AALAC/Mellon 23 Collaborative Workshop Proposal

December 17, 2010

**Designated Workshop Liaison:** Elizabeth Jamieson, Smith College, ejamieso@smith.edu

**AALAC Workshop Organizers:**
Hilary Eppley, DePauw University
Margaret Geselbracht, Reed College
Elizabeth Jamieson, Smith College
Adam Johnson, Harvey Mudd College
B. Scott Williams, Joint Science Department, Scripps College

**non-AALAC Workshop Speakers:**
Sheila Smith, University of Michigan- Dearborn
Joanne Stewart, Hope College

**Project Description:**
The field of inorganic chemistry is one of the broadest in chemistry, covering the entire Periodic Table of the Elements. For faculty with diverse teaching loads and deep yet narrow graduate training within a specific subdiscipline of inorganic chemistry, curricular innovation faces considerable barriers. Collaboration with colleagues from different inorganic subfields would be an obvious solution to this problem, but geographical and professional isolation, especially at small institutions, inhibits such collaborations.

We seek to enhance the inorganic chemistry classroom experience for students and faculty members by inviting AALAC chemists to become part of IONiC (Interactive Online Network of Inorganic Chemists), a vibrant virtual 'community of practice.' We propose to whet their interest with a web conference that will introduce them to the web-based collaboration tools IONiC uses and to IONiC's web home, VIPEr (Virtual Inorganic Pedagogical Electronic Resource, www.ionicviper.org). The online meeting will be followed by a face-to-face workshop that will enable participants to:

- become familiar with technology tools to maintain contact with other inorganic chemists and increase interactivity between inorganic classes (Google docs, Skype, Elluminate, Ning, VIPEr)
- develop content for their classes and learn to share that content with others on VIPEr
- take home an inorganic "learning object" (in-class activity, literature discussion, etc.) that they can readily implement in their class
- discuss strategies for best practices for implementing and assessing learning objects
- learn new inorganic content outside their comfort zone

**Who should attend:**

1. Inorganic Faculty will be our primary focus. To date, we have identified 5 other AALAC chemists who are interested in attending.
2. Faculty who teach general chemistry. Many of the VIPEr resources are suitable or readily adaptable for general chemistry courses.

**Proposed Workshop Schedule:**
The **web conference** will be scheduled for May or June 2011. We will use Elluminate, accessible through Smith College, as the platform for our online interaction.

The web conference will be used to introduce participants to one another to begin building the personal connections that are critical to successful collaborations. The capabilities of Elluminate will be demonstrated. Participants will be introduced to the VIPEr resource and become registered users. Finally, the goals of the face-to-face workshop will be described and participant feedback on those goals will be sought.

The **face-to-face workshop** will be held in July 2011 and will begin on a Friday with a "getting to know you" social hour and dinner and end on Sunday at noon. A more detailed schedule is included as an addendum.

**Impact of Workshop**:
Faculty participants will become part of a teaching and learning community, learn about creative, successful teaching approaches for inorganic chemistry, and learn about Web 2.0 technologies for collaboration. The impact will be assessed through 1) pre- and post-workshop surveys that ask about community engagement, Web 2.0 technologies, and teaching with VIPEr learning objects, 2) the submission of new VIPEr learning objects by workshop participants, and 3) 3- and 9-month follow-up virtual meetings to discuss the impact of the workshop on teaching and research.

**Preliminary Budget:**
Stipend for primary workshop organizers (to be shared) = **$1000**
Travel expenses for 4 AALAC workshop organizers @ $800 each = **$3200**
Travel expenses for 12 AALAC workshop participants @ $500 each = **$6000**
Travel expenses for 2 non-AALAC workshop speakers @ $800 each = **$1600**
Food $60 per day x 2 days x 19 participants = **$2280**
Lodging $135 per day x 2 nights x 18 participants = **$4860**
Administrative expenses & Assessment of workshop = **$1000**
**TOTAL = $19,940**

**Addendum - Proposed schedule for face-to-face workshop**

**Friday**

| | |
|---|---|
| 4:00 pm | Social hour and 'getting to know you' ice breakers |
| 6:00 pm | Dinner and welcome |
| 7:00 pm | After dinner, overview of VIPEr and intro to learning object design (Mini-workshop on backward design by Stewart) |
| 8:00 pm | Small group (birds of a feather) sharing of learning object ideas |

**Saturday**

| | |
|---|---|
| 8:00 am | Breakfast |
| 9:00 am | Playing on VIPEr, view learning objects and learn about commenting, forums, RSS feeds (Jamieson/Smith) |
| 9:45 am | Writing a learning object, pedagogical considerations, VIPEr requirements |
| 10:30 am | Break |
| 11:00 am | Working on learning objects either collaboratively or independently |
| 12:00 pm | Lunch |
| 1:00 pm | Using other social networking technologies: Skype, Elluminate, Google docs, Delicious, Ning (Eppley/Williams) |
| 2:30 pm | Break |
| 3:00 pm | Teaching a learning object - participants will share what they have developed in small groups |
| 4:30 pm | Inter-institutional teaching - IONiC and workshop participants will share their experiences with using technology to bring classes from different institutions together (Johnson/Geselbracht) |
| 6:00 pm | Dinner and social outing |

**Sunday**

| | |
|---|---|
| 8:00 am | Breakfast |
| 9:00 am | Post your learning object on VIPEr |
| 10:30 am | Break |
| 11:00 am | Whole group session: Where do we go from here? VIPEr development ideas (versioning). Personal action plans. |
| 12:00 pm | Box lunches available for participants as they leave |

# Hilary J. Eppley, Ph.D.

***Professional Preparation***

| | | |
|---|---|---|
| **Franklin & Marshall College** | **Chemistry** | **B.A., *summa cum laude*, 1991** |
| **Indiana University** | **Inorganic Chemistry** | **Ph.D., 1996** |
| **Indiana University** | **Bioinorganic Chemistry** | **Postdoctoral Appt. 1997-1999** |

***Appointments***

| | |
|---|---|
| **DePauw University, Director of the Science Research Fellows Program** | 2008-present |
| **DePauw University, Associate Professor** | 2005-present |
| **DePauw Unversity, Assistant Professor (converted to tenure track Dec 2000)** | 1999-2005 |
| **Indiana University, Postdoctoral Appointment, Helen Hay Whitney Postdoctoral Fellow** | 1997-1999 |
| **Indiana University, Research Assistant, NSF Graduate Fellow, Procter and Gamble Fellow, IU Dissertation Year Fellow** | 1991-1996 |

***Most Relevant Publications (27 total)***

1. Reisner, B. A.; Eppley, H. J.; Geselbracht, M.; Jamieson, E. R.; Johnson, A. J.; Smith, S.R.; Stewart, J. L.; Watson, L. A.; Williams, B. S. "Building an Online Teaching Community: An Evolving Tale of Communication, Collaboration, and Chemistry." *ACS Symposium Series: Enhancing Learning with Online Resources, Social Networking, and Digital Libraries,* Belford, R.; Moore, J.; Pence, H. (Eds.), in press.
2. Eppley, H. J. "Open-Ended Recrystallization Addition to the Traditional $M(acac)_3$ Laboratory" in JCE VIPEr column by Geselbracht, M. J.; Reisner, B.A. "Inorganic Chemistry Learning Objects for Use in the General Chemistry Curriculum," *J. Chem. Educ.* **2010**, *87*, 756-757.
3. Benatan, E., Dene, J., Eppley, H., Geselbracht, M., Jamieson, E., Johnson, A., Reisner, B., Stewart, J., Watson, L. and Williams, B. "Come for the Content, Stay for the Community," in "Innovative Practices for Challenging Times," *Academic Commons.* (http://www.academiccommons.org/commons/essay/come-content-stay-community, accessed September 2009).
4. "IONiC: A Cyber-Enabled Community of Practice for Improving Inorganic Chemical Education." E. Benatan, , H. J. Eppley,, M. J. Geselbracht, A. R. Johnson, B. A. Reisner, J. L. Stewart, L. Watson, and B. S. Williams, *J. Chem. Ed.* **2009**, *86*, 123.
5. "JCE VIPEr: An Inorganic Teaching and Learning Community." Benatan, Ethan; Dene, Jezmynne; Eppley, Hilary J.; Geselbracht, Margret J.; Jamieson, Elizabeth R.; Johnson, Adam R.; Reisner, Barbara A.; Stewart, Joanne L.; Watson, Lori A.; Williams, B. Scott. *J. Chem. Educ.* **2009,** *86,* 766-767.
6. "Cu(II)-Mediated Intramolecular Carbene Cation Radical Formation: Relevance to Unimolecular Metal-Ligand Radical Intermediates." Brian J. Kraft, **Hilary J. Eppley**, John C. Huffman, Jeffrey M. Zaleski, *J. Am. Chem. Soc.* **2002**, *124*, 272-280.
7. "Synthesis of $[Mn_{12}O_{12}(O_2CR)_{16}(H_2O)_4]$ Complexes (R = Me, Et, Ph, Cr)]," **Hilary J. Eppley** and George Christou, invited paper, *Inorg. Synth.,* **2002,** *33*, 61-66.
8. "Transition Metal Kinamycin Model as a DNA Photocleaver for Hypoxic Enivronments: bis(9-diazo-4,5diazafluorene) copper(II) nitrate," **Hilary J. Eppley**, John C. Huffman, Susan M. Lato, Andrew D. Ellington, Jeffrey M. Zaleski, *Chem Comm*, **1999**, 2405-2406.
9. "Decanuclear Manganese(III) Carboxylate Complexes with the $[Mn_{10}O_8]^{14+}$ Core: Structural and Magnetochemical Characterization of $Mn_{10}O_8(O_2CR)_6(chel)_8$ (chel = $pic^-$ or $dbm^-$)," **Hilary J. Eppley**, Sheila M. Aubin, Kirsten Folting, William Streib, David N. Hendrickson, George Christou, *Inorg. Chem.*, **1997**, *36*, 109-115.
10. "High Spin Molecules: Unusual Magnetic Susceptibility Relaxation Effects in $Mn_{12}O_{12}(O_2CEt)_{16}(H_2O)_3$ (S=9) and the One-Electron Reduction Product $(PPh_4)[Mn_{12}O_{12}(O_2CEt)_{16}(H_2O)_4]$ (S=19/2)," **Hilary J. Eppley**, Hui-Lien Tsai, Nadine deVries, Kirsten Folting, George Christou, David N. Hendrickson, *J. Am. Chem. Soc.* **1995**, *117*, 301-317.

***Most Relevant Grants (excludes both external and internal research grants)***

1. "Come for the Content, Stay for the Community: Building a Vibrant Community of Practice Among GLCA Chemists," GLCA New Directions Initiative, with two faculty co-applicants ($15,700), February, 2010.
2. "IONiC: A Cyber-Enabled Community of Practice for Improving Inorganic Chemical Education," NSF DUE CCLI Phase I, PI with six faculty co-applicants, ($149,374), September 2007.
3. "Project IONiC: Intellectual Online Network of Inorganic Chemists Building VIPEr: Virtual Inorganic Pedagogical Electronic Resource," NITLE Western Regional Instructional Innovation Fund ($9750), a co-applicant, PI's: Margret Geselbracht and Ethan Benetan, May 2007.
4. "IONIC: A Cyber-Enabled Network of Inorganic Faculty," Mellon Interinstitutional Faculty Career Enhancement Grant, one of six faculty co-applicants, ($26,100), January 2007.
5. "Inorganic Chemistry Curricular Initiative," Mellon Interinstitutional Faculty Career Enhancement Grant, one of seven faculty co-applicants, ($11,625), January 2006.

***Synergistic Activities***

- **Founding member of IONiC (Interactive On-Line Network of Inorganic Chemists)**: www.ionicviper.org, (2005-present) We have developed a Web 2.0-enabled virtual community of practice devoted to the teaching of inorganic chemistry as well as the electronic resource, VIPEr (Virtual Inorganic Pedagogical Electronic Resource). The website serves as a teaching repository and a community building tool for teachers of inorganic chemistry. Through this group I have written papers and grants related to this project, given presentations on both the VIPEr resource and strategies on electronic collaboration strategies, and run workshops for learning object development.
- **Served as Director of DePauw's Science Research Fellows Program and sponsored and supported undergraduate research in a variety of ways:** I have mentored 35 students in eight years, supervised 39 presentations of my students at external meetings (including 8 at National American Chemical Society Meetings) and served on the Science Research Fellows steering committee which oversees DePauw's research-based science honors program. Since July 2008, I have served as the Director of this program. Some accomplishments during and prior to that tenure included directing a large portion of the program's self-study, revamping the senior seminar to include service learning and an original research proposal, and expanding a co-curricular summer symposium series.
- **Contributed course materials I developed to several on-campus teaching workshops on writing and active learning in science classes, participated in several off-campus workshops on effective teaching techniques, contributed to departmental curricular reform efforts, and shared new inorganic chemistry course materials with the wider community:** Two examples include presentation on using chemical information in an upper level inorganic chemistry course at the Biennial Conference on Chemical Education (2008) and presenting a novel First Year Seminar course (Rust, Blood, and Magnets) at BCCE (2006).
- **Served as Chair of the Younger Chemists Committee for the Indiana Section of the American Chemical Society**: In this position I initiated a poster session that brings together industrial chemists and undergraduate and graduate student presenters for a poster session. This poster session typically attracts about 75 posters and 120 attendees and has garnered several National American Chemical Society awards and award nominations, including Best Local Section YCC activity in 2004. I supervised the planning of this poster session from 2000 to 2005.
- **Serve as a leader in university activities and participated in Leadership Development Workshops:** I have served as chair of DePauw's Admission's committee (2006), and as one of its two Great Lakes College Association representatives (2005-2006, 2007-2008). I have participated in a variety of leadership development workshops, including the PKAL Assembly: Shaping General Education Programs Focused on Quantitative and Scientific Literacy (Fall 2003), a National American Chemical Society's Leaders Conference (Winter 2005) and three COACh Workshops (Spring 2007, 2009, 2010).

## BIOGRAPHICAL SKETCH – DR. MARGRET J. GESELBRACHT

### PROFESSIONAL PREPARATION

| | | |
|---|---|---|
| University of Notre Dame du Lac | Chemistry | B.S. 1986 |
| University of California Berkeley | Chemistry | Ph.D. 1991 |
| University of Wisconsin-Madison | Inorganic Chemistry | 1991-1992 |

### APPOINTMENTS

MacArthur Professor of Chemistry, Chemistry Department Chair, Reed College, 2010–present
Professor of Chemistry, Reed College, 2006–2010
Visiting Scientist, U.S. Naval Research Laboratory, 2006–2007
Associate Professor of Chemistry, Reed College, 1998–2006
Visiting Scientist, Oxford University, Inorganic Chemistry Laboratory, 1999–2000
Assistant Professor of Chemistry, Reed College, 1993–1998

### PUBLICATIONS RELATED TO THE PROPOSED PROJECT

1) M. J. Geselbracht and B. A. Reisner, "Inorganic Chemistry Learning Objects for Use in the General Chemistry Curriculum," *J. Chem. Educ.* **2010**, *87*, 756-757.

2) E. Benatan, J. Dene, H. Eppley, M. Geselbracht, E. Jamieson, A. Johnson, B. Reisner, J. Stewart, L. Watson, and B. Williams, "Come for the Content, Stay for the Community," in "Innovative Practices for Challenging Times," *Academic Commons* [Online]. http://www.academiccommons.org/commons/essay/come-content-stay-community (accessed September 10, 2009).

3) E. Benatan, J. Dene, H. J. Eppley, M. J. Geselbracht, E. R. Jamieson, A. R. Johnson, B. A. Reisner, J. L. Stewart, L. A. Watson, and B. S. Williams, "JCE VIPEr: An Inorganic Teaching and Learning Community," *J. Chem. Educ.* **2009**, *86*, 766-767.

4) E. Benatan, H. Eppley, M. Geselbracht, A. Johnson, B. Reisner, J. Stewart, L. Watson, and B. S. Williams, "IONiC: A Cyber-Enabled Community of Practice for Improving Inorganic Chemical Education," *J. Chem. Educ.* **2009**, *86*, 123.

5) A. B. Ellis, M. J. Geselbracht, B. J. Johnson, G. C. Lisensky, and W. R. Robinson, *Teaching General Chemistry: A Materials Chemistry Companion*, American Chemical Society: Washington D.C., 1993.

### OTHER SIGNIFICANT PUBLICATIONS (UNDERGRADUATE CO-AUTHORS UNDERLINED)

1) M. J. Geselbracht, H. K. White, J. M. Blaine, M. J. Diaz, J. L. Hubbs, N. Adelstein, and J. A. Kurzman, "New Solid Acids in the Triple-Layer Dion-Jacobson Layered Perovskite Family," *Mater. Res. Bull.* in press, Dec **2010**.

2) J. A. Kurzman and M. J. Geselbracht "Probing Octahedral Tilting in Dion-Jacobson Layered Perovskites With Neutron Powder Diffraction and Raman Spectroscopy," in *Solid State Chemistry of Inorganic Materials VI*, edited by R. Seshadri, J. W. Kolis, D. B. Mitzi, M. J. Rosseinsky (Mater. Res. Soc. Symp. Proc. *988E*, Warrendale, PA, **2007**), 0988-QQ08-06.

3) M. J. Geselbracht, A. S. Erickson, M. P. Rogge, J. E. Greedan, R. I. Walton, M. W. Stoltzfus, H. W. Eng, and P. Woodward, "Structure Property Relationships in the $ATi_2O_4$ ($A$ = Na, Ca) Family of Reduced Titanates," *Journal of Solid State Chemistry* **2006**, *179*, 3489-3499.

4) M. J. Geselbracht, L. D. Noailles, L. T. Ngo, J. H. Pikul, R. I. Walton, E. S. Cowell, F. Millange, and D. O'Hare, "Probing Molten Salt Flux Reactions Using Time-Resolved *in situ* High Temperature Powder X-ray Diffraction: A New Synthesis Route to the Mixed-Valence $NaTi_2O_4$," *Chemistry of Materials* **2004**, *16*, 1153-1159.

5) M. J. Geselbracht, R. I. Walton, E. S. Cowell, F. Millange, and D. O'Hare, "Investigating the Synthesis of the Layered Perovskite $RbCa_2Nb_3O_{10}$ Using Time-Resolved *in situ* High Temperature Powder X-ray Diffraction," *Chemistry of Materials* **2002**, *14*, 4343-4349.

**SYNERGISTIC ACTIVITIES**

- Founding member of the IONiC Leadership Council (Interactive Online Network of Inorganic Chemists). With funding from NITLE and the NSF CCLI program, developed and launched VIPEr (www.ionicviper.org), an online resource to support a virtual community of practice for improving inorganic chemistry education. VIPEr was featured in the *Journal of Chemical Education*, **2008**, *85*, 1342.
- Collaborator in "A Distributed Combinatorial Search for Water Splitting Photocatalysts", research project directed by Prof. Bruce A. Parkinson (University of Wyoming) and funded by the Special Grant Program in the Chemical Sciences, Camille and Henry Dreyfus Foundation, $45,000, 2008-09.
- Co-organizer for Symposium entitled *Undergraduate Research at the Frontiers of Inorganic Chemistry*, Spring National Meeting of the American Chemical Society, Salt Lake City, UT, March 22-26, 2009.
- Invited contributor to the *NSF Workshop on Materials*, St. Louis, MO, October, 2008.
- Panelist and co-author, "Section 6: Education" in *The Third Workshop on Future Directions of Solid State Chemistry: The Status of Solid State Chemistry and its Impact in the Physical Sciences*, workshop sponsored by the National Science Foundation and held at Northwestern University, Evanston, IL. May 2006. Final report available at http://www.chem.northwestern.edu/~poeppel/dmr/.

**GRANTS**

1) National Science Foundation, "MRI: Acquisition of a Multi-Institutional, Multi-Departmental, Modern X-Ray Diffraction System to Anchor a Portland Area Materials Characterization Group." Andrea M. Goforth (Portland State University), Anne K. Bentley (Lewis and Clark College), and Margret J. Geselbracht (Reed College), 2009-2011, $225,624. (Award #DMR-0923572)
2) National Science Foundation, CCLI, "IONiC: A Cyber-Enabled Community of Practice for Improving Inorganic Chemical Education." Hilary Eppley (DePauw University, PI), Margret Geselbracht (Reed College), Adam Johnson (Harvey Mudd College), Barbara Reisner (James Madison University), Joanne Stewart (Hope College), Lori Watson (Earlham College) and Scott Williams (The Claremont Colleges Joint Science Department), 2008-2011, $149,374 (Award #DUE-0737030).
3) NITLE, Western Region Instructional Innovation Award, "Project IONiC: Intellectual Online Network of Inorganic Chemists Building VIPEr: Virtual Inorganic Pedagogical Electronic Resource," Margret Geselbracht and Ethan Benatan (co-PIs, Reed College), Hilary Eppley (DePauw University), Adam Johnson (Harvey Mudd College), Barbara Reisner (James Madison University), Joanne Stewart (Hope College), Lori Watson (Earlham College) and Scott Williams (The Claremont Colleges Joint Science Department), 2007-2008, $9750.

**GRADUATE ADVISOR:** Prof. Angelica M. Stacy, University of California Berkeley

**POSTDOCTORAL ADVISOR**: Prof. Arthur B. Ellis, University of California San Diego

***Undergraduate Research Students*** *(since 1993): 45*
***Undergraduate Theses Advised*** *(since 1993): 32*

**ELIZABETH REDDING JAMIESON**

**a. Professional Preparation**
Smith College, *magna cum laude* (with highest honors in Chemistry), A.B., 1994
Massachusetts Institute of Technology, Inorganic Chemistry, Ph.D., 2000
Boston University, NIH Postdoctoral Fellow, Chemistry Department, 2000-2001

**b. Appointments**
Associate Professor of Chemistry, Smith College, 2009-present
Assistant Professor of Chemistry, Smith College, 2001-2009

**c. Publications**
***Related to the proposed project:***

"Come for the Content, Stay for the Community," E. Benatan, J. Dene, H. Eppley, M. Geselbracht, E. Jamieson, A. Johnson, B. Reisner, J. Stewart, L. Watson, and B. Williams, in "Innovative Practices for Challenging Times," *Academic Commons* [Online]. http://www.academiccommons.org/commons/essay/come-content-stay-community (accessed September 10, 2009).

"JCE VIPEr: An Inorganic Teaching and Learning Community," E. Benatan, J. Dene, H. J. Eppley, M.J. Geselbracht, E.R. Jamieson, A.R. Johnson, B.A. Reisner, J.L. Stewart, L.A. Watson, and B.S. Williams, *J. Chem. Ed.* **2009**, *86*, 766-767.

***Other significant publications ( * denotes undergraduate co-author):***

"Identifying Protein Interactions with Metal-Modified DNA Using Microarray Technology," Stansfield, H.E.,* Kulczewski, B.P.,* Lybrand, K.E.,* and Jamieson, E.R. *J. Biol. Inorg. Chem.*, **2009**, *14*, 193-199.

"Impact of the Oxidized Guanine Lesion Spiroiminodihydantoin on the Conformation and Thermodynamic Stability of a 15-mer DNA Duplex" F. Chinyengetere* and E.R. Jamieson, *Biochemistry*, **2008**, *47*, 2584-2591.

"C4' Sugar Oxidation of Deoxyribonucleotide Triphosphates by Chromium(V) Complexes" T. Chowdhury* and E.R. Jamieson, *Mutation Research*, **2006**, *610*, 66-73.

"A General Synthesis of Specifically Deuterated Nucleotides for Studies of DNA and RNA" B. Chen, E.R. Jamieson, and T.D. Tullius, *Bioorganic and Medicinal Chemistry Letters* **2002**, *12*, 3093-3096.

"DNA Sequence Context Modulates the Impact of a Cisplatin 1,2-d(GpG) Intrastrand Cross-link on the Conformational and Thermodynamic Properties of Duplex DNA" D.S. Pilch, S.U. Dunham, E.R. Jamieson, S.J. Lippard, and K.J. Breslauer, *J. Mol. Biol.* **2000**, *296*, 803-812.

"Stopped-Flow Fluorescence Studies of HMG-Domain Proteins Binding to Cisplatin-Modified DNA" E.R. Jamieson and S.J. Lippard. *Biochemistry*, **2000**, *39*, 8426-8438.

"Structure, Recognition, and Processing of Cisplatin-DNA Adducts" E.R. Jamieson and S.J. Lippard. *Chem. Rev.*, **1999**, *99*, 2467-2498.

**d. Synergistic Activities**

- Member of Leadership Council for the Interactive Online Network of Inorganic Chemists (IONiC), a project funded by an NSF CCLI grant, since July 2008
- Co-PI for NSF MRI Grant, Acquisition of a 500 MHz NMR, August 2009
- PI for NSF MRI Grant, Acquisition of Aqueous Biogeochemistry Facilities, August 2007
- Research Rewards Grant recipient, TriLink Biotechnologies, July 2007
- Franklin Research Grant recipient, American Philosophical Society, March 2005
- Professional/Honor Society Memberships: American Chemical Society, Council on Undergraduate Research, Sigma Xi, Phi Beta Kappa, Iota Sigma Pi
- Member of advisory committee for the Smith College Biochemistry Program
- Member of the Chemistry Department subcommittee to address under-representation and success of students of color in courses and former member of advisory board for Clark Science Center's Inreach/Outreach program for underrepresented students in the sciences

**e. Collaborators**

***Research:*** Prof. Megan E. Nuñez, Mt. Holyoke College
Prof. Cristina Suarez, Smith College

***Education:***
Prof. Hilary P. Eppley, DePauw University; Prof. Margaret J. Geselbracht, Reed College; Prof. Adam R. Johnson, Harvey Mudd College; Prof. Barbara Reisner, James Madison University; Prof. Sheila Smith, University of Michigan Dearborn; Prof. Joanne Stewart, Hope College; Prof. Lori Watson, Earlham College; Prof. B. Scott Williams, JSD, Claremont Colleges

***Graduate Advisor:*** Prof. Stephen J. Lippard, Massachusetts Institute of Technology

***Postdoctoral Advisors:*** Prof. Thomas D. Tullius, Boston University

***Undergraduate Research Students:***

Total number of undergraduate research students supervised: 28
Total number of undergraduate honors theses supervised: 4 (denoted with *)

Julia Park,* Candice Kwon, Chynna Chou, Ma Thida, Chi Gao, Pyae Naing, Melissa Wong, Megana Dwarakanath,* Maud Martei, Holly Boyle, Liz Liao, Melinda Ng, Kristin Wilson, JiYing Zhao, Ingrid Boedker, Jennie Brown, Paninya Masrangsan, Salome Ngatia, Fadzai Chinyengetere,* Bethany Kulczewski, Angela Lane, Kyle Lybrand, Hope Stansfield, Kereida Beadle, Tahmeena Chowdhury, Emilia Connolly,* Megan Murphy, Lauren Nichols

**Biographical Sketch – Dr. Adam R. Johnson**

**A. Professional Preparation**

| | | |
|---|---|---|
| Oberlin College | Chemistry (high honors) | B.A. 1993 |
| Massachusetts Institute of Technology | Inorganic Chemistry | Ph. D. 1997 |
| University of California, Berkeley | NIH postdoctoral fellow | 1997-1999 |

**B. Appointments**

| | |
|---|---|
| Associate Professor of Chemistry, Harvey Mudd College | 2005- |
| Visiting Associate in chemistry, California Institute of Technology | 2005-2006 |
| Assistant Professor of Chemistry, Harvey Mudd College | 1999-2005 |

**C. Publications** (#1-5 most closely related to the project)
(23 published, * indicates undergraduate co-author)

1. Resiner, B. A.; Eppley, H. J.; Geselbracht, M. J.; Jamieson, E. R.; Johnson, A. R., Smith, S. R.; Stewart, J. L.; Watson, L. A.; and Williams, B. S. "Building an Online Teaching Community: An Evolving Tale of Communication, Collaboration and Chemistry" in *Enhancing Learning with Online Resources, Social Networking, and Digital Libraries*; Moore, J., Pence, H., Belford, R., Eds.; ACS Symposium Series, *in press*.

2. Benatan, E., Eppley, H. J., Geselbracht, M. J., Johnson, A. R., Reisner, B. A., Stewart, J. L., Watson, L. and Williams, B. S. "IONiC: A Cyber-Enabled Community of Practice for Improving Inorganic Chemical Education." *J. Chem. Educ.*, **2009**, *86*, 123.

3. Johnson, A., Benatan, E., Dene, J., Eppley, H., Geselbracht, M., Jamieson, E., Reisner, B., Stewart, J., Watson, L. and Williams, B., "The Virtual Inorganic Pedagogial Electronic Resource: An Online Teaching Materials Repository and Interactive Social Networking Environment for Inorganic Chemistry Educators," in EDULEARN09, Proceedings of the International Conference on Education and New Learning Technologies, Barcelona, Spain, July 6-8, 2009; IATED, Ed. (www.iated.org/edulearn09).

4. Benatan, E., Dene, J., Eppley, H., Geselbracht, M., Jamieson, E., Johnson, A., Reisner, B., Stewart, J., Watson, L. and Williams, B. "Come for the Content, Stay for the Community," in "Innovative Practices for Challenging Times," Academic Commons. (http://www.academiccommons.org /commons/essay/come-content-stay-community, accessed September 2009).

5. Spring 2008 CONFCHEM, an on-line conference. Benatan, E., Eppley, H. J., Geselbracht, M. J., Johnson, A. R., Reisner, B. A., Stewart, J. L., Watson, L. and Williams, B. S. "IONiC: A Cyber-Enabled Community of Practice for Improving Inorganic Chemical Education." (http://www.ched-ccce.org/confchem/2008/b/P4.html, accessed June 2009).

6. Near, K. E.*, Chapin, B. M.*, McAnnally-Linz, D. C.*, and Johnson, A. R. "Asymmetric Hydroamination of Aminoallenes Catalyzed by Titanium and Tantalum Complexes of Chiral Sulfonamide Alcohol Ligands." *J. Organometal. Chem.*, **2011**, *696*, 81-86 (special issue on "Catalytic addition of E-H bonds") doi:10.1016/j.jorganchem.2010.08.001.

7. Chapin, B. M.*, Hughs, L. D.*, Golen, J. A., Rheingold, A. L. and Johnson, A. R. "Chlorido($\eta^5$-cyclopentadienyl)bis(dimethylamido)titanium, ($TiCl(\eta^5\text{-}C_5H_5)(NMe_2)_2$)." *Acta Cryst.*, **2010**, *C66*, m191-m193.

8. Hickman, A. J.*; Hughs, L. D.*; Jones, C. M.*; Li, H.*; Redford, J. E.*; Sobelman, S. J.*; Kouzelos, J. A.*; and Johnson, A. R. "Sterically encumbered chiral amino alcohols for titanium catalyzed asymmetric intramolecular hydroamination of aminoallenes." *Tetrahedron: Asymmetry*, **2009**, *20*, 1279-1285.

9. Petersen, J. R.*; Hoover, J. M.*; Kassel, W. S.; Rheingold, A. L.; and Johnson A. R. "Titanium complexes with chiral amino alcohol ligands: synthesis and structure of complexes related to hydroamination catalysts" *Inorg. Chim. Acta*, **2005**, *358*, 687-694.

10. Hoover, J. M.*; Petersen, J. R.*; Pikul, J. H.* and Johnson, A. R. "Intramolecular catalytic hydroamination of substituted aminoallenes by chiral titanium amino-alcohol complexes" *Organometallics*, **2004**, *23*, 4614-4620.

**D. Synergistic Activities**

- Founding member and Leadership Council of IONiC (Interactive Online Network of Inorganic Chemists, www.ionicviper.org)
- Summer Undergraduate Research Coordinator (NSF-REU)
- Mentoring undergraduate researchers (40 students over the past 12 years).
- Redesign of the inorganic chemistry and laboratory curriculum at Harvey Mudd College with a focus on inquiry-based learning and group work, modern synthetic techniques and technical writing
- Session Chair IATED, Barcelona, Spain, July 6-8, 2009
- President, and Vice President, Claremont Colleges Chapter of Sigma Xi (scientific research honor society)
- Reviewer for National Science Foundation, Civilian Research and Development Foundation (CRDF), American Chemical Society-Petroleum Research Fund, AAAS-Merck, Inorganic Chemistry, Tetrahedron Letters, Journal of Chemical Education
- Member, American Chemical Society, Sigma Xi

**E. Collaborators and Other Affiliations (2006-present)**

Ethan Benatan, Reed College (computer user services)
Brette M. Chapin, Harvey Mudd College (undergraduate student)
Hilary J. Eppley, DePauw University (faculty)
Margret J. Geselbracht, Reed College (faculty)
Amanda J. Hickman, University of Michigan (graduate student)
Lauren D. Hughs, University of Washington (employee)
Elizabeth R. Jamieson, Smith College (faculty)
Casey M. Jones, Princeton University (graduate student)
Katherine E. Near, Stanford University (graduate student)
Barbara A. Resiner, James Madison University (faculty)
Joanne E. Redford, University of Wisconsin (graduate student)
Arnold L. Rheingold, University of California, San Diego (faculty)
Sheila R. Smith, University of Michigan, Dearborn (faculty)
Joanne L. Stewart, Hope College (faculty)
Lori Watson, Earlham College (faculty)
B. Scott Williams, Claremont Colleges Joint Science Department (faculty)

*Graduate advisor:* Christopher C. Cummins, Massachusetts Institute of Technology
*Postdoctoral advisor:* Kenneth N. Raymond, University of California, Berkeley

Total number of undergraduate research students advised: 39
Total number of post-doctoral research advisees: 1
Total number of undergraduate theses supervised: 22

# CURRICULUM VITA

**Sheila Rose Smith**
Associate Professor of Chemistry
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University of Michigan- Dearborn
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Dearborn, MI 48128
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## Education

**Post-Doctoral Research Associate.—Chemistry** **1997- 2001**
Michigan State University, East Lansing, MI
**Ph.D.—Inorganic Chemistry** **February 1997**
University of North Carolina, Chapel Hill, NC
**B.S.—Chemistry, ACS** **May 1992**
North Carolina State University

## Publications

[1] Neyhart, G.A.; Grover, N.; **Smith, S.R.**; Kalsbeck, W. A.; Fairley, T. A.; Cory, M.; Thorp, H.H.. Binding and Kinetics Studies of DNA Oxidation by Oxoruthenium(IV). *J. Am. Chem. Soc.* **1993**, *115*, 4423 - 4428.

[2] S. R. Smith, G. A. Neyhart, W. A. Kalsbeck, H. H. Thorp Electronic Properties of Aquapolpyrydyl Ruthenium Complexes Bound to DNA. *New J. Chem.* **1994**, *18*, 397-406.

[3] Trammell, S.; Sullivan, B. P.; Hodges, L. M.; Harman, W. D.; **Smith, S. R.**; Thorp, H. H..Photochemistry of a Structurally Uncomplicated Phenylcarbyne Complex. *Inorg. Chem.* **1995**, *34*, 2791 - 2792.

[4] Kazmierski, W. M.; Wolberg, G.; Wilson, J. G.; **Smith, S. R.**; Williams, D. S.; Thorp, H. H.; Molina, L.. "Iron Chelates Bind Nitric Oxide and Decrease Mortality in Experimental Model of Septic Shock." *Proceedings of the National Academy of Sciences*, **1996**, *93*, 9138-9141.

[5] **Smith, S.R.** "Siderophores as Catalysts: Electrocatalytic Reduction of Nitric Oxide and Nitrite by the Siderophore Complex Ferrioxamine B." *Doctoral Dissertation*, University of North Carolina, **1997**.

[6] **Smith, S.R.**; Thorp, H. H. "Application of the Electrocatalytic Reduction of Nitric Oxide Mediated by Ferrioxamine B to the Determination of Nitric Oxide Concentrations in Solution." *Inorganica Chemica Acta*, **1998**, *273*, 316-319.

[7] Broderick, J.B.; Henshaw, T.F.; Cheek, J.; Wojtuszewski, K.; **Smith, S.R.**; Trojan, M.R.; McGhan, R.M.; Kopf, A.; Kibbey, M.; Broderick, W.E.. "Pyruvate Formate-Lyase Activating Enzyme: Strictly Anaerobic Isolation Yields Active Enzyme Containing a [3Fe4Su]$^{+}$ Cluster." Biochemical and Biophysical Research Communications, **2000**, 269, 451-456.

[8] Hogan, D.A.; **Smith, S.R.**; Saari, E.A.; McCracken, J.M.; Hausinger, R.P.. "Site-Directed Mutagenesis of 2,4-Dichlorophenoxyacetic acid/a-Ketoglutarate Dioxygenase: Identification

of Residues involved in Metallocenter Formation and Substrate Binding." Journal of Biological Chemistry,**2000**, 275, 12400-12409.

[9] **Smith, S.R.**." The Primary Literature as Text: An Undergraduate Level Topics Course in Bioinorganic Chemistry for Chemistry, Biology and Biochemistry Majors." The Chemical Educator, **2006**, 11 (1), 9-12.

[10] **Smith.S.R.**; Pala, I., and Benore-Parsons, M.. "Riboflavin Binding Protein Contains a Type II Copper Binding Site." Journal of Inorganic Biochemistry. **2006**, 100,*1730-1733.*

[11] **Smith, S.R.**; Bencze, K.Z.; Wasiukanis, K.; Stemmler. T.L.; Benore-Parsons, M.. "Association of Copper to Riboflavin Binding Protein; Characterization by EPR and XAS." The Open Inorganic Chemistry Journal, **2008**, 2, 22-24.

[12] **Smith, S.R.**; Bencze, K.Z.; Russ, K.A.; Wasiukanis. K.;Benore-Parsons, M.; Stemmler, T.L.. "Investigation of the Copper Binding Site and the Role of Histidine as a Ligand in Riboflavin Binding Protein." Inorganic Chemistry , **2008**,47, 6867–6872.

[13] Reisner, B.; Eppley, H.; Geselbracht, M.; Jamieson, E.; Johnson, A.;**Smith, S.**;Stewart, J.; Watson, L.; Williams, B. "Building an Online Teaching Community: An Evolving Tale of Communication, Collaboration and Chemistry." ACS Symposium Series, **2010,** accepted.

## Selected Presentations (2009-2010)

[1] **Smith, S.R.;** Benore, M.; Stemmler, T.L.. "Characterization of Copper Binding to Riboflavin Binding Protein: Examination of Binding Interaction by ITC and CD, Gordon Research Conferences, Metals in Biology, Ventura, CA, February **2010**.

[2] Watson, L.A.; Benetan, E.; Dene, J.; Eppley, H.J.; Geselbracht, M.J.; Jamieson, E.R.; Johnson, A.R.; Reisner, B.A.; **Smith, S.R.;**Stewart, J.L.; Williams, B.S.. "VIPEr: Virtual inorganic pedagogical electronic resource" 239th National Meeting of the American Chemical Society, San Francisco, CA , March 2010

[3] **Smith, S.R.;** Benore, M.; Stemmler, T.L.. "Characterization of Copper Binding to Riboflavin Binding Protein: Examination of Binding Interaction by ITC and CD" 239th National Meeting of the American Chemical Society, San Francisco, CA , March **2010.**

[4] **Smith, S.R.;** Russ, K.;Bencze, K.; Stemmler, T.L.; Benore, M.."Characterization of copper binding to Riboflavin Binding Protein: A new player in avian embryonic copper transport and storage?" MENA Women in Science and Engineering Workshop on Association Building and International Research Collaboration , Abu Dhabi, UAE, May **2010**.

## National Service (2009-2010)

Member, Leadership Council, Interactive Online Network of Inorganic Chemists (IONIC)

Session Chair, two sessions, 239th National Meeting of the American Chemical Society, San Francisco, CA , March **2010.**

National AP Exam Reader

## Grants (2009-2010)

ARRA Summer Supplement for Students and Science Educators, NIH, $18,000 (Stemmler Lab, Wayne State University School of Medicine)

**Biographical Sketch**

**Joanne L. Stewart**
Professor of Chemistry
www.hope.edu/academic/chemistry/faculty/stewart/

Department of Chemistry
Hope College
Holland, MI 49423

**Professional Preparation:**

| | | |
|---|---|---|
| Kalamazoo College | Chemistry | B.A., 1982 |
| U.C. Berkeley | Inorganic Chemistry | Ph.D., 1988 |

**Appointments**

Professor, Department Chemistry, Hope College, 1999-Present
Visiting Academic, University of Queensland, 2008-2009
Visiting Scholar, U.C., San Diego, 2001-2002
Associate Professor, Department of Chemistry, Hope College, 1994-1999
Visiting Scientist, Harvard University, 1994-1995
Assistant Professor, Department of Chemistry, Hope College, 1988-1994
Associate Staff Chemist, General Electric, 1982-1983

**Publications**

*Most closely related to the proposed project:*

*undergraduate researcher

1. Benatan, E., Eppley, H. J., Geselbracht, M. J., Johnson, A. R., Reisner, B. A., Stewart, J. L., Watson, L. and Williams, B. S. IONiC: A Cyber-Enabled Community of Practice for Improving Inorganic Chemical Education. *J. Chem. Ed.* **2009**, *86*, 123.
2. Benatan, E.; Dene, J.; Eppley, H. J.; Geselbracht, M. J.; Jamieson, E. R.; Johnson, A. R.; Reisner, B. A.; Stewart, Jo. L.; Watson, L. A.; Williams, B. S. JCE VIPEr: An Inorganic Teaching and Learning Community. *J. Chem. Educ.* **2009,** *86,* 766-767.
3. Benatan, E., Dene, J., Eppley, H., Geselbracht, M., Jamieson, E., Johnson, A., Reisner, B., Stewart, J., Watson, L. and Williams, B.S. "Come for the Content, Stay for the Community," in "Innovative Practices for Challenging Times," Academic Commons. (http://www.academiccommons.org/commons/essay/come-content-stay-community, accessed September 2009).
4. Leah A. Chase, Joanne Stewart, and Christopher C. Barney, "Cultivation of an Interdisciplinary, Research-Based Neuroscience Minor at Hope College" *Journal of Undergraduate Neuroscience Education*, Fall 2006, 5(1):A6-A13. Full paper available at http://www.funjournal.org/downloads/ChaseJUNEf06.pdf.
5. Stewart, J.L., Wilkerson, V.* "ChemConnections: A Guide to Teaching with Modules," W.W. Norton & Company: New York, 2003.

*Other significant publications:*

1. Lisensky, G.C., Ellis, A.B., Beall, H., Campbell, D.J., Stewart, J.L., *Build a Better CD Player: How Can You Get Blue Light From a Solid?* W.W. Norton & Company: New York, 2003.

2. Van Zaandt, W.* Huffman, J.C., Stewart, J.L., "Synthesis and X-ray Crystal Structure of a Lead Aryl Oxide Dimer, $Pb_2(\mu\text{-}O\text{-}2,6\text{-}Ph_2C_6H_3)_2(O\text{-}2,6\text{-}Ph_2C_6H_3)$," *Main Group Metal Chemistry* **1998**, *21*, 237-240.
3. Stewart, J.L., Andersen, R.A., "Trivalent uranium chemistry: molecular structure of $[(Me_3Si)_2N]_3U$", *Polyhedron* **1998**, *17*, 953-958.
4. Stewart, J.L. and Andersen, R.A., "Crystal Structures of $[(Me_3Si)_2N]_4U_2[\mu\text{-}N(H)\text{-}(mesityl)]_2$; Compounds with Asymmetrically Bridging Primary Amide and Imide Groups." *New J. Chem.*, **1995**, *19*, 587-595.
5. Kras, L.H.*, Euvrard, A.*, Grassl, Y.N.*, Ronda, S.M.* and Stewart, J.L., "Synthesis of $Sn[OCH(t\text{-}Bu)_2]_2$ and $Sn[OSi(t\text{-}Bu)_3]_2$: Variable Temperature $^1H$ and $^{119}Sn$ NMR Studies," *Main Group Metal Chemistry*, **1994**, *17*, 409-412.

**Synergistic Activities**

- Director of Hope College Howard Hughes Medical Institute Program, 2008-present.
- Carnegie Scholar, 2005-2006. Interdisciplinary curriculum development and research on student integrative learning in science.
- HHMI Director of Integrative Learning in Science, Hope College, 2005-2008. Led faculty development and curriculum development for HHMI program at Hope College.
- Keck-Project Kaleidoscope consultant on issues of active/cooperative learning, science building design, and women in science (1994-present).
- External review panel member for department reviews: Colorado College, 1997; Muskingum, 1999; St. Olaf, 2000; Macalester, 2001; Lewis & Clark, 2002; Smith College, 2006, Drew University, 2009.

**Collaborators:**
Hilary Eppley, DePauw University
Margret Geselbracht, Reed College
Elizabeth Jamieson, Smith College
Adam Johnson, Harvey Mudd College
Gwen Lawrie, University of Queensland
Barbara Reisner, James Madison University
Lori Watson, Earlham College
B. Scott Williams, Joint Science Department, Claremont Colleges
Christopher Barney, Hope College
Leah Chase, Hope College
Tricia Ferrett, Carleton
Sandra Laursen, Univ. of Colorado, Boulder
Mary Walczak, St. Olaf College

**Graduate and Postdoctoral Advisor:** Dr. Richard A. Andersen, University of California, Berkeley

**Undergraduate Research Students Supervised:** 53

**B. Scott Williams, Associate Professor of Chemistry**
**Joint Science Department of the Claremont Colleges**
**Scripps, Claremont McKenna, and Pitzer Colleges**
**Biographical Sketch**

**Professional Preparation**

| | | |
|---|---|---|
| Harvey Mudd College | Chemistry | B.S., 1995 |
| University of Washington, Seattle | Inorganic Chemistry | Ph.D., 2000 |
| Universiteit Utrecht, Utrecht, The Netherlands 01 | Metal-Mediated Synthesis | Postdoc, 00- |
| University of North Carolina, Chapel Hill 03 | Organometallic Chemistry | Postdoc, 01- |

**Appointments**

| | |
|---|---|
| 2009-present | Associate Professor of Chemistry, W. M. Keck Science Center (Joint Science Department), The Claremont Colleges, Claremont, CA |
| 2009-2010 | Visiting Scholar, Department of Chemistry and Biochemistry, Rutgers: The State University of New Jersey, Piscataway, NJ |
| 2007 | Visiting Scientist, Chemistry Department, University of Washington, Seattle, WA |
| 2003-2009 | Assistant Professor of Chemistry, W. M. Keck Science Center (Joint Science Department), The Claremont Colleges, Claremont, CA |
| 2001-2003 | Postdoctoral Fellow, Chemistry Department, University of North Carolina, Chapel Hill. |
| 2000-2001 | NSF-NATO Postdoctoral Fellow, Department of Metal-Mediated Synthesis, Debye Institute, Universiteit Utrecht, Utrecht, The Netherlands. |

**Publications**

**A. Publications most closely related to the proposed project**

1. Eppley, H. J; Geselbracht, M. J.; Jamieson, E. R; Johnson, A. R.; Reisner, B. A.; Smith, S. Stewart, J. L.; Watson, L. A., Williams, B. S. "Building an Online Teaching Community: An Evolving Tale of Communication, Collaboration and Chemistry" in *Enhancing Learning with Online Resources, Social Networking and Digital Libraries*; Pence, H; Moore, J.; Belford, R., Eds.; to be published by the American Chemical Society Press. In press.

2. Williams, B. S. "Sceptical Chymists Online: How the Practice, Teaching, and Learning of Science Will be Affected by Web 2.0" in *Enhancing Learning with Online Resources, Social Networking and Libraries*; Pence, H; Moore, J.; Belford, R., Eds.; to be published by the American Chemical Society Press. In press.

3. "Visible Teaching: Moving from a Solitary Practice to a Community Endeavor" Reisner, B. A.; Williams, B. S. *J. Chem. Educ.* **2010**, *87*, 252-253.
http://pubs.acs.org/doi/abs/10.1021/ed800104t

4. "Come for the Content, Stay for the Community" Benatan, E.; Dene, J.; Eppley, H.; Geselbracht, M.; Jamieson, E.; Johnson, A.; Reisner, B.; Stewart, J.; Watson, L.; Williams, B. S. *Academic Commons* **2009**, *September*. http://www.academiccommons.org/commons/essay/come-content-stay-community

5. "IONiC: A Cyber-Enabled Community of Practice for Improving Inorganic Chemical Education" Benatan, E.; Eppley, H. J.; Geselbracht, M. J.; Johnson, A. R.; Reisner, B. A.; Stewart, J. L.; Watson, L.; Williams, B. S . *J. Chem. Educ.* **2009**, *86*, 123 (summary, full pdf at link). http://jchemed.chem.wisc.edu/Journal/Issues/2009/Jan/abs123_2.html

**B. Other Publications**

1. "Reversible carbonylation of an [NCN]PtMe pincer complex and direct evidence of alkyl migration" Scheuermann, M. L.; Rheingold, A. L.; Williams, B. S. *Organometallics* **2009**, *28*, 1613-1614. http://pubs.acs.org/doi/abs/10.1021/om900050p

2. "Reductive Elimination and Dissociative β-Hydride Abstraction from Pt(IV) Hydroxide and Methoxide Complexes" Smythe, N. A.; Grice, K. A.; Williams, B. S.; Goldberg, K. I. *Organometallics* **2009**, *28*, 277–288. http://pubs.acs.org/doi/full/10.1021/om800905q

3. "A Mechanistic Study of Competitive $sp^3$-$sp^3$ and $sp^3$-$sp^2$ Carbon-Carbon Reductive Elimination from a Platinum (IV) Center and the Isolation of a C-C Agostic σ-Complex." Madison, B. L.; Thyme, S. B.; Keene, S.; Williams, B. S. *J. Am. Chem. Soc* **2007**, *129*, 9538-9539. http://pubs.acs.org/doi/abs/10.1021/ja066195d

4. "Reactions of Vinyl Acetate and Vinyl Trifluoroacetate with Cationic Diimine Pd(II) and Ni(II) Alkyl Complexes: Identification of Problems Connected with Copolymerizations of These Monomers with Ethylene" Williams, B. S.; Leatherman, M. D.; White, P. S.; Brookhart, M. *J. Am. Chem. Soc.* **2005**, *127*, 5132–5146. http://pubs.acs.org/doi/abs/10.1021/ja045969s

5. "Studies of Reductive Elimination Reactions To Form Carbon-Oxygen Bonds from Pt(IV) Complexes." Williams, B. S.; Goldberg, K. I . *J. Am. Chem. Soc.* **2001**, *123*, 2576-2587. http://pubs.acs.org/doi/abs/10.1021/ja003366k

**Affiliations and Awards:**

**2009:** NITLE and Academic Commons Community Contribution Award (for VIPEr) to recognize and promote exemplary projects that make effective use of available technologies and resources

**2003:** Camille and Henry Dreyfus Faculty Start-up Awardee

**2001:** NSF-NATO Postdoctoral Fellow