J. M. An overview of *N*-heterocycle syntheses involving nitrene transfer reactions. *Topics in Heterocyclic Chemistry*, **2023**, 1-65, *in press*.

112. Dequina, H.; Jones, C. L.; Schomaker, J. M. One ring to rule them all: recent progress and future perspectives in aziridine synthesis and reactivity. *Chem* **2023**, <https://doi.org/10.1016/j.chempr.2023.04>.

111. Trinh, T. A.; Schomaker, J. M. Unnatural  $\alpha$ -amino acid synthesis. *Nature Syn.* **2023**, doi.org/10.1038/s44160-023-00278-7.

110. Choi, I.; Trenerry, M.; Lee, K.; King, N.\*\*; Berry, J. F.; Schomaker, J. M. Divergent C-H aminations and iminations by tuning electrochemical reaction potentials. *ChemSusChem*. **2022**, <https://doi.org/10.1002/cssc.202201662>.

109. Fu, Y.; Zerull, E. E.; Schomaker, J. M.; Liu, P. Origins of catalyst-controlled selectivity in the Ag-catalyzed regiodivergent C-H amination. *J. Am. Chem. Soc.* **2022**, *144*, 2735-2746.

108. Nicastrì, K. A.; Zappia, S.; Pratt, J. C.; Duncan, J. M.; Fernandez, I.; Schomaker, J. M. Tunable aziridinium ylide reactivity: non-covalent interactions enable divergent product outcomes. *ACS Catal.* **2022**, *12*, 1572-1580.

107. Vine, L. E.; Schomaker, J. M. Back to basics. *Nat. Chem.* **2022**, doi: 10.1038/s41557-022-01029-5.

106. Liu, W.; Choi, I.; Zerull, E. E.; Schomaker, J. M. Tunable silver-catalyzed nitrene transfer: From chemoselectivity to enantioselective C-H amination. *ACS Catal.* **2022**, *12*, 5527-5539.

105. Zerull, E. E.; Schomaker, J. M. Chiral amine synthesis refashioned. *Nat. Synthesis* **2022**, *1*, 506-507.

104. Ward, R. M.; Schomaker, J. M. C-H amination via hydrogen atom transfer. in Handbook of CH-Functionalization (CHF) John Wiley & Sons: Chichester, UK, **2022**, *13*, 1-37.
103. Carrasquel Ursulaez, W.; Dehghany, M.; Jones, C.; Schomaker, J. M.; Chanda, B. Acylated and Alkylated Benzo Crown Ethers as Ion Channels in Biological Membranes. *Biophys. J.* **2022**, *121*, 1105-1114.
102. Zerull, E. E.; Kim, J.; Trinh, A.; Schomaker, J. M. C-H functionalization via asymmetric nitrene transfer in Handbook of CH-Functionalization (CHF) John Wiley & Sons: Chichester, UK, **2022**, *in press*.
101. Dequina, H. J.; Eshon, J.; Schmid, S. C.; Raskopf, W. T.\*\*; Sanders, K. M.; Fernandez, I.; Schomaker, J. M. Re-evaluation of product outcomes in the Rh-catalyzed ring expansion of aziridines with N-sulfonyl-1,2,3-triazoles. *J. Org. Chem.* **2022**, *87*, 10902–10907.
100. Vine, L. E.; Schomaker, J. M. Pd-catalyzed Heck-type reactions of allenes for stereoselective syntheses of substituted 1,3-dienes. *Chem. Eur. J.* **2021**, <https://doi.org/10.1002/chem.202103507>.
99. Hu, Y.; Schomaker, J. M. Recent Advances in Reagents for Bioorthogonal Labeling. Invited review for *ChemBioChem* **2021**, *22*, 3254-3262.
98. Vine, L. E.; Reeves, R. D.; Landwehr, E.; Schomaker, J. M. Chemodivergent Pd-Catalyzed Cycloisomerization/Cross-Couplings of Allenyl Malonates. *ACS Catal.* **2021**, *11*, 9485-9494.
97. Ju, M.; Schomaker, J. M. Modern Catalyst Design Strategies for Enantioselective Formation of C-N Bonds via Nitrene Transfer. Invited review for *Nat. Rev. Chem.* **2021**, *5*, 580-594.
96. Ward, R. M.; Schomaker, J. M. Radical Trifunctionalization of Allenes Enabled by an EDA Complex. *J. Org. Chem.* **2021**, *86*, 8891-8899.
95. Dequina, H. J.; Nicastrì, K. A.; Schomaker, J. M. Invited chapter for *Advances in Organometallic Chemistry*, **2021**, *76*, 1-100.
94. Dehghany, M.; Schomaker, J. M. Silver-catalyzed Enantioselective Functionalizations of Alkenes and Alkynes: A Short Review. *Invited review for Curr. Opin. Green and Sustainable Chem.* **2021**, <https://doi.org/10.1016/j.cogsc.2021.100483>.
93. Zerull, E. E.; Vine, L. E.; Schomaker, J. M. Taming Nitrene Reactivity with Silver Catalysts. Invited perspective for *Synlett* **2021**, *32*, 30-44.
92. Hu, Y.; Roberts, J. M.; Kilgore, H.; Mat Lani, A. S.; Raines, R. T.; Schomaker, J. M. Triple, Mutually Orthogonal Cycloadditions with Type I-III Dipoles through the Design of Electronically Activated SNO-OCTs. *J. Am. Chem. Soc.* **2020**, *142*, 18826-18835.
- Highlighted in *Synfacts*
91. Carrasquel Ursulaez, W.; Reeves, R. D.; Dehghany, M.; Jones, C.; Schomaker, J. M.; Chanda, B. Re-Evaluation of the Mechanism of Cytotoxicity Dialkylated Lariat Ether Compounds. *RSC Advances* **2020**, *10*, 40391-40394.

90. Crandall, J. K.; Curci, R.; D'Accolit, L.; Fusco, C.; Nicastrì, K. A.; Schomaker, J. M. DMDO. In *Encyclopedia of Reagents for Organic Synthesis* **2021**, <https://doi.org/10.1002/047084289X.rd329.pub3>.

89. Dequina, H. J.; Schomaker, J. M. Complex *N*-Heterocycles via Metal Carbenoid-Generated Aziridinium Ylides. *Trends in Chemistry* **2020**, *2*, 874-887.

88. Ju, M.; Zerull, E. E.; Roberts, J. M.; Huang, M.; Guzei, I. A.; Schomaker, J. M. Silver-Catalyzed Enantioselective Propargylic C-H Bond Amination through Rational Ligand Design. *J. Am. Chem. Soc.* **2020**, *142*, 12930-12936.

- Most-read articles for July, 2020.

87. Liu, L.; Ward, R. M.; Schomaker, J. M. Regioselective Intramolecular Allene Amidation Enabled by an EDA Complex. *Chem. Eur. J.* **2020**, *26*, 13783-13787.

86. Nicastrì, K. A.; Schomaker, J. M. 1,2-Azide Migration Enables Synthesis of  $\beta$ -Difluoroalkyl Azides. *Chem* **2020**, *6*, 327-329.

85. Huang, M.; Paretsky, J.; Schomaker, J. M. Rigidifying Ag(I) Complexes for Selective Nitrene Transfer. *ChemCatChem*. **2020**, *12*, 3076-3081.

84. Gerstner, N. C.; Nicastrì, K. A.; Schomaker, J. M. Strategies for the Syntheses of Pactamycin and Jogyamycin. *Angew. Chem. Int. Ed.* **2020**, [doi.org/10.1002/ange.202004560](https://doi.org/10.1002/ange.202004560).

83. Reeves, R. D.; Kinkema, C. N.; Landwehr, E. M.\*\*; Vine, L. E.; Schomaker, J. M. Stereodivergent Metal-Catalyzed Allene Cycloisomerizations. Invited contribution for the *Synlett* ISySyCat2019 special issue, **2020**, *31*, 627-631.

82. 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. *Nat. Commun.* **2020**, *11*, 1-8.

81. Corbin, J.; Ketelboeter, D.\*\*; Schomaker, J. M. Biomimetic Imino-Nazarov Cyclizations via Eneallene Aziridination. *J. Am. Chem. Soc.* **2020**, *142*, 5568-5573.

- Highlighted in <https://www.organic-chemistry.org/Highlights/2020/14December.shtm>.

80. Schomaker, J. M. Interview with Jennifer M. Schomaker. *Org. Chem. Front.* **2020**, *7*, 442-444.

79. Gerstner, N. C.; Schomaker, J. M. Stereocontrolled Synthesis of the Aminocyclopentitol Core of Jogyamycin via an Ichikawa Rearrangement Reaction. *J. Org. Chem.* **2019**, *84*, 14092-14100.

78. Lu, L.; Ward, R. M.; Schomaker, J. M. Mechanistic Aspects and Synthetic Applications of Radical Additions to Allenes. *Chem. Rev.* **2019**, *119*, 12422-12490.

77. Ju, M.; Guan, W.\*\*; Schomaker, J. M.; Harper, K. C. Sequential Reduction of Nitroalkanes Mediated by CS<sub>2</sub> and Amidine/Guanidine Bases: a Controllable Nef Reaction. *Org. Lett.* **2019**, *21*, 8893-8898.

- Most-read articles for Nov. 2019.
- Highlighted <https://www.organic-chemistry.org/Highlights/2020/29June.shtm>.

76. Ju, M.; Huang, M.; Vine, L. F.; Roberts, J. M.; Dehghany, M.; Schomaker, J. M. Tunable, Catalyst-Controlled Syntheses of  $\beta$ - and  $\gamma$ -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. Schmid, S. C.; Guzei, I. A.; Fernandez, I.; Schomaker, J. M. Ring expansion of bicyclic methyleneaziridines via concerted, near-barrierless [2, 3]-Stevens rearrangements of aziridinium ylides. *ACS Catalysis* **2018**, *8*, 7907-7914.

72. Eshon, J.; Foarta, F.; Landis, C. R.; Schomaker, J. M.  $\alpha$ -Tetrasubstituted Aldehydes through Electronic and Strain-Controlled Branch-Selective Stereoselective Hydroformylation. *J. Org. Chem.* **2018**, *83*, 10207-10220.

- Highlighted <https://www.organic-chemistry.org/Highlights/2019/15July.shtm>.

71. Eshon, J.; Gerstner, N. C.; Schomaker, J. M. Oxidative Allene Amination for the Synthesis of Nitrogen-Containing Heterocycles. *Arkivoc* **2018**, 204-233.

70. Mat Lani, A. S.; Schomaker, J. M. Site-Selective, Catalyst-Controlled Alkene Aziridination. *Synthesis* issue in honor of Professor Scott Denmark's 65<sup>th</sup> birthday, **2018**, *50*, 4462-4470.

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

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

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

62. Eshon, J.; Landis, C.R.; Schomaker, J.M. Regioselective, Rh-Catalyzed Hydroformylation of 1,1,3-Trisubstituted Allenes using a BisDiazaPhos Ligand. *J. Org. Chem.* **2017**, *82*, 9270- 9278.

61. Ju, M.; Weatherly, C. D.; Guzei, I. A.; Schomaker, J. M. Chemo- and Enantioselective Silver-

Catalyzed Aziridinations. *Angew. Chem. Int. Ed.* **2017**, *56*, 9944-9948.

- Highlighted in *Synfacts* **2017**, 933.
- Highlighted in <https://www.organic-chemistry.org/Highlights/2018/23July.shtm>.

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

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

58. Alderson, J. M.; Corbin, J. R.; Schomaker, J. M. Tunable, Chemo- and Site-Selective Nitrene Transfer through the Rational Design of Silver(I) Catalysts. *Accts. Chem. Res.* **2017**, *50*, 2147-2158.

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

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

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

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

- Highlighted in D. F. Taber, *Organic Chemistry Highlights* **2018**, January 22. URL: <http://www.organic-chemistry.org/Highlights/2018/22January.shtm>

53. Weatherly, C. D.; Alderson, J. M.; Berry, J. F.; Hein, J. E.; Schomaker, J. M. Catalyst-Controlled Nitrene Transfer by Tuning Metal:Ligand Ratios: Insight into the Mechanisms of Chemoselectivity. *Organometallics* **2017**, *36*, 1649–1661.

52. Dolan, N. S.; Scamp, R. J.; Yang, T.; Berry, J. F.; Schomaker, J. M. Catalyst-Controlled and Tunable, Chemoselective Silver-Catalyzed Intermolecular Nitrene Transfer: Experimental and Computational Studies. *J. Am. Chem. Soc.* **2016**, *138*, 14658.

51. Touney, E. E.\*\*; Van Hoveln, R.; Buttke, C. T.\*\*; Freidberg, M. D.\*\*; Guzei, I. A.; Schomaker, J. M. Heteroleptic Nickel Complexes for the Markovnikov-Selective Hydroboration of Styrenes. *Organometallics* **2016**, *35*, 3436.

50. Gerstner, N.; Adams, C. S.; Tretbar, M.; Schomaker, J. M. Intermolecular [4 + 3] Cycloadditions of Allenes via Bicyclic Methyleneaziridines. *Angew. Chem. Int. Ed.* **2016**, *55*, 13240.

49. Scamp, R. J.; Jirak, J. G.; Guzei, I. A.; Schomaker, J. M. General Catalyst for Site-Selective C(sp<sup>3</sup>)-H Bond Amination of Activated Secondary over Tertiary Alkyl C(sp<sup>3</sup>)-H Bonds. *Org. Lett.* **2016**, *18*, 3014.

48. Phelps, A. M.; Chan, V. S.; Napolitano, J. G.; Krabbe, S.; Schomaker, J. M.; Shekhar, S. Ligand-Controlled Synthesis of Azoles via Ir-Catalyzed Reactions of Sulfoxonium Ylides with 2-Amino Heterocycles. *J. Org. Chem.* **2016**, *81*, 4158.

47. Gerstner, N. C.; Adams, C. S.; Grigg, R. D.; Tretbar, M.; Rigoli, J. W.; Schomaker, J. M. Diastereoselective Synthesis of the Aminocyclitol Core of Jogyamycin via an Allene Aziridination Strategy. *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**, DOI: 10.1055/sos-SD-221-00172.

45. Burke, E. G.; Schomaker, J. M. Oxidative Allene Amination for the Synthesis of Azetidino-3-ones. *Angew. Chem. Int. Ed.* **2015**, *54*, 12097.

- Highlighted in *Synfacts* **2015**, 1142.

44. Schmid, S. C.; Van Hoveln, R. J.; Rigoli, J. W.; Schomaker, J. M. Development of N-Heterocyclic Carbene-Copper Complexes for 1,3-Halogen Migration. *Organometallics* **2015**, *34*, 4164.

43. Croisant, M. F.; Van Hoveln, R.; Schomaker, J. M. Formal Dyotropic Rearrangements in Organometallic Transformations. Invited review for *Eur. J. Org. Chem.* **2015**, *27*, 5897.

42. Van Hoveln, R. J.; Hudson, B.; Wedler, H.; Bates, D. M.; Le Gros, G.\*\*; Tantillo, D.; Schomaker, J. M. Experimental and Computational Insights into the Mechanism of Cu-catalyzed 1,3-Halogen Migration. *J. Am. Chem. Soc.* **2015**, *137*, 5346.

41. Scamp, R.; Alderson, J. M.; Phelps, A. M.; Dolan, N. S.; Schomaker, J. M. Ligand-Controlled, Tunable Silver-Catalyzed C-H Amination. *J. Am. Chem. Soc.* **2014**, *136*, 16720.

40. Van Hoveln, R.; Schmid, S.; Schomaker, J. M. 1,3-Halogen Migration as an Entry to Aryl Coppers from an Unintuitive Starting Material. Invited perspective for *Org. Biomol. Chem.* **2014**, *12*, 7655.

39. Van Hoveln, R. J.; Schmid, S. C.; Tretbar, M.; Buttke, C.\*\*; Schomaker, J. M. Copper-Catalyzed Enantioselective Transfer of Bromine via 1,3-Halogen Migration. *Chem. Sci.* **2014**, *5*, 4763.

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- Highlighted in *Org. Process Res. Dev.* **2014**, dx.doi.org/10.1021/op500329b.

38. Adams, C.S.; Grigg, R.D.; Schomaker, J.M. Complete Stereodivergence in the Synthesis of 2-Amino-1,3-diols via Allene Aziridination. *Chem. Sci.* **2014**, *5*, 3046.

- 17<sup>th</sup> most-read article for April-June 2014.

37. Adams, C. S.; Grigg, R. D.; Schomaker, J. M. Aminosugar Motifs via an Allene Aziridination Strategy. Invited paper for the *Tetrahedron Young Investigator Symposium-in-Print* in honor of Prof. Sarah Reisman, **2014**, *70*, 4128.

36. Adams, C. S.; Weatherly, C. D.; Burke, E. G.; Schomaker, J. M. The Synthesis and Reactivity of Strained Three-Membered Heterocycles Derived from Allenes. Invited review for *Chem. Soc. Rev.* special issue on "Progress in Allene Chemistry", **2014**, *43*, 3136.

35. Rigoli, J. W.; Guzei, I. A.; Schomaker, J. M. Stereocontrolled Oxidation of Allenes to Aminodiols. *Org. Lett.* **2014**, *16*, 1696.

- Highlighted in *Synfacts* **2014**, *10*, 608.

34. Scamp, R. J.; Rigoli, J. W.; Schomaker, J.M. Chemoselective Silver-Catalyzed Nitrene Insertion Reactions. *Pure Appl. Chem.*, **2014**, *86*, 381.



33. Rigoli, J. W.; Weatherly, C. D.; Alderson, J.; Vo, B. T.; Schomaker, J. M. Tunable, Chemoselective Amination via Silver Catalysis. *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. Weatherly, C. D.; Schomaker, J. M. Stereodefined 1,3-Diamino-2-ols via Aminohydroxylation of Bicyclic Methylene Aziridines. *Eur. J. Org. Chem.* **2013**, 3667.

31. Phelps, A. M.; Dolan, N. S.\*\*; Connell, N. T.; Schomaker, J. M. Divergent Reactivity of Allene-containing  $\alpha$ -Diazoesters using Cu and Rh Catalysis. Invited paper for the *Tetrahedron Young Investigator Symposium-in-Print* in honor of Melanie Sanford, **2013**, *56*, 5614.

30. Grigg, R. D.; Schomaker, J. M. Activating Group Recycling: A Fresh Approach to Arene Functionalization. Invited contribution to *Synlett* **2013**, *24*, 401.

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- Top-ten most accessed article for the month of October 2012.
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- <http://www.organic-chemistry.org/Highlights/2013/09September.shtm>
- <http://organometallicchemistrynews.blogspot.com/2012/12/copper-catalyzed-recycling-of-halogen.html>

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26. Adams, C. S.; Boralsky, L. A.; Guzei, I.A.; Schomaker, J.M. Modular Functionalization of Allenes to Aminated Stereotriads. *J. Am. Chem. Soc.* **2012**, *134*, 10807.

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25. Weatherly, C. D.; Rigoli, J. W.; Schomaker, J. M. Synthesis of 1,3-Diaminated Stereotriads via Rearrangement of 1,4-Diazaspiro[2.2]Pentanes. *Org. Lett.* **2012**, *14*, 1704.

24. Rigoli, J. W.; Boralsky, L. A.; Hershberger, J. C.; Meis, A. R.\*\*; Guzei, I. A.; Schomaker, J. M. 1,4-Diazaspiro[2.2]Pentanes as a Platform for the Synthesis of Diamine-Bearing Stereotriads. *J. Org. Chem.* **2012**, *77*, 2446.

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

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

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- Highlighted online [http://justlikecooking.blogspot.com/2012\\_02\\_01\\_archive.html](http://justlikecooking.blogspot.com/2012_02_01_archive.html)

21. Rigoli, J. W.; Moyer, S. A.; Pearce, S. D.\*\*; Schomaker, J. M.  $\alpha,\beta$ -Unsaturated Imines via Ru-

Catalyzed Coupling of Allylic Alcohols and Amines. *Org. Biomol. Chem.* **2012**, *10*, 1746.

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20. Grigg, R. D.; Schomaker, J. M.; Timokhin, V. C-H Amination/Cyclocarbonylation of Allene Carbamates: a Versatile Platform for the Synthesis of  $\alpha,\beta$ -Unsaturated  $\gamma$ -Lactams. Invited paper for the *Tetrahedron Young Investigator Symposium-in-Print* in honor of F. Dean Toste, **2011**, *67*, 4318.

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

#### Postdoctoral Publications

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

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

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

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#### Graduate Student Publications

14. Kulshrestha, A.; Schomaker, J. M.; Holmes, D.; Staples, R. J.; Jackson, J. E.; Borhan, B. Addition of Organometallic Reagents to Aziridine-2-Carboxyaldehydes: Selectivity with Different Protecting Groups and Substitution Patterns. *Chem. Eur. J.* **2011**, *17*, 12326.

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

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

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

11. Schomaker, J. M.; Bhattacharjee, S.; Yan, J.; Borhan, B. 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. *J. Am. Chem. Soc.* **2007**, *129*, 1996.

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

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

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

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

7. Schomaker, J. M.; Pulgam, V. R.; Borhan, B. Synthesis of Diastereomerically and Enantiomerically Pure Substituted Tetrahydrofurans Using a Sulfoxonium Ylide. *J. Am. Chem. Soc.* **2004**, *126*, 13600.
6. Schomaker, J. M.; Borhan, B. Total Synthesis of (+)-Tanikolide Via Oxidative Lactonization. *Org. Biomol. Chem.* **2004**, *2*, 621.
5. Schomaker, J. M.; Travis, B. R.; Borhan, B. Direct Lactonization of Alkenols via Osmium Tetroxide-Mediated Oxidative Cleavage. *Org. Lett.* **2003**, *5*, 3089.
4. Schomaker, J. M.; Delia, T. J. Arylation of Halogenated Pyrimidines via a Suzuki Coupling Reaction. *J. Org. Chem.* **2001**, *66*, 7125-7128.
3. Schomaker, J. M.; Delia, T. J. 2,4,6-Trichloropyrimidine. Reaction with anilines. *J. Heterocyclic Chem.* **2000**, *37*, 1457-1462.
2. Delia, T. J.; Meltsner, B. R.; Schomaker, J. M. 2,4,6-Trichloropyrimidine. Reaction with sodium amide. *J. Heterocyclic Chem.* **1999**, *36*, 1259-1261.
1. Schomaker, J. M. Inside the Career of a Chemical Technician. *American Careers* **1998**, 6-7.

#### PATENTS/DISCLOSURES

9. Compounds and Methods for Forming Ion Channels in Biological Membranes. Inventors: Chanda, B.; Schomaker, J. M.; Carrasquel Ursulaez, W.; Jones, C.; Dehghany, M. submitted July, **2022**. EFS ID: 46343362 Application Number: 17881038.
8. Electronically Activated Strained Alkynes. Inventors: Schomaker, J. M.; Burke, E. G. US10676449B2, US 20190233385 A1 20190801, issued June, **2020**.
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, US 20140371480 A1 20141218, 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. 2013033245 A1 20130307, issued March 28, **2013**.
4. Synthesis of N-Heterocycles,  $\beta$ -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. US 20090012120 A1 20090108, issued January 8, **2009**.
3. Catalytic osmium-assisted oxidative cleavage of olefins Inventors: Borhan, B.; Travis, B.; Schomaker, J. M. US 20030149299 A1 20030807, 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. US 6211403 B1 20010403, 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. WO 9842677 A1 19981001, issued January 18, **2000**.

**INVITED PRESENTATIONS** (\* = rescheduled due to COVID19)Seminars

162.	July, 2025	9 <sup>th</sup> Heron Conference on Reactive Intermediates	Queensland, Australia
161.	Sept, 2024	Brazilian Meeting Organic Synthesis, plenary speaker	Bento Gonçalves, Brazil
160.	Aug, 2024	ACS meeting, Chemistry Across the Border	Denver, CO
159.	June, 2024	Heterocycles Gordon Research Conference	Newport, RI
158.	Mar, 2024	Univ. of South Florida, Barbara & Dean Martin Lecture	Tampa, FL
157.	Mar, 2024	University Oklahoma, Distinguished Karcher Speaker	Norman, OK
156.	Feb, 2024	Dartmouth College	Hanover, NH
155.	Sept, 2023	Janssen Pharmaceuticals	La Jolla, CA
154.	Aug, 2023	Université de Montréal	Montreal, Canada
153.	Aug, 2023	Fall ACS meeting, Late-stage functionalizn symposium	San Francisco, CA
152.	Aug, 2023	Natural Products Gordon Research Conference	Andover, NH
151.	July, 2023	Organic Reactions and Processes GRC	Smithfield, RI
150.	July, 2023	International symposium on carbene/nitrene chemistry	Amsterdam, Netherlands
149.	Jun, 2023	CSC annual meeting, Chemistry Across the Border	Vancouver, BC
148.	May, 2023	Adesis	New Castle, DE
147.	Mar, 2023	Stahl ACS Award in Organometallic Chemistry symp.	Indianapolis, IN
146.	Mar, 2023	Anatolian Conference on Organic Chemistry	Antalya, Turkey
145.	Jan, 2023	University of Göttingen	Göttingen, Germany
144.	Jan, 2023	Saarland University	Saarbrücken, Germany
143.	Nov 8, 2022	Southwest Region ACS Organic Synthesis Symposium	Baton Rouge, LA
142.	Sept 21, 2022	Division of Organic Chemistry, virtual symposium	Madison, WI
141.	Sept 8, 2022	Adesis	New Castle, DE
140.	Aug 22, 2022	ACS National meeting, Strained Rings in Synthesis	Chicago, IL
139.	Aug 22, 2022	ACC-WCC 10 <sup>th</sup> anniversary celebration	Chicago, IL
138.	Aug 23, 2022	ACS Cope Scholars Symposium	Chicago, IL
137.	July 10, 2022	Organometallics Gordon Research Conference	Newport, RI
	Jun, 2022*	Catalysis and Sensing for our Environment (CASE)	Isle of Skye, Scotland
136.	Jun 14, 2022	Genentech	South San Francisco, CA
135.	Jun 7, 2022	AbbVie-sponsored Women in Chemistry Symposium	Ypsilanti, MI
134.	Jun 6, 2022	University of Oxford	Oxford, UK
133.	Mar 4, 2022	Marquette University	Milwaukee, WI
132.	Jan 14, 2022	Hope College	Holland, MI
131.	Dec 17, 2021	Winter In-person Organic Symposium (WIPOS)	Honolulu, HI
130.	Dec 18, 2021	Pacifichem (Carbenes for Catalysis and Synthesis)	Honolulu, HI
129.	Dec 18, 2021	Pacifichem (Remote Functionalizn of Org Molecules)	Honolulu, HI
128.	Nov, 2021	Boehringer-Ingelheim	Ridgefield, CT
127.	Oct 29, 2021	Georgia State University	Atlanta, GA
126.	Oct 15, 2021	Barnard College/Columbia	New York, NY
125.	Aug 31, 2021	Indiana State University	Terra Haute, IN
124.	July 27, 2021	Pfizer	Groton, CT
123.	Mar 15, 2021	Central Michigan University	Mt. Pleasant, MI
122.	Mar 1, 2021	University of California	Berkeley, CA
121.	Feb 22, 2021	Indiana University	Bloomington, IN
120.	Feb 15, 2021	Cleveland State University	Cleveland, OH
119.	Dec 10, 2020	Rennes Institute of Chemical Sciences	Rennes, France
118.	Nov 4, 2020	Wake Forest University	Winston-Salem, NC

117.	Aug 8, 2020	Drug Discovery 2020, Lahore University	LUMS, Pakistan
116.	Feb 14, 2020	University of Kansas	Lawrence, KS
115.	Feb 13, 2020	Kansas State University	Manhattan, KS
114.	Feb 6, 2020	3 <sup>rd</sup> International Symposium on Carbene/Nitrene Chem.	San Antonio, TX
113.	Nov 19, 2019	Miller Institute	Berkeley, CA
112.	Nov 12, 2019	University of California, San Francisco	San Francisco, CA
111.	Nov 5, 2019	University of California, Berkeley	Berkeley, CA
110.	Oct 18, 2019	South China University of Technology	Guangzhou, China
109.	Oct 16, 2019	Nanjing University	Nanjing, China
108.	Oct 14, 2019	Nankai University	Tianjin, China
107.	Sept 27, 2019	University of Texas at San Antonio	San Antonio, TX
106.	Sept 4, 2019	International Symposium on Synthesis and Catalysis	Evora, Portugal
105.	Apr 11, 2019	University of Washington	Seattle, WA
104.	Mar 30, 2019	Garvan-Olin Award Symposium in honor of Prof. Lisa McElwee-White	Orlando, FL
103.	Jan 16, 2019	University of Toledo	Toledo, OH
102.	Oct 26, 2018	POSTTECH	Pohang, S. Korea
101.	Oct 24, 2018	Seoul National University	Seoul, South Korea
100.	Oct 22, 2018	KAIST	Daejeon, S. Korea
99.	May 29, 2018	Canadian Society of Chemistry	Edmonton, Alberta
98.	Apr 9, 2018	University of Alberta	Edmonton, Alberta
97.	Mar, 2018	Florida Heterocyclic Conference	Gainesville, FL
96.	Feb 2, 2018	New York University	New York, NY
95.	Nov 13, 2017	University of California	Berkeley, CA
94.	Oct 26, 2017	University of Notre Dame	South Bend, IN
93.	Oct 12, 2017	Grinnell College	Grinnell, IA
92.	July 18, 2017	CCHF Virtual Symposium	Madison, WI
91.	Mar 7, 2017	Inorganic Reaction Mechanisms GRC	Galveston, TX
90.	Oct 24, 2016	Frontiers in Chemistry, Western Michigan University	Kalamazoo, MI
89.	July 14, 2016	ACSEL 2016, keynote speaker	Jeju, South Korea
88.	July 27, 2016	Stereochemistry Gordon Research Conference	Newport, RI
87.	June 22, 2016	French-American Chemical Society (FACS) meeting	Santa Barbara, CA
86.	May 6, 2016	Paquette Legacy Symposium, Ohio State University	Columbus, OH
85.	Feb 24, 2016	University of California	Irvine, CA
84.	Dec 19, 2015	Pacificchem	Honolulu, HI
83.	July 1, 2015	OMCOS 18	Sitges, Spain
82.	May 15, 2015	Rutgers University	New Brunswick, NJ
81.	Apr 9, 2015	University of Illinois	Urbana-Champaign, IL
80.	Feb 19, 2015	University of California	Los Angeles, CA
79.	Jan 26, 2015	Medicinal and Bioorganic Chemistry Conference	Steamboat Springs, CO
78.	Jan 22, 2015	University of Wisconsin	Madison, WI
77.	Oct 30, 2014	University of Minnesota	Minneapolis, MN
76.	Sept 26, 2014	University of Rochester	Rochester, NY
75.	Sept 10, 2014	University of West Virginia	Morgantown, WV
74.	Sept 8, 2014	Cornell University	Ithaca, NY
73.	Aug 11, 2014	Young Investigator National Award Symposium	San Francisco, CA
72.	Aug 12, 2014	ACS JOC/OL Symposium	San Francisco, CA
71.	June 23, 2014	Reaction Mechanisms Conference	Davis, CA

70.	Jun 15, 2014	Heterocycles Gordon Research Conference	Newport, RI
69.	May 2, 2014	University of Iowa	Iowa City, IA
68.	Apr 23, 2014	Princeton	Princeton, NJ
67.	Apr 18, 2014	University of Texas	Austin, TX
66.	Apr 16, 2014	California Institute of Technology	Pasadena, CA
65.	Apr 11, 2014	University of California	Santa Barbara, CA
64.	Apr 9, 2014	Scripps Research Institute	La Jolla, CA
63.	Mar 27, 2014	University of Florida	Gainesville, FL
62.	Mar 18, 2014	ACS Advances in C-H Functionalization Symposium	Dallas, TX
61.	Mar 16, 2014	ACS George A. Olah Award Symposium	Dallas, TX
60.	Mar 17, 2014	ACS WCC Rising Star Awards Symposium	Dallas, TX
59.	Jan 9, 2014	Knox College	Galesburg, IL
58.	Dec 6, 2013	University of Wisconsin	Stevens Point, WI
57.	Nov 18, 2013	University of Pennsylvania	Philadelphia, PA
56.	Nov 14, 2013	ACS Southeastern Regional Meeting	Atlanta, GA
55.	Nov 12, 2013	University of Pittsburgh	Pittsburgh, PA
54.	Nov 8, 2013	Carleton College	Northfield, MN
53.	Oct 1, 2013	University of California, Berkeley	Berkeley, CA
52.	Sept 9, 2013	Young Academic Investigators Award Symposium	Indianapolis, IN
51.	Aug 14, 2013	"Kurthfest", University of California	Davis, CA
50.	Aug 20, 2013	Eli Lilly	Indianapolis, IN
49.	July 30, 2013	OMCOS 17	Fort Collins, CO
48.	July 17, 2013	Organic Reactions/Process Gordon Research Conf.	Providence, RI
47.	May, 2013	Dow Agrosciences	Zionsville, IN
46.	Apr, 2013	University of Missouri Organic Chemistry Day	Columbia, MS
45.	Apr 23, 2013	University of Michigan	Ann Arbor, MI
44.	Apr 24, 2013	Michigan State University	East Lansing, MI
43.	Apr 10, 2013	American Chemical Society National Meeting	New Orleans, LA
42.	Apr, 2013	1st Annual Cal Meyers Research Symposium	Carbondale, IL
41.	Nov 14, 2012	Bristol-Myers-Squibb Process Research	New Brunswick, NJ
40.	Nov 13, 2012	Bristol-Myers-Squibb Discovery Research	Hopewell, NJ
39.	Nov 8, 2012	Clemson University	Clemson, SC
38.	Oct 5, 2012	Abbott Laboratories	Abbott Park, IL
37.	July 9, 2012	Organometallics Gordon Research Conference	Newport, RI
36.	Jun 16, 2012	Robert G. Bergman 70 <sup>th</sup> Birthday Symposium	Berkeley, CA
35.	Mar 27, 2012	American Chemical Society National Meeting	San Diego, CA
34.	Mar 26, 2012	American Chemical Society National Meeting	San Diego, CA
33.	Nov 18, 2011	Carroll University	Waukesha, WI
32.	Oct 25, 2011	Saginaw Valley State University	University Center, MI
31.	July 12, 2011	Organometallics Gordon Research Conference	Newport, RI
30.	June 26, 2011	Heterocycles Gordon Research Conference	Newport, RI
29.	June 6, 2011	National Organic Symposium (poster talk)	Princeton, NJ
28.	Feb 11, 2011	Chicago Organic Symposium	Chicago, IL
27.	Jan 30, 2011	Conference on Medicinal & Bioorganic Chemistry	Steamboat Springs, CO
26.	Mar 21, 2010	American Chemical Society National Meeting	San Francisco, CA
25.	Nov, 2009	University of Wisconsin, Eau Claire	Eau Claire, WI
24.	Sept 10, 2009	University of Wisconsin, Madison	Madison, WI
23.	Feb 2009	Texas A&M	College Station, TX

22.	Feb 2009	Ohio State University	Columbus, OH
21.	Jan 2009	University of Pittsburgh	Pittsburgh, PA
20.	Jan 2009	University of Texas	Austin, TX
19.	Jan 2009	University of Oregon	Eugene, OR
18.	Jan 2009	North Carolina State University	Raleigh, NC
17.	Jan 2009	University of Wisconsin, Madison	Madison, WI
16.	Jan 2009	University of North Carolina	Chapel Hill, NC
15.	Jan 2009	University of Iowa	Iowa City, IA
14.	2008	University of Michigan	Ann Arbor, MI
13.	2008	Stanford University	Palo Alto, CA
12.	2008	University of California	Berkeley, CA
11.	2008	University of California	Santa Barbara, CA
10.	2008	Massachusetts Institute of Technology	Cambridge, MA
9.	2008	University of Texas-Austin	Austin, TX
8.	2008	University of Kentucky	Lexington, KY
7.	2008	University of Nebraska	Lincoln, NE
6.	2008	University of Louisville	Louisville, KY
5.	2008	Illinois Institute of Technology	Chicago, IL
4.	2008	Mississippi State University	Starkville, MS
3.	2008	Cornell University	Ithaca, NY
2.	2008	University of Illinois	Urbana-Champaign, IL
1.	2008	Michigan State University	East Lansing, MI

*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	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 <sup>th</sup> 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 <sup>th</sup> 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 2023	Kim, J.; Halicki, P. C.; <u>Griffin, A.</u> ; Rhode, K.; Schomaker, J. M. Silver Catalyzed C-H Amination as a Route to Novel Mycobacterium tuberculosis Inhibitors. ACS Fall 2023, San Francisco, CA.
Jul 2023	<u>Dehghany, M.</u> ; Pavaneli, G.; Kailing, J. W.; Guzei, I. Fernandez, I. D'Oca C. D.; Schomaker, J. M. Harnessing the Divergent Reactivity of Aziridinium Ylides for Rapid Synthesis of Azetidone and Piperidine Scaffolds. National Organic Symposium, Notre Dame, IN.
Aug 2022	<u>Kim, J.</u> ; Schomaker, J. M. Site and enantioselective amination of activated and electron deficient C–H bonds. ACS Fall 2022, Chicago, IL.
Aug 2022	<u>E. E. Zerull</u> , Y. Hu, J. M. Schomaker; Silver-catalyzed site-selective C–H amination of urea derivatives for the synthesis of tetrahydropyrimidones; ACS Fall 2022; Chicago, IL.
Aug 2022	<u>Dequina, H.J.</u> ; Vine, L.E.; Raskopf, W.R.; Robey, J.R.; Schomaker, J.M. Progress Toward the Total Synthesis of Nogalamycin. Natural Products and Bioactive Compounds Gordon Research Conference; Andover, NH. Poster presentation.
July 2022	<u>Hu, Y.</u> ; Zerull, E. E.; Schomaker, J. M. Synthesis of tetrahydro-2-pyrimidones via Ag-catalyzed site-selective intramolecular nitrene transfer. July 27–28, 2022. Gordon Research Conference: Stereochemistry. Newport, RI.
July 2022	<u>Dequina, H.J.</u> ; Vine, L.E.; Raskopf, W.R.; Robey, J.R.; Schomaker, J.M. Progress Toward the Total Synthesis of Nogalamycin. Natural Products and Bioactive Compounds Gordon Research Seminar; Andover, NH. Poster presentation.
July 2022	<u>Dequina, H.J.</u> ; Vine, L.E.; Raskopf, W.R.; Robey, J.R.; Schomaker, J.M. Progress Toward the Total Synthesis of Nogalamycin. Natural Products and Bioactive Compounds Gordon Research Seminar; Andover, NH. Oral presentation.
Jun 2022	<u>Hu, Y.</u> ; Lee, K.; Spiegelhoff, R.; Schomaker, J. M. Synthesis of S,N,O-containing cyclooctynes and application for bioorthogonal click-and-release reactions. National Organic Symposium, San Diego, CA.
Jun 2022	<u>Dequina, H.J.</u> ; Vine, L.E.; Raskopf, W.R.; Robey, J.R.; Schomaker, J.M. Progress Toward the Total Synthesis of Nogalamycin. National Organic Chemistry Symposium; La Jolla, CA.
Jun 2022	<u>Dequina, H.J.</u> ; Vine, L.E.; Raskopf, W.R.; Robey, J.R.; Schomaker, J.M. Progress Toward the Total Synthesis of Nogalamycin. Empowering Women in Organic Chemistry; Cambridge, MA.
Jun 2022	<u>Emily E. Zerull</u> , Yun Hu, J. M. Schomaker; Synthesis of tetrahydropyrimidinones via Ag-catalyzed site-selective intramolecular nitrene transfer; NOS 2022; San Diego, CA
Mar 2021	<u>Nicastri, K.</u> ; Gerstner, N.; Schomaker, J. M. Progress toward the total synthesis of jogyamycin: a tandem Ichikawa/Winstein approach. 261 <sup>st</sup> ACS National Meeting and Exposition, virtual.
Mar 2021	<u>Zerull, E.</u> ; Ju, M.; Roberts, J.; Schomaker, J. M. Silver-BOX catalyzed enantioselective C-H amination via nitrene transfer. 261 <sup>st</sup> ACS National Meeting and Exposition, virtual.
Mar 2020	<u>Hu, Y.</u> ; Mat Lani, A.; Roberts, J.; Kilgore, H.; Raines, R. T.; Schomaker, J. M. “Modular SNO-OCT scaffolds for multiple, rapid bioorthogonal labeling.” 259 <sup>th</sup> ACS National Meeting and Exposition, Philadelphia, PA.
Mar 2020	<u>Dequina, H.</u> ; Eshon, J.; Fernandez, I.; Schomaker, J. M. “Intermolecular [3+3] ring expansion of bicyclic aziridines to access functionalized piperazines via aziridinium ylides.” 259 <sup>th</sup> ACS National Meeting and Exposition, Philadelphia, PA.
	<u>Landwehr, E. M.*</u> ; Reeves, R. D.; Schomaker, J. M. "Palladium-catalyzed



- Aug 2019 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." 257<sup>th</sup> ACS National Meeting, Orlando, FL.
- Mar 2019 Reeves, R.; Schomaker, J. M. "Transition-metal mediated cycloisomerizations of allenes to afford highly substituted cyclopentenes." 257<sup>th</sup> 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." 257<sup>th</sup> ACS National Meeting, Orlando, FL.
- Mar 2019 Ju, M.; Huang, M.; Vine, L. E.; Dehghany, M.; Schomaker, J. M. "Tunable, catalyst-controlled syntheses of  $\beta$ - and  $\gamma$ -amino alcohols enabled by silver complexes." 257<sup>th</sup> ACS National Meeting, Orlando, FL.
- Mar 2019 Guan, W.\*; Ju, M.; Schomaker, J. M.; Harper, K. "Reductive Nef reaction mediated by CS<sub>2</sub> and amidine/guanidine bases." 257<sup>th</sup> ACS National Meeting, Orlando, FL.
- Aug 2018 Huang, M.; Schomaker, J. "Tunable, catalyst-controlled syntheses of  $\beta$ - and  $\gamma$ -amino alcohol motifs enabled by silver complexes." 256<sup>rd</sup> 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." 256<sup>rd</sup> 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." 255<sup>th</sup> 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." 253<sup>rd</sup> ACS National Meeting, San Francisco, CA.
- Apr 2017 Sheffer, B.\*; Scamp, R.J.; Schomaker, J.M. "Regioselective benzosultam formation via silver-catalyzed nitrene insertion." 253<sup>rd</sup> 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." 253<sup>rd</sup> 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." 250<sup>th</sup> ACS National Meeting, Boston, MA.
- Aug 2015 Gerstner, N.; Adams, C.; Schomaker, J.M. "Stereodivergence in intermolecular [4+3] cycloadditions of bicyclic methyleneaziridines." 250<sup>th</sup> ACS Natl 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." 250<sup>th</sup> 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." 249<sup>th</sup> 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." 249<sup>th</sup> 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." 248<sup>th</sup> 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." 248<sup>th</sup> 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." 247<sup>th</sup> ACS National Meeting, Dallas, TX.
- Mar 2014 Dolan, N.S.; Phelps, A.M.; Schomaker, J.M. "Intermolecular, silver-catalyzed aziridination and C-H insertion." 247<sup>th</sup> 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." 246<sup>th</sup> ACS National Meeting, Indianapolis, IN.
- Sept 2013 Phelps, A.M.; Schomaker, J.M. "Fully-substituted cyclopentanes via Au-catalyzed cyclization of allenes." 246<sup>th</sup> 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." 245<sup>th</sup> 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." 245<sup>th</sup> 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." 245<sup>th</sup> 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." 245<sup>th</sup> 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." 245<sup>th</sup> ACS National Meeting, New Orleans, LA.

- Apr 2013 Van Hoveln, R.J.; Grigg, R.D.; Schomaker, J.M. "Copper-mediated 1,3-halogen migration." 245<sup>th</sup> 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." 245<sup>th</sup> 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." 4<sup>th</sup> 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." 243<sup>rd</sup> 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." 243<sup>rd</sup> 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." 243<sup>rd</sup> 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 CO<sub>2</sub> carboxylation." 243<sup>rd</sup> 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." 243<sup>rd</sup> 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." 243<sup>rd</sup> ACS National Meeting, San Diego, CA.
- Aug 2011 Hershberger, J.C.; Schomaker, J.M. "Synthesis of palladapyrrolidinones and allene functionalization via methylene aziridines." 242<sup>nd</sup> 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." 3<sup>rd</sup> 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." 239<sup>th</sup> 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, 2021-2022

Chem 605      Structure Determination Using Spectroscopic Methods  
Chem 547      Advanced Organic Chemistry

Spring 2012-2020  
Fall 2020-2023

## SERVICE ACTIVITIES

### Departmental

2023-present      Co-chair of the Organic Path  
2022-present      Instrumentation Committee  
2022-present      Faculty Awards Committee  
2019-2022      Faculty Recruiting Committee  
2019      Graduate Student Orientation weekend, Joining a Research Group panel  
2018-2022      Department Leadership Council  
2016      Organic Faculty Search Committee  
2014      Organic Faculty Search Committee  
2013-2018      Organic division graduate advising  
2013-2016      IC-Mass Spec Instrumentation Committee  
2012-2022      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

2022-present      Chair, University Curriculum Committee  
2020-2021      Committee on Women in the University  
2020-present      University Curriculum Committee  
2017-2020      L&S Curriculum Committee  
2017      Hilldale Scholar mentor  
2017      McNair Scholar mentor  
2017      UW2020 (contributor) *Acquisition of State-of-the-Art Solid-State NMR*  
2016      UW ICTR Novel Methods Pilot Grant Award. PI: Dr. Michael Hoffman  
2014      *Computational Platform for Drug Target and Therapeutic Discovery*  
2013-2015      Small Molecule Screening Facility Advisory Board  
2010      Faculty Senate

### National/International

2023      International Carbene and Nitrene Consortium Committee member  
2022      NSF Review Panel for Catalysis  
2021      NIH review panel for SCORE program  
2021-present      Advisory Board, *Tetrahedron Chem*  
2020      NSF reviewer for Chemical Synthesis  
2020-current      Advisory Board, *Chem Catalysis*  
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	<i>Organometallics</i> Roundtable Discussion
Apr 2011	NSF BCST meeting on Sustainable Chemistry Basic Research
Mar 2011	Organic Letters Editorial Advisory Board Group meeting
2009-present	Regular reviewer for almost 30 journals in chemical synthesis and catalysis: <i>Dalton Transactions, Catalysis Science &amp; Technology, Tetrahedron Letters, Organic Letters, Journal of Organic Chemistry, Journal of Organometallic Chemistry, Organic &amp; 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 J. Org. Chem.</i>

### CURRENT GRADUATE STUDENTS/POST-DOCS/VISITING STUDENTS

Hillary Dequina (B.S. Northeastern)	2018-present
Yun Hu (B.S. Holy Cross)	2018-present
Emily Zerull Schroeder (B.S. Calvin College)	2018-present
Jed Kim (B.S. University of Southern California)	2020-present
Tuan Anh Trinh (B.S. Nagoya University)	2020-present
Ken Lee (B.S. University of Illinois, Urbana-Champaign)	2020-present
Giuliana Pavaneli (Federal University of Paraná, Curitiba, Brazil)	2021-present
Dr. Kyeongduk Seo (POSTECH, Pohang, South Korea)	2022-present
Dr. Zhen-Yao Dai (University of Science & Technology of China)	2022-present
Jacob Kailing (B.S. University of Wisconsin-LaCrosse)	2022-present
Chenxi Liu (B.S. Barnard College)	2022-present
Olivia Duke (B.S. University of Delaware)	2022-present
Elijah Marris (B.S. Hamilton College)	2022-present
Derek Hu (B.S. University of California-Berkeley)	2022-present

### CURRENT UNDERGRADUATE STUDENTS

Amory Griffin	2022-present
Colin Crawford	2022-present
Ethan Warrington	2023-present
Steven Kwas	2023-present

## FORMER POST-DOCS AND VISITING SCHOLARS

Dr. John C. Hershberger (Ph.D., University of Kansas)	Associate 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
Dr. Jon Paretsky (Ph.D., UC-Irvine)	Scientist at Georgia-Pacific LLC
Dr. Zhibin Xu (Ph.D., BIT)	Beijing Institute of Technology
Aria Vahdani (Januvia Pharma)	Ph.D., Borhan group, Michigan State
Medena Noikham (Mahidol University)	Ph.D., Mahidol University, Thailand
Dr. Corey Jones (Ph.D. Michigan State)	Pfizer, Groton, CT
Dr. Wentan Liu (Ph.D. SUSTC, China)	Start-up, Guangzhou, China
Dr. Isaac Choi (Ph.D. Universität Göttingen)	Chungbuk National University, Seoul
Sam Drescher (University of Lethbridge)	University of Lethbridge

## 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 Hovel, Ph.D. 2015	Associate Professor, Indiana State University
Dr. Cale Weatherly, Ph.D. 2015	Post-doc, Amos Smith, Penn, 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, Evonik
Dr. Julie Alderson, Ph.D. 2017	PPG
Dr. Steven C. Schmid, Ph.D. 2017	Post-doc, Aprahamian (Dartmouth), Evonik
Dr. Nels C. Gerstner, Ph.D. 2019	NIH Postdoctoral fellow, Miller group, UC-Berkeley
Dr. Lu Lui, Ph.D. 2019	Patent Agent, Quarles & Brady, LLP
Dr. Minxue Huang, Ph.D. 2020	Scientist, GSK
Dr. Josephine Eshon, Ph.D. 2020	Scientist, BMS
Dr. Ryan Reeves, Ph.D. 2020	Research Scientist, Codexis
Dr. Josh Corbin, Ph.D. 2020	Los Alamos National Lab
Dr. Minsoo Ju, Ph.D. 2020	NIH postdoctoral fellow, Song Lin lab, Cornell
Dr. Jess Roberts, Ph.D. 2020	Evonik Chemical, Janesville, WI
Dr. Kate Nicastri, Ph.D. 2022	Takeda Pharmaceuticals, Boston, MA
Dr. Logan Vine, Ph.D. 2022	Cogent Biosciences, Boulder, CO
Dr. Robert Ward, Ph.D. 2022	Dow Chemical Company
Dr. Mahzad Dehghany, Ph.D. 2023	Bristol-Myers-Squibb

## 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)	Millipore Corporation
Nicholas Dolan (undergrad/M.S. 2012-2015)	Ph.D. student, Francis group, Berkeley
Caitlin Utt (2017-2019)	Blueprint Medicines, Boston, MA
Amirah Mat Lani (undergrad/M.S. 2016-2019)	Research chemist, IGL Coatings
Ethan Licht (2019-2021)	PPD, Middleton, WI
Soren Zappia (B.S. University of Wisconsin)	Arrowhead, Madison, WI

## FORMER UNDERGRADUATE STUDENTS

Dr. Andrea Unzue	Ph.D. with Christina Nevado, University of Zürich, Merck
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Dr. Alan Meis	Ph.D. Steven Martin, UT-Austin, Corteva
Dr. Patrick Pentek	Pharm.D. Concordia College
Sam Neale	University of Bristol exchange student
Ally Esch	
Amanda Assen	
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	Ph.D. program, Chemical Engineering Michigan State
Brad Sheffer	PPD, Middleton, WI
Eric Lang	Chemist, AbbVie, North Chicago, IL
Bethany Koerner	Chemist, Cargill
Margeaux Hagemann	Ph.D. program, Odom group, Michigan State University
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, Lin group, Cornell
Devin Ketelboeter	Ph.D. student, Aponick group, University of Florida
Eleanor Landwehr	Ph.D. student, Shenvi group, Scripps Research Institute
Danielle Bender	UW-Madison
Abby Ragan	Ph.D. program in Chemistry, UC-Davis
Otto Anson	UW-Madison
Will Raskop	Medical College of Wisconsin, Milwaukee, WI
Macy Vanderpass	UW-Madison
Rachel Spiegelhoff	B.S. UW-Madison, 2022
Grace Klubertanz	UW-Madison
Joseph Robey	B.S. UW-Madison, 2022
Nicholas King	
Jack Shinnars	
Ian Stukes	
Jared Pratt	
Tom Hotvedt	
Mingeun Park	

## RESEARCH FUNDING

**Current**

University of Wisconsin Vilas Associates Award 7/01/23-6/30/25

National Science Foundation  
CLP-2203611 6/01/22-5/31/25

*Multifunctional, Mutually Orthogonal Probes to Visualize Simultaneous Cellular Events*

This project aims to develop new tools for mutually exclusive bioorthogonal labeling and employ them for the study of single chain antibody fragments.

09/01/19-8/31/24

NIH R01GM111412-06

*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.

CHE-1664374

06/01/20-05/31/23

National Science Foundation

In no-cost extension

*Designer Silver Catalysts for Tunable C=C and C-H Bond Amination*

This project aims to develop new silver catalysts for chemo-, site- and stereo-selective C-H bond aminations.

Romnes Faculty Fellowship

7/2021-6/2026

Arthur C. Cope Scholar Award

unrestricted funds

**Pending or will be submitted soon**

NIH-MIRA

submitted 1/2023

General Medical Sciences

NIH

National Institute for Allergies and Infectious Diseases

will be submitted 10/16/2023

**Completed**

Wisconsin Alumni Research Foundation

5/2021-4/2022

*Visible-light mediated hydrocarbon functionalization via EDA complexes*

This proposal develops boronic esters able to activate aromatic N-heterocycles towards formation of EDA complexes with inexpensive inorganic salt donors.

*PARCI Schomaker*

3/2021-1/2023

This project provides funds to support research during COVID-19

Glaxo-Smith-Kline (Internship for Hillary Dequina)

11/2020-10/2021

*Novel N-heterocycles on ELT and Arrays*

This project seeks to develop 'on-DNA' chemistry for syntheses of stereochemically complex, densely functionalized DNA-encoded amine libraries



<p>American Chemical Society  Green Chemistry Institute Pharmaceutical Roundtable  <i>Tunable Catalytic C(sp<sup>3</sup>)-H Functionalization of Heterocyclic Scaffolds</i></p>	<p>11/01/21-10/31/22</p>
<p>NIH 1R21GM131662-01  co-PI with Prof. Baron Chanda, Neuroscience  <i>Synthetic design of an all-optical electrophysiology system</i>  The goal of this project is to design new pore and carrier ionophores to tune membrane potential for better optical electrophysiology measurements.</p>	<p>01/01/19-01/30/22</p>
<p>UW-2020 (co-PI with Chanda, Goldsmith, Rogers)  <i>All-Optical Electrophysiology- Electrophysiology without electrodes</i></p>	<p>6/1/18-5/30/21</p>
<p>American Chemical Society New Directions Award  <i>Strategies for aldoxime and ketoxime umpolung: Versatile syntheses of amines and heterocycles.</i>  The goal of this project is to employ oximes as convenient building blocks for the synthesis of complex amines.</p>	<p>07/01/17-08/31/19</p>
<p>Wisconsin Alumni Research Foundation  <i>Allenes as three-carbon synthons for the synthesis of neuroprotective terpenoids and their analogs</i></p>	<p>07/01/18-06/30/19</p>
<p>Abbvie  <i>Investigations of Nef Reactions Mediated by CS<sub>2</sub> and DBU</i>  This project studied the mechanism of a mild method converting nitroalkenes to aldehydes and ketones, with the aim of replacing CS<sub>2</sub> in the process.</p>	<p>01/01/18-12/31/18</p>
<p>CHE-1254397  National Science Foundation  <i>CAREER: New Catalysts and Methods for Amine Synthesis via Stereoselective Allene Aziridination</i>  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.</p>	<p>7/01/13-6/30/18</p>