David F. Watson

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Education

1996	B.S. in Chemistry with Departmental Honors, Haverford College
1997	M.S. in Chemistry, Northwestern University
2001	Ph.D. in Chemistry, Princeton University Dissertation: *Photochemistry and Spectroscopy of Trinuclear Transition Metal Mixed-Valence Complexes.* Advisor: Andrew B. Bocarsly.
2001-2004	Postdoctoral Fellow, Johns Hopkins University. Advisor: Gerald J. Meyer

Professional Appointments

2001-2004	Postdoctoral Fellow, Johns Hopkins University. Advisor: Gerald J. Meyer.
2004-	Assistant Professor of Chemistry, University at Buffalo

Current External Research Funding

1. "CAREER: Photoinduced Electron Transfer Processes in Self-Assembled Inorganic Nanomaterials." National Science Foundation, CHE-0645678. $576,100; 04/01/2007-03/31/2012. PI: David Watson.
2. "Environmental Transport, Biodegradation, and Bioaccumulation of Quantum Dots and Oxide Nanoparticles." U.S. Environmental Protection Agency, Science to Achieve Results (STAR) Program, R833861. $400,000; 07/01/2008-06/30/2011. PI: Diana Aga; co-PIs: Sarbajit Banerjee, Luis Colón, David Watson.
3. "MRI: Acquisition of an Inductively Coupled Plasma Mass Spectrometer (ICP/MS)." National Science Foundation, Major Research Instrumentation (MRI) program, CHE-0959565. $390,524; 01/01/2010-12/31/2012. PI: Diana Aga; co-PIs: Tracy Bank, David Watson, Eliza Calder, Alan Rabideau.

Previous External Research Funding

1. "Metallic and Semiconducting Nanowire Arrays for the Electrical and Optical Detection of Biomolecules." James D. Watson Investigator Program, New York State Office of Science, Technology, and Academic Research (NYSTAR). $200,000; 09/01/2005-08/31/2007. PI: David Watson.
2. "Bridge-Mediated Interparticle Electron Transfer in Self-Assembled Hybrid Semiconductor Nanomaterials." American Chemical Society Petroleum Research Fund. $35,000; 09/01/2006-08/31/2008. PI: David Watson.

Previous Internal (UB) Research Funding

1. "Porous Anodic Alumina Templates for Nanomaterials and Devices." University at Buffalo Interdisciplinary Research and Creative Activities Fund (IRCAF). $25,000; 11/01/2004-10/31/2005. PI: Hao Zeng; co-PIs: David Watson, Surajit Sen.
2. "Optimizing Dye-sensitized Photoinduced Charge Transfer through Controlled Aggregation." Funding from University at Buffalo's Multi-Investigator Proposal Support program. $8,750; 06/01/2008-08/31/2008. PI: Michael Detty; co-PI: David Watson.

Publications (refereed journal articles): University at Buffalo

1. Dibbell, R.S.; Soja, G.R.; Hoth, R.M.; Watson, D.F. "Photocatalytic Patterning of Monolayers for the Site-Selective Deposition of Quantum Dots onto TiO_2 Surfaces." *Langmuir* **2007,** *23,* 3432-3439.
2. Mann, J.R.; Watson, D.F. "Adsorption of CdSe Nanoparticles to Thiolated TiO_2 Surfaces: Influence of Intralayer Disulfide Formation on CdSe Surface Coverage." *Langmuir* **2007,** *23,* 10924-10928.
3. Soja, G.R.; Mann, J.R.; Watson, D.F. "Temporal Evolution of the Composition of Mixed Monolayers on Nanocrystalline TiO_2 Films." *Langmuir* **2008,** *24,* 5249-5252.
4. Mann, J.R.; Gannon, M.K.; Fitzgibbons, T.C.; Detty, M.R.; Watson, D.F. "Optimizing the Photocurrent Efficiency of Dye-Sensitized Solar Cells through the Controlled Aggregation of Chalcogenoxanthylium Dyes on Nanocrystalline Titania Films." *J. Phys. Chem. C* **2008,** *112,* 13057-13061.
5. Navarro, D.A.G.; Watson, D.F.; Aga, D.S.; Banerjee, S. "Natural Organic Matter-Mediated Phase Transfer of Quantum Dots in the Aquatic Environment." *Env. Sci. Tech.* **2009,** *43,* 677-682.
6. Dibbell, R.S.; Watson, D.F. "Distance-Dependent Electron Transfer in Tethered Assemblies of CdS Quantum Dots and TiO_2 Nanoparticles." *J. Phys. Chem. C* **2009,** *113,* 3139-3149.
7. Soja, G.R.; Watson, D.F. "TiO_2-Catalyzed Photodegradation of Porphyrins: Mechanistic Studies and Application in Monolayer Photolithography." *Langmuir* **2009,** *25,* 5398-5403.
8. Mann, J.R.; Nevins, J.S.; Soja, G.R.; Wells, D.D.; Levy, S.C; Marsh, D.A.; Watson, D.F. "Influence of Solvation and the Structure of Adsorbates on the Kinetics and Mechanism of Dimerization-Induced Compositional Changes of Mixed Monolayers on TiO_2." *Langmuir* **2009**, *25,* 12217-12228.
9. Dibbell, R.S.; Youker, D.G.; Watson, D.F. "Excited-State Electron Transfer from CdS Quantum Dots to TiO_2 Nanoparticles via Molecular Linkers with Phenylene Bridges." *J. Phys. Chem. C* **2009,** *113,* 18643-18651.
10. Smith, A.R.; Watson, D.F. "Photochemically Triggered Assembly of Composite Nanomaterials through the Photodimerization of Adsorbed Anthracene Derivatives." *Chem. Mater.* **2010,** *22,* 294-304.
11. Navarro, D.A.G; Banerjee, S.; Aga, D.S.; Watson, D.F. "Partitioning of Hydrophobic CdSe Quantum Dots into Aqueous Dispersions of Humic Substances: Influence of Capping-Group Functionality on the Phase-Transfer Mechanism." *J. Coll. Interface Sci.* In press, online as corrected proof.

Publications (refereed journal articles): previous institutions

1. Belanger, S.; Hupp, J.T.; Stern, C.L.; Slone, R.V.; Watson, D.F.; Carrell, T.M. "Thin-Film Molecular Materials Based on Tetrametric 'Squares': Nanoscale Porosity and Size Selective Guest Transport Characteristics." *J. Am. Chem. Soc.* **1999,** *121,* 557-563.
2. Pfennig, B.W.; Lockard, J.V.; Cohen, J.L.; Watson, D.F.; Ho, D.M.; Bocarsly, A.B. "Synthesis, Characterization, and Photochemistry of a Dinuclear Cyanide-Bridged Iron(II)-Platinum(IV) Mixed-Valence Compound and Its Implications for the Corresponding Iron(II)-Platinum(IV)-Iron(II) Complex." *Inorg. Chem.* **1999,** *38,* 2941-2946.
3. Hennessy, M.H.; Soos, Z.G.; Watson, D.F.; Bocarsly, A.B. "Raman Excitation Profiles with Self-Consistent Excited-State Displacements." *J. Phys. Chem. B* **2000,** *104,* 10909-10914.
4. Watson, D.F.; Bocarsly, A.B. "Interfacial Photoannealing: The Light-Driven Alteration of the Surface-Binding Geometry of a Trimetallic Mixed-Valence Complex Capable of

5. Watson, D.F.; Bocarsly, A.B. "The Effects of Electronic Coupling and Solvent Broadening on the Intervalent Electron Transfer of a Centrosymmetric Mixed-Valence Complex." *Coord. Chem. Rev.* **2001,** *211,* 177-194.
6. Watson, D.F.; Willson, J.T.; Bocarsly, A.B. "Photochemical Image Generation in a Cyanogel System Synthesized from Tetrachloropalladate(II) and a Trimetallic Mixed Valence Complex: A Consideration of Photochemical and Dark Mechanistic Pathways of Prussian Blue Formation." *Inorg. Chem.* **2002,** *41,* 2408-2416.
7. Watson, D.F.; Bocarsly, A.B.; Schreiber, E. "Pump-Probe Spectroscopy of a Trinuclear Transition Metal Mixed-Valence Complex: Dependence of Back Electron Transfer Rate on the Activation Barrier." In *Femtochemistry and Femtobiology: Ultrafast Dynamics in Molecular Science*; Douhal, A. and Santamaria, J. Eds.; World Scientific: Singapore, 2002; pp. 664-673.
8. Pfennig, B.W.; Mordas, C.J.; McCloskey, A.; Lockard, J.V.; Salmon, P.M.; Cohen, J.L.; Watson, D.F.; Bocarsly, A.B. "Excited-State Electronic Coupling and Photoinduced Multiple Electron Transfer in Two Related Ligand-Bridged Hexanuclear Mixed-Valence Compounds." *Inorg. Chem.* **2002,** *41,* 4389-4395.
9. Watson, D.F.; Marton, A.; Stux, A.M.; Meyer, G.J. "Insights into Dye-Sensitization of Planar TiO_2: Evidence for Involvement of a Protonated Surface State." *J. Phys. Chem. B* **2003,** *107,* 10971-10973.
10. Watson, D.F.; Tan, H.S.; Schreiber, E.; Mordas, C.J.; Bocarsly, A.B. "Femtosecond Pump-Probe Spectroscopy of Trinuclear Transition Metal Mixed-Valence Complexes." *J. Phys. Chem. A* **2004,** *108,* 3261-3267.
11. Watson, D.F.; Marton, A.; Stux, A.M.; Meyer, G.J. "Influence of Surface Protonation on the Sensitization Efficiency of Porphyrin-Derivatized TiO_2." *J. Phys. Chem. B* **2004,** *108,* 11680-11688.
12. Watson, D.F.; Meyer, G.J. "Cation Effects in Nanocrystalline Solar Cells." *Coord. Chem. Rev.* **2004,** *248,* 1391-1406.
13. Watson, D.F.; Meyer, G.J. "Electron Injection at Dye-Sensitized Semiconductor Electrodes." *Ann. Rev. Phys. Chem.* **2005,** *56,* 119-156.
14. Hasselman, G.M.; Watson, D.F.; Stromberg, J.R.; Bocian, D.F.; Holten, D.; Lindsey, J.S.; Meyer, G.J. "Theoretical Solar-to-Electrical Energy-Conversion Efficiencies of Perylene-Porphyrin Light-Harvesting Arrays." *J. Phys. Chem. B.* **2006,** *110,* 25430-25440.

Conference presentations (presenting author underlined)

University at Buffalo

1. Soja, G.R.; Dibbell, R.S.; Hoth, R.M.; Watson, D.F. "Photochemically-Directed Self-Assembly: Site-Selective Deposition of Semiconductor Quantum Dots onto TiO_2 Surfaces." American Chemical Society Northeast Regional Meeting; Binghamton, NY; October 5-7, 2006. Oral presentation, ***invited***.
2. Soja, G.R.; Dibbell, R.S.; Hoth, R.M.; Watson, D.F. "Photochemically-Directed Self-Assembly: Site-Selective Deposition of Inorganic Nanoparticles onto Metal Oxide Surfaces." 233rd American Chemical Society National Meeting; Chicago, IL; March 25-29, 2007. Oral presentation, contributed.

3. Goodrich, L.E.; Smith, A.; Nevins, J.; Dibbell, R.S.; Watson, D.F. "Synthesis, Characterization, and Photochemically-Directed Self-assembly of Au Nanoparticles." 233rd American Chemical Society National Meeting; Chicago, IL; March 25-29, 2007. Poster presentation, contributed.
4. Watson, D.F.; Dibbell, R.D.; Mann, J.R.; Soja, G.R. "Quantum Dot-Sensitized Metal Oxides: Materials Assembly and Electron Transfer Reactivity." 235th American Chemical Society National Meeting; New Orleans, LA; April 6-10, 2008. Oral presentation, contributed.
5. Soja, G.R.; Watson, D.F. "Photocatalytic Oxidative Degradation of Surfactant Monolayers on TiO_2 Films: Mechanistic and Kinetic Studies of a Novel Photopatterning Process." 235th American Chemical Society National Meeting; New Orleans, LA; April 6-10, 2008. Poster presentation, contributed.
6. Dibbell, R.S.; Watson, D.F. "Emission Quenching Studies of CdS Nanoparticles Molecularly Linked to TiO_2: Influence of Linker Length on Interfacial Electron Transfer Yield." 235th American Chemical Society National Meeting; New Orleans, LA; April 6-10, 2008. Poster presentation, contributed.
7. Soja, G.R.; Mann, J.R.; Watson, D.F. "Photocatalytic Patterning of Monolayers for the Site-Selective Adsorption of Metallic and Semiconducting Nanoparticles to Metal Oxide Surfaces." 213th Electrochemical Society Meeting; Phoenix, AZ; May 18-23, 2008. Oral presentation, ***invited***.
8. Dibbell, R.S.; Mann, J.R.; Watson, D.F. "Quantum Dot-Functionalized TiO_2 Films: Materials Assembly and Photoinduced Electron Transfer Reactivity." Gordon Research Conference: Electron Donor Acceptor Interactions; Newport, RI; August 3-8, 2008. Poster and oral presentation, contributed. ***(Poster was one of four selected by conference organizers and attendees for oral presentation.)***
9. Dibbell, R.S.; Watson, D.F.* "Time-Resolved Spectroscopic Studies of CdS Nanoparticles Molecularly Linked to TiO_2: Effect of Linker Properties on Photoinduced Electron Transfer." 236th American Chemical Society National Meeting; Philadelphia, PA; August 17-21, 2008. Oral presentation, contributed. (* Due to illness, presentation was given by D.F. Watson.)
10. Mann, J.R.; Gannon, M.K.; Fitzgibbons, T.F.; Watson, D.F.; Detty, M.R. "Aggregation of Chalcogenoxanthylium-Based Sensitizers in Dye-Sensitized Solar Cells." 236th American Chemical Society National Meeting; Philadelphia, PA; August 17-21, 2008. Oral presentation, contributed.
11. Smith, A.R.; Watson, D.F. "Direct Photoinduced Attachment of Gold Nanoparticles to Nanocrystalline Metal Oxide Thin Films. 236th American Chemical Society National Meeting; Philadelphia, PA; August 17-21, 2008. Poster presentation, contributed.
12. Soja, G.R.; Watson, D.F. "Patterned Deposition of Nanoparticles onto Surfaces through TiO_2-Catalyzed Oxidative Degradation of Mercaptoalkanoic Acid Surfactants." 236th American Chemical Society National Meeting; Philadelphia, PA; August 17-21, 2008. Oral presentation, contributed.
13. Watson, D.F.; Mann, J.R.; Soja, G.R.; Nevins, J.S. "Dimerization-Induced Dynamic Compositional Changes of Mixed Monolayers on Nanocrystalline Metal Oxide Surfaces." 236th American Chemical Society National Meeting; Philadelphia, PA; August 17-21, 2008. Oral presentation, contributed.
14. Dibbell, R.S.; Watson, D.F. "Spectroscopic Characterization of Electron Injection and Charge Recombination in Tethered Quantum Dot-Metal Oxide Assemblies." Materials

15. Soja, G.R.; Watson, D.F. "Photocatalytic Oxidation of Surfactants for the Patterned Deposition of Nanoparticles onto Metal Oxide Surfaces." Materials Research Society Fall Meeting 2008; Boston, MA; December 1-5, 2008. Poster presentation, contributed.
16. Watson, D.F. "Excited-State Electron Transfer between Molecularly-Linked Inorganic Nanoparticles." 2009 National Science Foundation Workshop on Inorganic Chemistry; Park City, UT; June 15-18, 2009. Oral presentation, contributed. ***(Abstract chosen in competitive process with formal review.)***
17. Smith, A.R.; Watson, D.F. "Photochemically Triggered Assembly of Composite Nanomaterials through the Photodimerization of Adsorbed Anthracene Derivatives." American Vacuum Society Hudson Mohawk Chapter Fall Meeting 2009; Albany, NY; October 13, 2009. Oral presentation, contributed.
18. Nevins, J.S.; Coughlin, K.M.; Watson, D.F. "Influence of Aqueous Quantum Dots' Surfactant Structure on Attachment to Nanocrystalline TiO_2 Films." American Vacuum Society Hudson Mohawk Chapter Fall Meeting 2009; Albany, NY; October 13, 2009. Oral presentation, contributed.
19. Smith, A.R.; Watson, D.F. "Photochemically Triggered Assembly of Composite Nanomaterials through the Photodimerization of Adsorbed Anthracene Derivatives." 37^{th} Ontario-Québec Physical Organic Mini-Symposium; Buffalo, NY; November 13-15, 2009. Oral presentation, contributed.
20. Mulhern, K.R.; Smith, A.R.; Calitree, B.D.; Gannon, M.K.; Fitzgibbons, T.C.; Onyeji, J.C.; Detty, M.R.; Watson, D.F. "Optimizing the Photocurrent Efficiency of Dye-Sensitized Solar Cells through the Controlled Aggregation of Chalcogenorhodamine Dyes." 37^{th} Ontario-Québec Physical Organic Mini-Symposium; Buffalo, NY; November 13-15, 2009. Poster presentation, contributed.
21. Smith, A.R.; Watson, D.F. "Photochemically Triggered Assembly of Composite Nanomaterials through the Photodimerization of Adsorbed Anthracene Derivatives." Materials Research Society Fall Meeting 2009; Boston, MA; November 30 to December 4, 2009. Oral presentation, contributed.
22. Mann, J.R.; Smith, A.R.; Calitree, B.D.; Gannon, M.K.; Fitzgibbons, T.C.; Onyeji, J.C.; Detty, M.R.; Watson, D.F. "Optimizing the Photocurrent Efficiency of Dye-Sensitized Solar Cells through the Controlled Aggregation of Chalcogenoxanthylium Dyes on Nanocrystalline TiO_2 Films." Materials Research Society Fall Meeting 2009; Boston, MA; November 30 to December 4, 2009. Oral presentation, contributed.
23. Dibbell, R.D.; Youker, D.G.; Coughlin, K.M.; Watson, D.F. "Spectroscopic Characterization of Bridge-Mediated Electron Transfer Processes in Tethered Quantum Dot-Metal Oxide Assemblies" Materials Research Society Fall Meeting 2009; Boston, MA; November 30 to December 4, 2009. Poster presentation, contributed.
24. Nevins, J.S.; Watson, D.F. "Adsorption of Aqueous Quantum Dots to Nanocrystalline TiO_2 Thin Films: Influence of Surfactant Structure on Surface Coverage and Electron Injection Efficiency." Materials Research Society Fall Meeting 2009; Boston, MA; November 30 to December 4, 2009. Poster presentation, contributed.
25. Lee, D.; Nevins, J.S.; Watson, D.F.; Cartwright, A.N.; Prasad, P.N. "Tuning of Absorbance Spectra in CdS/CdSe Quantum Dot Co-Sensitized Solar Cells." Materials Research Society

26. Navarro, D.A.G.; Depner, S.W.; Coughlin, K.M.; Youker, D.G.; Watson, D.F.; Aga, D.S.; Banerjee, S. "Interactions of Natural Organic Matter with Engineered Nanocrystals." Materials Research Society Fall Meeting 2009; Boston, MA; November 30 to December 4, 2009. Oral presentation, contributed.

Previous institutions

1. Watson, D.F.; Bocarsly, A.B. "Pump-Probe Spectroscopy of Trimetallic Mixed-Valence Complexes: Solvent Dependence of Back Electron Transfer Lifetime." Vth Femtochemistry Conference; Toledo, Spain; September 2-6, 2001. Poster presentation.
2. Watson, D.F.; Marton, A.; Stux, A.M.; Meyer, G.J. "Reorganization Energy of Excited State Electron Injection through Multiple Semiconductor-Sensitizer Linkages." 14th Inter-American Photochemical Society Winter Conference; Clearwater, FL; January 2-5, 2003. Poster presentation.

Invited lectures at universities and colleges

Presentations to departments of chemistry, unless otherwise noted.

1. SUNY Fredonia, October 2004
2. Canisius College, September 2005
3. SUNY Geneseo, September 2005
4. University at Buffalo, Dept. of Electrical Engineering, January 2006
5. Buffalo State College, November 2006
6. Amherst College, November 2006
7. University at Buffalo, Dept. of Chemical Engineering, November 2006
8. Ursinus College, April 2007
9. Union College, October 2007
10. Youngstown State University, February 2008
11. University of Rochester, September 2008
12. Princeton University, October 2008
13. Emory University, October 2008
14. Georgia Institute of Technology, October 2008
15. University of Georgia, October 2008
16. Johns Hopkins University, October 2008
17. SUNY Brockport, November 2008
18. Haverford College, January 2009
19. Drexel University, Dept. of Materials Science and Engineering, January 2009
20. Bowling Green University, February 2009
21. Cornell University, March 2009
22. University at Buffalo, September 2009
23. Canisius College, January 2010
24. Indiana University of Pennsylvania, February 2010

Professional Service

1. Symposium co-organizer: "Recent Advances in Inorganic Materials." American Chemical Society Northeast Regional Meeting; Binghamton, New York; October 5-7, 2006.
2. Manuscript reviewer for the following journals: *ACS Nano, ACS Applied Materials and Interfaces, Advanced Functional Materials, Chemical Communications, Chemistry of*

3. Proposal reviewer for the following funding agencies: National Science Foundation, American Chemical Society Petroleum Research Fund, U.S. Civilian Research Development Foundation.

University Service

University level

1. Member of organizing committee for Integrated Nanostructured Systems Symposium: "Multifunctional Nanomaterials and Nanodevices." University at Buffalo; May 18-19, 2007.
2. Member of one review panel for UB 2020 Scholars Fund.
3. Member of two review panels for Interdisciplinary Research Development Fund (IRDF).

Departmental committees

2004-	Graduate recruitment committee
2005-	Colloquium committee
2005	Chair selection advisory committee
2005	Materials chemistry / polymer science faculty search committee
2006-	Graduate admissions committee
2006	Nanomaterials faculty search committee

Community Service / Outreach Activities

1. Director of *Internships in Nanomaterials Research* (2007-2011), an NSF-funded summer research internship program for high school students from Buffalo Public Schools (http://ub2020.buffalo.edu/ins/outreach/summerinternships.php). Interns (4 in 2007, 6 in 2008, 6 in 2009) perform research in the Departments of Chemistry, Physics, Chemical Engineering, and Electrical Engineering. Interns also participate in a thrice-weekly seminar series to discuss fundamental concepts in nanomaterials science, to meet with various faculty and discuss their research areas, and to discuss scientific writing and develop writing skills.
2. Faculty participant in UB-Buffalo Public Schools (UB-BPS) Partnership science outreach program involving Buffalo middle and high school students (Fall 2006 – present). Developed and led demonstrations and hands-on laboratory exercises for middle school students and parents, organized visits to UB laboratories, and worked with science teachers to develop laboratory experiments and corresponding curricula.
3. Invited speaker: American Chemical Society Western New York Section's Education Night. May 5, 2006.
4. Faculty participant in *Western New York Science and Technology Forum* (December 2006). Presented the lecture, "Nanoscale Science: Why It is of Interest."
5. Participant in ACS PFLAGS Seminar (May 2007). Led a discussion of academic careers at research universities.

Courses taught

Fall 2004	CHE 503, Inorganic Chemistry (symmetry and group theory, coordination chemistry, descriptive chemistry of the transition metals, organometallic chemistry, bioinorganic chemistry)
Fall 2005	CHE 503, Inorganic Chemistry

Spring 2006	CHE 102, General Chemistry
Fall 2006	CHE 503, Inorganic Chemistry
Spring 2007	CHE 504, Physical Methods in Inorganic Chemistry (co-taught, 50%: electronic and vibrational spectroscopies)
Spring 2007	CHE 322, Advanced Inorganic Chemistry Laboratory (co-taught, 50%)
Fall 2007	CHE 503, Inorganic Chemistry (co-taught, 50%)
Spring 2008	CHE 102, General Chemistry
	CHE 510, Inorganic Materials Chemistry (co-taught, 50%: solid-state structure, electronic and optical properties of materials)
Spring 2009	CHE 504, Physical Methods in Inorganic Chemistry (co-taught, 50%)
	CHE 510, Inorganic Materials Chemistry (co-taught, 50%)
Fall 2009	CHE 102, General Chemistry
Spring 2010	CHE 322, Advanced Inorganic Chemistry Laboratory

Student advisement

Research group

Graduated Ph.D. students:

Gregory Soja (Ph.D. thesis: *Patterning Applications via Photochemical and Intermolecular Reactions within Monolayers on Metal Oxide Films*; defended 12/2008)

Rachel Dibbell (Ph.D. thesis: *Fundamental Studies of the Surface Chemistry and Photoinduced Charge Transfer Reactivity of Tethered Semiconductor Nanoassemblies*; defended 05/2009)

Graduated masters students:

Ruth Hoth (M.S., 2006)
Tzuchuan Cheng (M.A., 2007)
Scott Martin (M.A., 2008)

Postdoctoral associate:

Jonathan Mann (advised 03/2007-05/2008)

Current graduate students:

Anthony Smith (Ph.D. anticipated 2010)
Jeremy Nevins (Ph.D. anticipated 2011)
Kathleen Coughlin (Ph.D. anticipated 2012)
Diane Youker (Ph.D. anticipated 2012)
Meghan Kern (Ph.D. anticipated 2013)
Kacie Mulhern (Ph.D. anticipated 2013)

Previous undergraduate students:

Stephen Slocum (B.S. 2006)
Patrick Wieder (B.A. 2006)
Austin Faulkner (B.A. 2007)
Jonathan Barone (B.A. 2008)
Kevin Cook (B.S. 2008)
David Marsh (B.S. 2008)
Thomas Fitzgibbons (B.S. 2009)
Seth Levy (B.S. 2010)
Sylvester Owusu-Ansah (B.A. 2010)
Alex Strait (B.A. 2010)

Lauren Goodrich (REU student, summer 2006)

Previous high school students:

Justin Onyeji (City Honors School, BPS; summer 2007, 2008)
Alenah Robbins (East High School, BPS; summer 2008)
Terasa Hall (East High School, BPS; summer 2009)

Departmental advisement

Research advisor in departmental REU program (2005, 2006, 2010)
Member of thesis committee of 39 graduate students.

Collaborators

1. Profs. Michael Detty and Jochen Autschbach, Dept. of Chemistry, Univ. at Buffalo
2. Profs. Diana Aga, Sarbajit Banerjee, and Luis Colón, Dept. of Chemistry, Univ. at Buffalo
3. Profs. Paras Prasad and Alexander Cartwright, Depts. of Chemistry and Electrical Engineering, Univ. at Buffalo
4. Prof. Joseph Gardella, Dept. of Chemistry, Univ. at Buffalo

Awards

2007	National Science Foundation CAREER Award
2005	James D. Watson Investigator Award, New York State Office of Science, Technology, and Academic Research (NYSTAR)
2000	International Precious Metals Institute Graduate Student Award
1996-1997	L. Carroll King Award for A-Level Teaching, Northwestern University
1996	American Institute of Chemists Student Award
1996	Lyman Beecher Hall Prize in Chemistry, Haverford College

Memberships

1998-	American Chemical Society, Division of Inorganic Chemistry
2008-	Electrochemical Society
2008-	Materials Research Society