Bess Vlaisavljevich Ph.D.

The University of South Dakota – Department of Chemistry • Pardee Hall, Vermillion, SD 57069
Phone: (651) 341-0805 • bess.vlaisavljevich@usd.edu • bessvlai@gmail.com

Research Experience and Appointments

Assistant Professor. The University of South Dakota
August 2017–Present

Postdoctoral Research Assistant. Northwestern University
Advisor: Prof. Toru Shiozaki
August 2015–July 2017
Area of Research: Method Development and Applications in Molecular Magnets

Postdoctoral Research Assistant. The University of California Berkeley
Advisor: Prof. Berend Smit
July 2013–July 2015
Area of Research: Quantum Chemistry and Molecular Simulations in Nanoporous Materials

Graduate Research Assistant. The University of Minnesota – Twin Cities
Advisor: Prof. Laura Gagliardi
September 2008–June 2013
Area of Research: Quantum Chemistry of Heavy Elements

Visiting Ph.D. Student. Los Alamos National Laboratory
Advisor: Dr. Richard Martin and Dr. Enrique Batista
May 2012–June 2012
Area of Research: Core Spectroscopy of Heavy Elements

Undergraduate Research Assistant. University of Minnesota – Morris
Advisor: Prof. Joseph Alia
March 2005–December 2007 Area of Research: Theoretical Chemistry: Valency Interaction Formulas

Education

June 2013
Ph.D. in Chemistry. University of Minnesota - Twin Cities (GPA 3.872/4.00)
Advisor: Prof. Laura Gagliardi
Thesis title: Quantum chemical studies of actinides and lanthanides: From small molecules to the nanoscale

March 2010
M.S. in Chemistry. University of Minnesota - Twin Cities (GPA 3.889/4.00)
Advisor: Prof. Laura Gagliardi
Thesis title: Analyzing systems containing multiple actinides with multiconfigurational methods

December 2007
B.A. in Chemistry. University of Minnesota - Morris (GPA 3.853/4.00)

Advisor: Prof. Joseph Alia

Peer-Reviewed Publications

(Click on the titles for links to the manuscripts)

1. S. Anderson, A. Gładysiak, P. G. Boyd, C. P. Ireland, P. Miéville, D. Tiana, **B. Vlaisavljevich**, P. Schouwink, W. Van Beek, K. J. Gagnon, B. Smit, and K. C. Stylianou. Formation Pathways of Metal–Organic Frameworks Proceeding Through Partial Dissolution of the Metastable Phase. *Cryst. Eng. Comm.* 2017, Just Accepted.

2. **B. Vlaisavljevich**, J. Huck, K. Lee, D. Alfe, J. Neaton, A. Michaelides, and B. Smit. Performance of van der Waals Corrected Functionals for Guest Adsorption in the M_2(dobdc) Metal–Organic Frameworks. *J. Phys. Chem. C* 2017, Just Accepted.

3. S. Jawahery, C. M. Simon, E. Braun, M. Witman, D. Tiana, **B. Vlaisavljevich**, and B. Smit. Adsorbate-Induced Lattice Deformation in IRMOF-74 Series. *Nature Comm.*, 2016, 8, 13945.

4. A. Janda, **B. Vlaisavljevich**, B. Smit, L.-C. Lin, and A. T. Bell. Effects of Pore and Cage Topology on Thermodynamics of n-Alkane Adsorption at Brønsted Protons in Zeolites at High Temperature. *J. Phys. Chem C*, 2017, 121 (3), 1618-1638.

5. **B. Vlaisavljevich** and T. Shiozaki. Nuclear Energy Gradients for Internally Contracted Complete Active Space Second-Order Perturbation Theory: Multistate Extensions. *J. Chem. Theory Comput.* 2016, 12 (8), 3781-3787.

6. M. S. Fataftah, S. C. Coste, **B. Vlaisavljevich**, J. M. Zadronzny, and D. E. Freedman. Transformation of the Coordination Complex $[Co(C_3S_5)_2]^{2-}$ from a Molecular Magnet to a Potential Qubit. *Chem. Sci.*, 2016, 7, 6160-6166.

7. R. Mercado, **B. Vlaisavljevich**, L.C. Lin, K. Lee, Y. Lee, J. A. Mason, D. Xiao, M. Gonzalez, M. Kapelewski, J. Neaton, and B. Smit. Force Field Development from Periodic Density Functional Theory Calculations for Gas Separation Applications Using Metal–Organic Frameworks. *J. Chem. Phys. C*, 2016, 120 (23), 12590-12604.

8. P. Miró, **B. Vlaisavljevich**, A. Gil, P. C. Burns, M. Nyman, and C. Bo. Self-assembly of Uranyl-peroxide Nanocapsules in Basic Peroxidic Environments. *Chem. Eur. J.*, 2016, 22 (25), 8571-8478.

9. A. Janda, **B. Vlaisavljevich**, L.-C. Lin, B. Smit, and A. T. Bell. Effects of Zeolite Structural Confinement on Adsorption Thermodynamics and Reaction Kinetics for Monomolecular Cracking and Dehyrogenation of *n*-Butane. *J. Am. Chem. Soc.* 2016, 138 (14), 4739-4756.

10. **B. Vlaisavljevich**, L. Andrews, X. Wang, Y. Gong, G. P. Kushto, and B. E. Bursten. Detection and Electronic Structure of Naked Actinide Complexes: Rhombic-Ring $(AnN)_2$ Molecules Stabilized by Delocalized π-Bonding. *J. Am. Chem. Soc.* 2016, 138 (3), 893-905.

11. S. Tyler, S. Natoli, **B. Vlaisavljevich**, P. Fanwick, and T. Ren. Turning a New Leaf on Metal-TMC Chemistry: Ni^{II}(TMC)Acetylides. *Inorg. Chem.* 2015, 54 (20), 10058-10064.

12. Z. Hulvey, **B. Vlaisavljevich**, J. A. Mason, E. Tsvision, T. P. Dougherty, E. D. Bloch, M. Head-Gordon, B. Smit, J. R. Long, C. M. Brown. Critical Factors Driving the High Volumetric Uptake of Methane in Cu_3(btc)$_2$. *J. Am. Chem. Soc.* 2015, 137 (33), 10816-10825.

13. W. S. Drisdell, R. Poloni, T. M. McDonald, T. A. Pascal, L. F. Wan, C. D. Pemmaraju, **B. Vlaisavljevich**, S. O. Odoh, J. B. Neaton, J. R. Long, D. Prendergast, and J. B. Kortright. Probing the Mechanism of CO_2 Capture in Diamine-Appended Metal–Organic Frameworks Using Measured and Simulated X-ray Spectroscopy. *Phys. Chem. Chem. Phys.*, 2015, 17, 21448-21457.

14. **B. Vlaisavljevich**, S. O. Odoh, A. L. Dzubak, S. K. Schnell, N. Planas, K. Lee, J. Neaton, B. Smit and L. Gagliardi. CO_2 Induced Phase Transitions in Diamine-Appended Metal–Organic Frameworks. *Chem. Sci.*, 2015, 6, 5177-5185.

15. J. S. Lee, **B. Vlaisavljevich**, D. K. Britt, J. A. Reimer, B. Smit, J. B. Neaton, J. R. Long, M. Haranczyk, and W. L. Queen. Understanding Small Molecule Interactions in Metal–Organic Frameworks: Coupling Experiment with Theory. *Adv. Mater.*, 2015, 27 (38), 5785-5796.

16. A. Janda, **B. Vlaisavljevich**, L.-C. Lin, S. M. Sharada, B. Smit, M. Head-Gordon, and A. T. Bell. Adsorption Thermodynamics and Intrinsic Activation Parameters for Monomolecular Cracking of *n*-Alkanes on Brønsted Acid Sites in Zeolites. *J. Phys. Chem. C*, 2015, 119 (19),10427-10438.

17. J. Qui, **B. Vlaisavljevich**, L. Jouffret, K. Nguyen, J. E. S. Szymanowski, L. Gagliardi, and P. C. Burns. Cation Templating and Electronic Structure Effects in Uranyl Cage Clusters Probed by the Isolation of Peroxide-Bridged Uranyl Dimers. *Inorg. Chem.*, 2015, 54 (9), 4445-4455.

18. T. M. McDonald, J. A. Mason, X. Kong, E.D. Bloch, D. Gygi, A. Dani, V. Crocella, F. Giordanino, S. O. Odoh, W. S. Drisdell, **B. Vlaisavljevich**, A. L. Dzubak, R. Poloni, S. K. Schnell, N. Planas, K. Lee, T. A. Pascal, L. F. Wan, D. Prendergast , J. B. Neaton, B. Smit, J. B. Kortright, L. Gagliardi, S. Bordiga, J. A. Reimer, and J. R. Long. A Cooperative Insertion Mechanism for Efficient CO_2 Capture in Diamine-Appended Metal–Organic Frameworks. *Nature*, 2015, 519, 303-308.

19. L. Luo, L. Balhorn, **B. Vlaisavljevich**, D. Ma, J. Choi, L. Gagliardi, C. D. Frisbie. Hopping Transport and Diode Behavior in Long Donor-Acceptor Molecular Wires. *J. Phys. Chem. C*, 2014, 118 (46), 26485-26497.

20. P. Miró, **B. Vlaisavljevich**, A. L. Dzubak, S. Hu, C. J. Cramer, R. Spezia, L. Gagliardi. Uranyl-peroxide Nanocapsules in Aqueous Solution: Force Field Development and First Applications. *J. Phys. Chem. C*, 2014, 118 (42), 24730-24740.

21. L. Andrews, X. Wang, Y. Gong, G. Kushto, **B. Vlaisavljevich**, L. Gagliardi. Infrared Spectra and Electronic Structure Calculations for NN Complexes with U, UN, and NUN in Solid Argon, Neon, and Nitrogen. *J. Phys. Chem. A*, 2014, 118, 5289-5303.

22. L. Andrews, X. Wang, Y. Gong, **B. Vlaisavljevich**, L. Gagliardi. Infrared Spectra and Electronic Structure Calculations for the $NUN(NN)_{1-5}$ and $NU(NN)_{1-6}$ Complexes in Solid Argon. *Inorg. Chem.*, 2013, 52, 9989-9993.

23. **B. Vlaisavljevich**, P. L. Diaconescu, W. L. Lukens, Jr., L. Gagliardi, C. C. Cummins. Investigations of the Electronic Structure of Arene-Bridged Diuranium Complexes. *Organometallics*, 2013, 32 (5), 1341–1352.

24. **B. Vlaisavljevich**, P. Miró, D. Ma, G. S. Sigmon, P. C. Burns, C. J. Cramer, L. Gagliardi. Synthesis and Characterization of the First 2D Neptunyl Structure Stabilized by Side-on Cation-Cation Interactions. *Chem. Eur. J.* 2013, 19, 2937-2941.

25. **B. Vlaisavljevich**, P. Miró, D. Koballa, T. Todorova, C. J. Cramer, L. Gagliardi, S. Daly, G. Girolami. Volatilities of Actinide and Lanthanide *N,N*-Dimethylaminodiboranate CVD Precursors: A DFT Study. *J. Phys. Chem. C* 2012, 116 (44), 23194-23200.

26. **B. Vlaisavljevich**, P. Miró, I. Infante, S. Liddle C. J. Cramer, L. Gagliardi. On the Nature of Actinide– and Lanthanide–Metal Bonds in Heterobimetallic Compounds. *Chem. Eur. J.* 2011, 17, 8424-8433.

27. X. Wang, L. Andrews, **B. Vlaisavljevich**, L. Gagliardi. Combined Triple and Double Bonds to Uranium: The NUNH Uranimine Nitride Molecule Prepared in Solid Argon. *Inorg. Chem.* 2011, 50, 3826-3831.

28. **B. Vlaisavljevich**, L. Gagliardi, P. C. Burns. Understanding the Structure and Formation of Uranyl Peroxide Nanoclusters by Quantum Chemical Calculations. *J. Am. Chem. Soc.* 2010, 132 (41), 14503-14508.

29. **B. Vlaisavljevich**, L. Gagliardi, X. Wang, B. Liang, L. Andrews, and I. Infante. U and P_4 Reaction Products: A Quantum Chemical and Matrix Isolation Spectroscopic Investigation. *Inorg. Chem.* 2010. 49, 9230-9235.

30. H.-G. Cho, L. Andrews, **B. Vlaisavljevich**, and L. Gagliardi. Infrared Spectra of Small Insertion and Methylidene Complexes in Reactions of Laser-Ablated Palladium Atoms with Halomethanes. *Organometallics* 2009, 28 (24), 6871-6879.

31. H.-G. Cho, L. Andrews, **B. Vlaisavljevich**, and L. Gagliardi. Infrared Spectra of Small Insertion and Methylidene Complexes in Reactions of Laser-Ablated Nickel Atoms with Halomethanes. *Organometallics* 2009, 28 (19), 5623-5632.

32. J. Alia, **B. Vlaisavljevich**, M. Abbot, H. Warneke, and T. Mastin. Prediction of Molecular Properties Including Symmetry from Quantum-Based Molecular Structural Formulas, VIF. *J. Phys. Chem. A* 2008, 112, 9784-9795.

Presentations

Seminars

- **B. Vlaisavljevich**. Predictive Materials Modeling with a Hierarchy of Theory and Computations. Departmental Seminar, Florida State University, September 15th, 2016.
- **B. Vlaisavljevich**. Predictive Simulation of Electronic Structure of Inorganic Molecules: Application and Theory Development. The Theory and Applications of Computational Chemistry Meeting, Seattle, WA, United States, August 29th, 2016.
- **B. Vlaisavljevich**. When Theory and Experiment Meet: First Heavy Elements then Carbon Capture. Departmental Seminar, University of Missouri, February 19th, 2016.
- **B. Vlaisavljevich**, Rocío Mercado, Johanna Huck, Li-Chiang Lin, Kyuho Lee, and B. Smit. Small Molecule Adsorption in Metal Organic Frameworks with Open Metal Sites. 249th ACS National Meeting, Denver, CO, United States, March 23rd, 2015
- **B. Vlaisavljevich**. CO_2 Adsorption in a Family of Diamine-Appended Metal Organic Frameworks. Departmental Seminar, Washington State University, March 9th, 2015.
- **B. Vlaisavljevich**, J. A. Mason, E. Tsivion, Z. Hulvey, C. M. Brown, M. Head-Gordon, J. R. Long, and B. Smit. Electronic Structure of Methane Binding in M-HKUST-1 Metal Organic Frameworks. Center for Gas Separations Energy Frontiers Research Center Annual Meeting, Berkeley, CA, United States, December 5th, 2014
- **B. Vlaisavljevich**, L. Andrews, B. Bursten. Quantum Chemical and Spectroscopic Study of Uranium and Nitrogen Compounds. 248th ACS National Meeting, San Francisco, CA, United States, August 14th, 2014
- **B. Vlaisavljevich**, J. A. Mason, E. Tsivion, Z. Hulvey, C. M. Brown, M. Head-Gordon, J. R. Long, and B. Smit. Electronic Structure of Methane Binding in M-HKUST-1 Metal Organic Frameworks. 248th ACS National Meeting, San Francisco, CA, United States, August 13th, 2014

- **B. Vlaisavljevich**, L. Andrews, L. Gagliardi. Quantum Chemical and Spectroscopic Study of Uranium and Nitrogen Compounds. 247th ACS National Meeting, Dallas, TX, United States, March 19th, 201
- **B. Vlaisavljevich**, L.-C. Lin, A. Janda, A. Bell, and B. Smit. Theoretical Simulations of n-Alkane Cracking on Zeolites. 247th ACS National Meeting, Dallas, TX, United States, March 17th, 2014
- **B. Vlaisavljevich**, P. Miró, S. Hu, A. Dzubak, R. Spezia, C. J. Cramer, and L. Gagliardi. Molecular Dynamics Simulations of Uranyl-Peroxide Nanocapsules in Aqueous Solution. Geological Association of Canada (GAC)-Mineralogical Associatoin of Canada (MAC) Annual Meeting, Winnipeg, Manitoba, Canada, May 22nd, 2013
- **B. Vlaisavljevich**, J. Qiu, L. Jouffret, P. C. Burns, and Laura Gagliardi. Isolating Uranyl-Peroxide Dimers with Organic Ligands 245th ACS National Meeting, New Orleans, LA, United States, April 11th, 2012
- **B. Vlaisavljevich**, P. Miró, S. Hu, A. Dzubak, R. Spezia, C. J. Cramer, and L. Gagliardi. Molecular Dynamics Simulations of Uranyl-Peroxide Nanocapsules in Aqueous Solution. 245th ACS National Meeting, New Orleans, LA, United States, April 8th, 2012
- **B. Vlaisavljevich**, P. Miró, S. Hu, A. Dzubak, R. Spezia, C. J. Cramer, and L. Gagliardi. Structure and Formation of Uranyl Peroxide Nanoclusters. Chemical Theory Center Seminar Series. Minneapolis, MN, United States, March 15th, 2013.
- **B. Vlaisavljevich**, S. Liddle, L. Gagliardi. Quantum Chemical and Spectroscopic Study of UN, UN(N_2) and UN(N_2)$_2$. 244th ACS National Meeting, Philadelphia , PA, United States, August 19th, 2012
- **B. Vlaisavljevich**, L. Andrews, L. Gagliardi. Electronic Structure of Arene-Bridged Uranium Species. 244th ACS National Meeting, Philadelphia , PA, United States, August 22nd, 2012
- **B. Vlaisavljevich**, P. Miró, D. Ma, C. J. Cramer, L. Gagliardi., G. Sigmon, P. C. Burns. Actinide and Lanthanide N,N-Dimethylaminodiboranates: A Quantum Chemical Study. 243rd ACS National Meeting, San Diego, CA, United States, March 25-29th, 2012
- **B. Vlaisavljevich**, P. Miró, D. Koballa, T. Todorova, C. J. Cramer, L. Gagliardi., S. Daly, G. Girolami. On the Nature of the Side-On Neptunyl Cation-Cation Interaction. 243rd ACS National Meeting, San Diego, CA, United States, March 25-29th, 2012
- **B. Vlaisavljevich**, L. Gagliardi, and P. C. Burns. The Growth Mechanism of the Uranyl Peroxide Dimer & the Electronic Structure of Neptunyl Cation-Cation Interactions. 2011 Energy Frontiers Research Center Science Advisory Board Meeting, South Bend, IN. September 24, 2011
- **B. Vlaisavljevich**, P. Miró, I. Infante, S. Liddle C. J. Cramer, L. Gagliardi. On the Nature of Lanthanide- and Actinide-Metal Bonds in Heterobimetallic Compounds. 242nd ACS National Meeting, Denver, CO, United States, August 28th-September 1st, 2011.
- **B. Vlaisavljevich**, P. Miró, C. J. Cramer, L. Gagliardi, and P. C. Burns. The Growth Mechanism of Uranyl Peroxide Clusters. 10th Annual Graduate Student Symposium , Minneapolis, MN, United States, May 17, 2011.
- **B. Vlaisavljevich**, P. Miró, C. J. Cramer, L. Gagliardi, and P. C. Burns. The Growth Mechanism of Small Uranyl Peroxide Clusters. Celebrating Women Chemist's luncheon seminar, Minneapolis, MN, United States, April 21, 2011.
- **B. Vlaisavljevich**, P. Miró, C. J. Cramer, L. Gagliardi, and P. C. Burns. Understanding the Growth Mechanism of Small Uranyl Peroxide Clusters: A Density Functional Theory Study. 241st ACS National Meeting, Anaheim, CA, United States, March 27-31, 2011.

Posters

- **B. Vlaisavljevich**, M. Fataftah, S. Coste, D. Freedman, and T. Shiozaki. Predictive Simulation of the Electronic Structure of Inorganic Molecules. 48th Midwest Theoretical Chemistry Conference. Pittsburgh, PA, June 10th, 2016.
- **B. Vlaisavljevich**, K. Lee, J. Huck, J. Neaton, B. Smit. Small Molecule Adsorption in Metal Organic Frameworks with Open Metal Sites. Carbon Capture, Storage, Utilization, and Sequestration Gordon Research Conference, Easton, MA, June 3, 2015.
- **B. Vlaisavljevich**, P. Miró, S. Hu, A. L. Dzubak, R. Spezia, and L. Gagliardi. Molecular Dynamics Simulations of Uranyl Peroxide Nanocapsules in Solution. EFRC Science Advisory Board Meeting, Minneapolis, MN, September 16th, 2012.
- **B. Vlaisavljevich**, P. Miró, D. Ma, C. J. Cramer, P. C. Burns, and L. Gagliardi. Side-On Neptunyl Cation-Cation Interactions. Heavy Elements Chemistry Symposia, Sante Fe , NM, United States, June 21st, 2012.
- L. J. Jouffret, **B. Vlaisavljevich**, P. Miró, C. J. Cramer, L. Gagliardi, and P. C. Burns. Mechanism of Nanostructure Growth: Raman and Computational Studies. Energy Frontiers Research Center Third Year Review, Denver, CO. February 9th, 2012.
- **B. Vlaisavljevich**, P. Miró, C. J. Cramer, P. C. Burns, and L. Gagliardi. The Nature of the Side-On Neptunyl Cation-Cation Interaction. 2011 Energy Frontiers Research Center Science Advisory Board Meeting, Notre Dame, IN. September 24th, 2011.
- **B. Vlaisavljevich**, P. Miró, C. J. Cramer, L. Gagliardi, and P. C. Burns. The Nature of the Side-On Neptunyl Cation-Cation Interaction. 242nd ACS National Meeting, Denver, CO, United States, August 28th-September 1st, 2011.
- **B. Vlaisavljevich**, P. Miró, C. J. Cramer, L. Gagliardi, and P. C. Burns. A Quantum Chemical Study of Uranyl-Peroxide Nanocluster Growth Mechanisms. Energy Frontiers Research Centers Summit & Forum, Washington, D.C. May 25-27, 2010.
- **B. Vlaisavljevich**, L. Gagliardi, and P. C. Burns. Understanding the Structure and Formation of Uranyl Peroxide Nanoclusters by Quantum Chemical Calculations. 2010 Energy Frontiers Research Center Science Advisory Board Meeting, South Bend, IN. May 24, 2010.
- **B. Vlaisavljevich** and L. Gagliardi. A CASSCF/CASPT2 Study of the Unsupported Bonding in the f-Block Elements (U or Y) with Ga or Re. 2009 European Summer School in Quantum Chemistry. San Nicola, Italy. September 13, 2009.
- **B. Vlaisavljevich**, C.-W. Hsu, and J. D. Alia. Studying the 1,5-Hydrogen Shift in 1,3-Pentadiene and 1,7-Hydrogen Shift in 1,3,5-Heptatriene via Valency Interaction Formulas. 235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008.
- **B. Vlaisavljevich**, J. D. Alia. Examining the Unconventional Bonding in Borohydrides via Valency Interaction Formulas. 235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008.

Referee for the Following Journals

- Journal of Chemical Theory and Computation
- Physical Chemistry Chemical Physics
- The Journal of Physical Chemistry

- Inorganic Chemistry
- Adsorption Science and Technology

Teaching Experience

- Participated in the Chemistry Department's Mentorship Program for Aspiring Chemistry Teachers (MPACT)
  - Mentor: Prof. David Blank. CHEM 1071H: Honors General Chemistry. Fall 2012
  - Mentor: Prof. Christopher J. Cramer. CHEM 4021/8012: Computational Chemistry. Spring 2013
    Link to video lectures I developed on QM/MM Methods.
- Attended the GRAD 8101: Teaching in Higher Education course at the University of Minnesota. Fall 2012
- Guest Lecturer in CHEM 4502: Introduction to Quantum Mechanics and Spectroscopy for Prof. Laura Gagliardi. Fall 2011, Spring 2012, Fall 2012
- Guest Lecturer in CHEM 8552: Graduate Quantum Mechanics II for Prof. Laura Gagliardi. Spring 2012
- Developed and Instructed a LaTeX Workshop for the Graduate Student Workshop Committee at the University of Minnesota. June 24, 2010 and August 14th, 2012
- Teaching Assistant, General Chemistry (CHEM 1022), University of Minnesota. September 2008 – May 2009
- Program Manager and Instructor of the Unit Joint Inspection Training Program, 133rd Minnesota Air National Guard
  May 2004 – September 2013

Awards

- Overend Award for Graduate Research in Physical Chemistry. 2012–2013
- University of Minnesota Graduate School Doctoral Dissertation Fellowship. 2012–2013
- Bunsen and Beaker Award for Outstanding Presentation at the 2011 Chemistry Graduate Student Research Symposium. March 2011
- Department of Chemistry Excellence in Graduate Studies Fellowship. 2010–2011
- 60th Annual Lindau Nobel Laureates Meeting Participant. June 2010
- Lester C. and Joan M. Krogh Endowed Fellowship, University of Minnesota - Twin Cities. 2008–2009
- Scholar of the College, University of Minnesota - Morris. Spring 2008
- University of Minnesota - Morris Dean's List. Fall 2002, Spring 2003, Fall 2004, Spring 2005, Spring 2007, and Fall 2007.
- Recipient of the Presidential and Chancellor's Scholarship, University of Minnesota, Morris. September 2002–December 2007
- Valedictorian, St. Bernard's High School, St. Paul, MN. May 2002.

Specialized Schools Attended

- Telluride School in Theoretical Chemistry. July 2011
- European Summer School in Quantum Chemistry. September 2009
- Molcas Workshop. May 2009

Memberships

- American Chemical Society. January 2008 to present
- Graduate Student Workshop Committee, University of Minnesota. January 2010 – June 2013 (Chair: Jan 2011 – April 2013)
- Association of Women Chemists, Northwestern University. August 2015 to present
- Women in Science and Engineering, University of Minnesota. September 2008 – June 2013

Community Involvement

- Participant in the Letters to a Pre-Scientist Program (pairs scientists with middle school students as pen pals). September 2012 to Present
- Spoke at "Profs and Profs" outreach event hosted by the Society of Women Engineers (SWE) for undergraduate students. March 7th, 2013
- Volunteered at "See yourself in CSE" outreach events hosted by the Society of Women Engineers (SWE) for high school girls. November 5th, 2011 and February 25th, 2012
- Exploring Careers in Engineering and Physical Sciences Program for high school students. June 15, 2011
- Women in Science and Engineering's Cool Chemistry Event for middle school girls. April 17th, 2010 and April 30th, 2011