



- 9/94-5/96      **Teaching Assistant**, University of Wisconsin-Madison
- Led discussion and review sessions for several general chemistry courses
  - Supervised laboratory sections for both general and organic chemistry
  - Lectured to entire general chemistry class

**Research Experience**

- 1/09-5/09      **Sabbatical Research**, London Imperial College, UK
- Investigated the synthesis of aluminum-based catalysts for the polymerization of biodegradable polymers (PLA) from non-petroleum resources.
  - Skilled with Schlenk and glove box techniques for manipulating and purifying air and moisture-sensitive reagents.
  - Instrumental experience includes  $^1\text{H}$ ,  $^{13}\text{C}$  NMR, HPLC, DSC, and Mass Spectroscopy.
  - Research Advisor: Dr. Charlotte Williams

- 9/94-5/00      **Doctoral Research**, University of Wisconsin-Madison
- Investigated the synthesis, characterization and reactions of room temperature stable silylenes and their derivatives.
  - Skilled with Schlenk and glove box techniques for manipulating and purifying air and moisture sensitive reagents.
  - Spectroscopic experience includes  $^1\text{H}$ ,  $^{13}\text{C}$ ,  $^{19}\text{F}$ ,  $^{31}\text{P}$  and  $^{29}\text{Si}$  NMR, Infrared and Mass Spectroscopy.
  - Research Advisor: Dr. Robert West

- Summer 1994      **Summer Internship**, Procter and Gamble, Norwich, NY
- Synthesized a series of new organic molecules as potential drugs for treatment of congestive heart failure.
  - Acquired skills with a variety of synthetic and analytical techniques (thin-layer, column and gas chromatography).

- 9/93-5/94      **Undergraduate Honors Research**, Ithaca College, Ithaca, NY
- Synthesized novel organic molecules for study in photo-induced electron transfer reactions.
  - Obtained and interpreted NMR, UV-Vis, GC-MS and IR spectra.
  - Purified compounds using HPLC on a preparative scale.
  - Research Advisor: Dr. William Bergmark

- Summer 1993      **REU Summer Research Fellow**, Columbia University, New York, NY
- Synthesized precursors to host-guest molecules for the purpose of studying electron transfer processes.
  - Research Advisor: Dr. Robert Beer

- Summer 1992      **Analytical Chemist**, New York State Health Department, Albany, NY
- Prepared concentrated extracts of water, soil, and air samples from around New York state for analysis of hazardous contaminants.

**Other Experience**

- 9/96-5/00      **Volunteer**, Madison Folk Music Society, Madison, WI
- Duties include the organization and promotion of local music concerts and festivals.
  - Prepared concert posters, newsletter articles, press releases and radio spots.
  - Board Member, September 1998

## Publications

16. S. A. Stoehr, J. P. Bilello, C. J. Hoimes M. Haaf, N. A. Warfel, J. Beard, H. C. Isom, "The Effects of Heptacellular Iron Overload on Wnt Signal Transduction In C57BL6 Mice *In Vivo*," **2007**, submitted to *Hepatology*.
15. J. L. Steinbacher, R. W. Y. Moy, K. E. Price, M. A. Cummings\*, J. Buffy, C. Roychowdhury, W. L. Oblrich, M. Haaf, D. T. McQuade, "Rapid Self-Assembly of Core-Shell Organosilicon Microcapsules in a Single Step," *Journal of the American Chemical Society*, **2006**, *128*, 9442.
14. S. L. Poe, M. A. Cummings\*, M. P. Haaf, D. T. McQuade, "Solving the Clogging Problem: Precipitate-Forming Reactions In Flow," *Angewandte Chemie International Edition in English*, **2006**, *45*, 1544.
13. X. Zhang, M. Haaf, E. Grosstephan\*, Henry Schieremberg\*, B. Todorich, J. R. Connor, "Cytokine Toxicity to Oligodendrocyte Precursors is Mediated by Iron," *Glia* **2005**, *52*, 199.
12. R. West, D. F. Moser, M. Haaf, T. A. Schmedake, I. Guzei, "New Reactions of stable Silylenes," *Organosilicon Chemistry V*, Auner & Weis, Eds, John Wiley & Sons. **2003**.
11. R. West, D. Moser, M. Haaf, "Silylenes as Catalysts for Olefin Polymerization," *patent filed*, September, 2002, U.S. Patent Number 6,576,729.
10. D. Amoroso, M. Haaf, G. P. A. Yapp, R. West, D. Fogg, "A Stable Silylene in a Reactive Environment: Synthesis, Reactivity, and Silicon Extrusion Chemistry of a Coordinatively Unsaturated Ruthenium Silylene Complex Containing Chloride and  $\eta^3$ -P-C-P Ligands," *Organometallics*, **2002**, *21*, 534.
9. M. Haaf, T. A. Schmedake, B. J. Paradise, D. R. Powell, R. West "Electronic and Steric Properties of Stable Silylene Ligands," *Journal of Organometallic Chemistry*, **2001**, *636*, 17.
8. R. West, T. A. Schmedake, M. Haaf, J. Becker, T. Mueller, "A Disilanyl Dianion and a Silyl Dianion from a Stable Silylene," *Chemistry Letters*, **2001**, 68.
7. M. Haaf, T. A. Schmedake, R. West, "Stable Silylenes," *Accounts of Chemical Research*, **2000**, *33* (10), 704.
6. T. A. Schmedake, M. Haaf, B. J. Paradise, D. Powell, and R. West, "Two Trigonal Ni(silylene)<sub>3</sub> Complexes," *Organometallics*, **2000**, *19*(17), 3263-3265
5. M. Haaf, T. Schmedake, B. Paradise, R. West, "Synthesis and Reactivity of the Stable Silylene N,N'-Di-tert-butyl-1,3-diaza-2-sila-2-ylidene," *Canadian Journal of Chemistry*, **2000**, *78*, 1526.
4. L. Leites, S. Bukalov, M. Haaf, R. West, "Raman Evidence for Aromaticity of a Stable Silylene," *Journal of Molecular Structure*, **2000**, *550*, 329.
3. T. A. Schmedake, M. Haaf, Y. Apeloig, T. Müller, S. Bukalov, R. West, "Reversible Transformation Between a Diaminosilylene and a Novel Disilene," *Journal of the American Chemical Society*, **1999**; *121*(40); 9479-9480.

2. M. Haaf, A. Schmiedl, T. A. Schmedake, D. Powell, A. Millevolte, M. Denk, R. West, "Synthesis and Reactivity of a Stable Silylene," *Journal of the American Chemical Society*, **1998**, *120*(49), 12714.
1. R. West, J. J. Buffy, M. Haaf, T. Muller, Y. Apeloig, "Chemical Shift Tensors and Electron Delocalization in Stable Silylenes," *Journal of the American Chemical Society*, **1998**, *120*(7), 1639.

\* denotes Ithaca College undergraduate

#### Presentations

"Research Ideas Born in the Classroom" Middle Atlantic Association of Liberal Arts Chemistry Teachers (MAALACT), October, 2006, Ithaca College, Ithaca, NY

Dean's List Address at Ithaca College, February, 2006. (invited)

"The Fellowship of the Rings: The First Chapter in an Undergraduate Research Program," Utica College, Utica, NY, April 2003. (invited keynote address)

"The Role of Silylenes in C-C Bond Formation", Undergraduate Seminar, Hamilton College, Hamilton, NY, April 2001. (invited talk)

"Conducting Polymers: A Context for Alan MacDiarmid's Address", Faculty Forum, Elizabethtown College, March 2001

"Recent Advances in the Chemistry of Stable Silylenes", Undergraduate Seminar, Ithaca College, Ithaca, NY, November 1999. (invited talk)

"Recent Advances in the Stille Coupling Reaction" Graduate Student Seminar, University of Wisconsin-Madison, November 1999.

"From Earth to Life: A New Interdisciplinary Course in Science", University of Wisconsin Women in Science Curriculum Reform Institute, Wisconsin Dells, May, 1999.

"Synthesis and Reactivity of a Stable Silylene", 32<sup>nd</sup> Annual Organosilicon Symposium, Marquette University, Milwaukee, WI, March, 1999.

#### Undergraduate Research Students Supervised at Ithaca College

*Fall 2002-Spring 2003* Christopher Binns ('03), Michael Sangi ('05), Christina Spado ('05), Matthew Sprague ('05), Erin Grosstephan ('06), Patricia Suchy ('06), Ryan Adler ('03) and Eric Leibensperger ('05)

*Summer 2003* Michael Sangi ('05), Kenneth Lassen ('05), and Erin Grosstephan ('06)

*Fall 2003-Spring 2004* Christina Spado ('05), Erin Grosstephan ('06), Henry Schierembergg ('05), Seth Carmody ('04), Michael Salvaggio ('07), and Kenneth Lassen ('05)

*Summer 2004* Erin Grosstephan ('06) and Henry Schierembergg ('05)

*Fall 2004-Spring 2005* Kenneth Lassen ('05), Michael Sangi ('06), Henry Schierembergg, Erin Grosstephan ('06), Sonya Morse ('06)

*Summer 2005* Meredith Cummings ('06)

*Fall 2005-Spring 2006* Ryan King ('06), Dustin Deering ('06), Sonya Morse ('06) KellLee Rich ('07), Daniel Cordaro ('07), Kendall Saffner ('07), Michael Salvaggio ('07)

*Summer 2006* Jonathan Shares ('07) and Philip Byers ('08)  
*Fall 2006-Spring 2007* Daniel Cordaro ('07), Michael Salvaggio ('07), Jonathan Shares, ('07), Paul Wilson ('07), Jenna Yehl ('08), Amanda Kowalsick ('08)  
*Summer 2007* Jenna Yehl ('08) and Melissa Martin ('09)  
*Fall 2008* Joshua Roaf ('10), Matthew Zetler ('10), Alex Levine ('10), and Juan Duchimaza ('11)

#### Undergraduate Student Presentations

*April 2002* "Selective Targeting of an Antioxidant to Mitochondria," presented by Bozho Todorich at the ISC Undergraduate Research Conference at Lebanon Valley College, PA.  
*April 2003* "Synthesis and Future Prospects for a Stable Silylene," co-presented by Christina Spado and Mike Sangi at the ECSC Undergraduate Research Conference at Ithaca College.  
*April 2004* "Synthesis of a Mitochondrially Targeted Antioxidant," presented by Erin Grosstephan ('06) and Henry Schierembergg ('05) at the ECSC Undergraduate Research Conference at Manhattan College.  
*May 2004* "Stille Reactions Catalyzed by a Silylene-Palladium Complex," presented by Michael Sangi ('05) and Kenneth Lassen ('05) at the 37<sup>th</sup> Annual Silicon Symposium held at the University of Pennsylvania in Philadelphia.  
*March 2005* "Stille Reactions Catalyzed by a Silylene-Palladium Complex," presented by Michael Sangi ('05) and Kenneth Lassen ('05) at the national American Chemical Society meeting held in San Diego, CA.  
*March 2005* "Synthesis of a Mitochondrially Targeted Antioxidant," presented by Erin Grosstephan ('06) and Henry Schierembergg ('05) at national American Chemical Society meeting held in San Diego, CA.  
*March 2006* "Applications for a Stable Silylene," presented by Ryan King ('06) and Dusting Deering ('06) at the national American Chemical Society meeting held in Atlanta, GA.  
*March 2006* "Precipitate Forming Reactions in a Simplified Microfluidic Device," presented by Meredith Cummings ('06) at the national American Chemical Society meeting held in Atlanta, GA.  
*October 2006* "An Efficient Synthesis of Tertiary Amines from Alkyl Nitriles," presented by Jonathan Shares ('07) at the Northeastern Regional ACS meeting held in Binghamton, NY.  
*March 2007* "An Efficient Synthesis of Tertiary Amines from Alkyl Nitriles," presented by Jonathan Shares ('07) at the American Chemical Society meeting held in Chicago, IL.  
*March 2007* "Design of Silanediol Histone Deacetylase Inhibitors," presented by Michael Salvaggio ('07) at the American Chemical Society meeting held in Chicago, IL.

#### Grant Activity

"Stable Silylenes as Ligands in Organometallic Catalysis," *Submitted to ACS Petroleum Research Fund, 2001, FUNDED (\$25,000)*  
 "Synthesis and Detection of Mitochondrially Targeted Antioxidants," *Submitted to Research Corporation, 2003, NOT FUNDED*  
 "Synthesis and Detection of Mitochondrially Targeted Antioxidants," *Submitted to Ithaca College Summer Research Fund, 2003, FUNDED (\$3,750)*  
 "Acquisition of a 400 MHz NMR Spectrometer," *Submitted to the National Science Foundation, 2005, FUNDED (\$267,000)*  
 "Acquisition of an X-ray Diffractometer for Expansion of Undergraduate Research Opportunities" *A collaborative effort between Ithaca, Juniata, Franklin and Marshall, and Allegheny Colleges submitted to the National Science Foundation, NOT FUNDED*  
 "The Role of Silylenes in C-C Bond Formation," *Submitted to Ithaca College Summer Research Fund, 2006, FUNDED (\$3,750)*

**Academic Service**

President, Ithaca College Phi Kappa Phi Chapter, Summer 2009-present  
President, Cornell Section of the American Chemical Society, Summer 2009-present  
President-Elect, Ithaca College Phi Kappa Phi Chapter, Fall 2008-Summer 2009  
President-Elect, Cornell Section of the American Chemical Society, Summer 2007-Summer 2009  
Chemistry Department Chair, June 2006-December 2008  
President of MAALACT (Middle Atlantic Association of Liberal Arts Chemistry Teachers), Fall 2006-Fall 2007  
Co-President, Ithaca College CP Snow Committee, Fall 2007-Spring 2008.  
Board Member, Cornell Section of the American Chemical Society, Summer 2005-present  
Ithaca College Leadership Scholarship Review Committee, Spring 2005-present.  
Ithaca College Premedical Science Committee, Spring 2003-present.  
Faculty Advisor for the Ithaca College Chemistry Club, Fall 2003-present.  
Faculty Advisor for the Ithaca Band Organization, Fall 2003.  
Faculty Advisor for the Social Enrichment for All Club, Fall 2003  
Ithaca College CP Snow Committee, Fall 2002-present.  
Elizabethtown College Cultural Events Committee  
University of Wisconsin-Baraboo Curriculum Committee  
University of Wisconsin-Baraboo Student Life and Interest on Campus (SLIC) Committee

**Affiliations**

American Chemical Society  
Council for Undergraduate Research  
Middle Atlantic Association of Liberal Arts Chemistry Teachers  
American Association for the Advancement of Science  
Phi Kappa Phi