

Christine Marie Rolland de Denus

Department of Chemistry
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Professional Experience

Hobart & William Smith Colleges,

Department Chair	July 2007-present
Associate Professor	July 2006-present
Assistant Professor	August 1999-July 2006

Natural Sciences and Engineering Research Council (NSERC) of Canada Postdoctoral Fellow, The Pennsylvania State University
September 1997-August 1999
Research Mentor: Harry R. Allcock

Education

Ph. D., Chemistry, The University of Manitoba
Research Mentor: Alaa S. Abd-El-Aziz
“Controlled Molecular Design and Polymerization of Polyaromatic Ethers”
NSERC Postgraduate Scholar 1993-1997

B. S., Chemistry, The University of Winnipeg
Research Mentor: Alaa S. Abd-El-Aziz
“A Convenient Synthesis of Some Arylated Phenyl-sulphonylacetonitriles and Ethyl Cyanoacetates Using Organoiron Complexes”
1988-1993

Peer-Reviewed Publications (undergraduate student authors are indicated in bold)

1. P. Hazendonk, C. R. de Denus, A. Iuga, P. Cahoon, B. Nilsson, D. Iuga. “A Morphological Study of Poly[Bis(Trifluoroethoxy)phosphazene] Using Solid-State NMR: Introducing Domain Selective ^1H and ^{19}F Decouples ^{13}C MAS NMR”, *J. Inorg. and Organomet. Polym.* **2006**, *16*, 343-357.
2. H. R. Allcock, E. S. Powell, A. E. Maher, R. L. Prange and C. R. de Denus. “Telechelic Polyphosphazenes: Reaction of Living Poly(dichlorophosphazene) Chains with Alkoxy and Aryloxy Phosphoranimines,” *Macromolecules*, **2004**, *37*, 3635-3641.
3. C. R. de Denus, **P. Baker, J. Toner, S. McKevitt**, E. K. Todd and A. S. Abd-El-Aziz. "Electrochemical Investigations of Oligomers and Polymers Containing Ruthenium- and Iron-Arene Complexes," *Macromol. Symp.* **2003**, *196*, 113-123.
4. C. R. de Denus. “Inorganic and Organometallic Polymers,” **Book Review** *J. Inorg. and Organomet. Polym.* **2001**, *11*, 199-201.
5. H. R. Allcock, S. D. Reeves, C. A. Crane and C. R. de Denus. “Influence of Reaction Parameters on the Living Cationic Polymerization of Phosphoranimines to Polyphosphazenes,” *Macromolecules*, **2001**, *34*, 748-754.
6. H. R. Allcock, C. R. de Denus, W. R. Laredo and R. Prange. “Synthesis of Norbornenyl Telechelic Polyphosphazenes and Ring-Opening Metathesis Polymerization (ROMP) Reactions,” *Macromolecules*, **2001**, *34*, 2757-2765.

7. C. R. de Denus, **L. M. Hoffa**, A. S. Abd-El-Aziz and E. K. Todd. "Synthesis of Oligomeric and Polymeric Ethers Containing the Cp^{*}Ru⁺ and CpFe⁺ Metal Moieties," *J. Inorg. and Organomet. Polym.*, **2000**, *10*, 189-208.
8. H. R. Allcock, J. M. Nelson, C. R. de Denus and I. Manners, "Design, Synthesis and Uses of Phosphazene High Polymers," p165-173 in *Tailored Polymers and Applications*, VSP International Science Publishers: Netherlands, **2000**.
9. A. S. Abd-El-Aziz, C. R. de Denus, E. K. Todd and S. Bernardin. "Design of Polyaromatic Ethers Using Cyclopentadienyliron Complexes," *Macromolecules*, **2000**, *33*, 5000-5005.
10. C. R. de Denus, H. R. Allcock and R. Prange. "Differences Between Initiator/Terminator Properties of Phosphazene Materials," *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)*, **2000**, *41*, 554-555.
11. H. R. Allcock and C. R. de Denus. "NMR Spectroscopy for the Study of Polyphosphazene Structures," *Polym. Prepr. (ACS PMSE Div.)* **2000**, *82*, 188-189.
12. H. R. Allcock, C. R. de Denus, R. Prange and J. M. Nelson. "Synthesis of Trifluoromethyl and Methyl Phosphazene Polymers: Differences between Polymerization and Initiator/Terminator Properties," *Macromolecules*, **1999**, *32*, 7999-8004.
13. H. R. Allcock, W. R. Laredo, C. R. de Denus and J. P. Taylor. "Ring-Opening Metathesis Polymerization of Phosphazene Functionalized Norbornenes," *Macromolecules*, **1999**, *32*, 7719-7725.
14. H. R. Allcock, J. M. Nelson, R. Prange, C. A. Crane and C. R. de Denus. "Synthesis of Telechelic Polyphosphazenes via the Ambient Temperature Living Cationic Polymerization of Amino Phosphoranimines," *Macromolecules*, **1999**, *32*, 5736-5743.
15. H. R. Allcock, J. M. Nelson, C. R. de Denus and I. Manners. "Design, Synthesis and Uses of Phosphazene High Polymers," *Proc. 3rd Int. Conf. on Advanced Polymers via Macromolecular Engineering*, **1999**.
16. A. S. Abd-El-Aziz, **E. K. Todd** and C. R. de Denus. "Design of Iron- and Ruthenium-Containing Polymers," *Polym. Prepr. Am. Chem. Soc. Div. Polym. Chem.*, **1999**, *40*(2), 926-927.
17. A. S. Abd-El-Aziz, K. M. Epp and C. R. de Denus. "Building Blocks of Aromatic Ethers and Thioethers: Synthesis and Polymerization", *Polym. Prepr. Am. Chem. Soc. Div. Polym. Chem.*, **1998**, *39*(2), 374-375.
18. A. S. Abd-El-Aziz, C. R. de Denus, M. J. Zaworotko and C.V. Krishnamohan Sharma. "The First Example of Cyclopentadienyliron Mediated Cyclic Aryl Ether Synthesis," *Chem. Commun.*, **1998**, 265-266.
19. A. S. Abd-El-Aziz, C. R. de Denus, K. M. Epp and **S. Smith**. "Effect of Ligand Structure, Solvent and Temperature on the Electrochemical Behavior of Polyarene-Iron Complexes," *Can. J. Chem.*, **1996**, *74*, 650-657.
20. A. S. Abd-El-Aziz, C. R. de Denus, M. J. Zaworotko and L.R. MacGillivray. "Controlled Design of Oligomeric Ethers with Pendant Cyclopentadienyliron Moieties," *J. Chem. Soc. Dalton Trans.*, **1995**, 3375-3393.
21. A. S. Abd-El-Aziz, C. R. de Denus and H. M. Hutton. "Ironcyclopentadienyl Mediated 2-Alkyl-2-Arylphenylsulphonylacetonitrile Synthesis," *Can. J. Chem.* **1995**, *73*, 289-295.
22. A. S. Abd-El-Aziz, Y. Lei and C. R. de Denus. "Aliphatic Diols in the Synthesis of Bis(cyclopentadienyliron) Arene Complexes," *Polyhedron*, **1995**, *14*, 1585-1591.

23. A. S. Abd-El-Aziz, C. R. de Denus and K. M. Epp. "The Design of Etheric and Thioetheric Building Blocks for Polymer Synthesis," *Proc. Indian Acad. Sci.*, **1995**, *107*, 877-888. (Invited)
24. A. S. Abd-El-Aziz and C. R. de Denus. "Molecular Design in Organometallic Chemistry: The First Example in the Synthesis of Poly(cyclopentadienyliron) Cations of Polyaromatic Ethers and Thioethers," *J. Chem. Soc. Chem. Comm.*, **1994**, 663-665.
25. A. S. Abd-El-Aziz, K. M. Epp, C. R. de Denus and G. Fisher-Smith. "A New Class of Diiron Arene Complexes With Disulfide and Diamine Bridges," *Organometallics*, **1994**, *13*, 2299-2308.
26. A. S. Abd-El-Aziz, D. C. Schriemer and C. R. de Denus. "Bis(cyclopentadienyliron) Arene Complexes: A New Route to the Synthesis and Functionalization of Polyaromatic Ethers," *Organometallics*, **1994**, *13*, 374-384.
27. A. S. Abd-El-Aziz, P. Hazendonk, H. M. Hutton and C. R. de Denus. "¹H NMR Analysis of Some η^6 -(Substituted Aryl Phenylsulphonylacetone)trile)- η^5 -Cyclopentadienyliron Hexafluorophosphates," *Inorg. Chim. Acta*, **1994**, *219*, 221-223.
28. A. S. Abd-El-Aziz and C. R. de Denus. "A Convenient Synthesis of Some Arylated Phenylsulphonylacetone nitriles and Ethyl Cyanoacetates Using Organoiron Complexes," *J. Chem. Soc., Perkin Trans. 1*, **1993**, 293-298.
29. A. S. Abd-El-Aziz, S. Tesfalidet, C. R. de Denus and K. Lezynska. "A Novel Approach to the Synthesis of Some Alkanolic Acid Esters," *Synn. Commun.*, **1993**, *23*, 1415-1426.
30. A. S. Abd-El-Aziz, C. R. de Denus and K. Lezynska, "Preparation of Some Organic Precursors Via Photolytic Demetallation of Their Iron Complexes," *Proc. Indian Acad. Sci.*, **1993**, *105*, 575-581.
31. A. S. Abd-El-Aziz and C. R. de Denus. "Synthesis of Isomeric Ethyl Tolylcianoacetates Using Organoiron Complexes," *Synn. Commun.*, **1992**, *22*, 581-591.

PATENTS and Invention Disclosures

1. US6392008: Allcock, H. R., Prange, R., de Denus, C. R., Nelson, J. M., Crane, C. A., Laredo, W. R. and Reeves, S. D. "Polyphosphazene Polymers." May 21, 2002.
2. WO0107505: Allcock, H. R., Prange, R., de Denus, C. R., Nelson, J. M., Crane, C. A., Laredo, W. R. and Reeves, S. D. "Polyphosphazene Polymers." Feb. 1, 2001.
3. United States Patent, 6072054. Abd-El-Aziz, A. S., de Denus, C. R. and May, L. J. "Cyclic Aryl Ethers, Thioethers, and Amines and Method Preparation." June 6, 2000.

Manuscripts in Preparation (undergraduate student authors are indicated in bold)

1. C. R. de Denus, A. Dann, P. Young, S. Czajkowski, and D. Evers. "New Molecular Wire Candidates Containing Substituted Ferrocene Moieties," to be submitted to *Inorg. Chem.* or *Organometallics*.

Invited Lectures

1. "Synthesis of Potential Molecular Wire Candidates," Cornell University, October, 2004.
2. "Small Molecules with Unique Properties: Synthesis, Characterization, and Applications," The University of Winnipeg, October, 2003.
3. "Electrochemical Investigations of Oligomers and Polymers Containing Ruthenium and Iron Arene Complexes," Canadian Society for Chemistry (CSC)/IUPAC conference, Ottawa, Ontario, Canada, August 10-15, 2003.
4. "Synthesis of Novel Inorganic Materials via S_NAr Reactions," Syracuse University, April, 2003.

5. "Organometallic Chemistry at Hobart and William Smith Colleges," Rennselaer Polytechnic Institute, November, 2001.

Presentations (HWS undergraduate contributors are indicated in bold)

1. C. R. de Denus, **P. Myers**, **C. Hurley**, and **J. Walkley**. "The preparation of molecular wire candidates containing ferrocene," 236th *ACS national meeting*, Philadelphia, PA, August 2008.
2. C. R. de Denus and **D. Evers**. "Synthesis and electrochemical studies of homo- and hetero-leptic terpyridine complexes", 233rd *ACS national meeting*, Chicago, IL, March 2007.
3. C. R. de Denus and **S. Czajkowski**. "Ferrocene based molecular wire candidates: Synthesis and characterization", 233rd *ACS national meeting*, Chicago, IL, March 2007.
4. C. R. de Denus and **A. Dann**. "Interactions of Ruthenium Chloride Complexes and Substituted Terpyridine Compounds," 228th *ACS National Meeting*, Philadelphia, PA, August 2004.
5. C. R. de Denus and **P. Young**. "Coupled Terpyridine-Ferrocene Molecular Wire Candidates," 228th *ACS National Meeting*, Philadelphia, PA, August 2004.
6. C. R. de Denus and **C. J. Rolle**. "Electrochemical Studies of Metallocenes Coupled With Terpyridine Ligands," 228th *ACS National Meeting*, Philadelphia, PA, August 2004.
7. C. R. de Denus and **H. Conurso**. "Preparation of 4'-substituted Terpyridine Ligands," 228th *ACS National Meeting*, Philadelphia, PA, August 2004.
8. C. R. de Denus and **A. Dann**. "Synthesis of Substituted Terpyridine Ligands and Their Interactions with Ruthenium Acid Chloride Complexes," 2nd Annual Summer Science Research Symposium, Hobart and William Smith Colleges, Nov. 7, 2003.
9. C. R. de Denus and **P. Young**. "Coupled Terpyridine-Ferrocene Molecular Wire Candidates," 2nd Annual Summer Science Research Symposium, Hobart and William Smith Colleges, Nov. 7, 2003.
10. C. R. de Denus and **C. J. Rolle**. "Synthesis of Potential Molecular Wire Candidates Incorporating Substituted Cobalticinium Complexes," 2nd Annual Summer Science Research Symposium, Hobart and William Smith Colleges, Nov. 7, 2003.
11. C. R. de Denus, **P. Baker**, **S. McKeivitt**, and **J. Toner**. "Electrochemical Investigations of Oligomers and Polymers Containing Ruthenium and Iron Arene Complexes," Canadian Society for Chemistry (CSC)/IUPAC Conference, Ottawa, Ontario, Canada, August 10-15, 2003.
12. C. R. de Denus and **C. Pierce**. "Synthesis of Organometallic Bipyridine Complexes," 48th Undergraduate Research Symposium, Rochester Section of the ACS, Brockport, NY, April 2003.
13. C. R. de Denus and **P. Baker**. "Electrochemical Investigations of Iron and Ruthenium Containing Complexes," 48th Undergraduate Research Symposium, Rochester Section of the ACS, Brockport, NY, April 2003.
14. C. R. de Denus, **S. McKeivitt** and **J. Toner**. "Synthesis and Characterization of Organometallic Polymers," 48th Undergraduate Research Symposium, Rochester Section of the ACS, Brockport, NY, April 2003.
15. C. R. de Denus and **P. Baker**. "Electrochemical Investigation of Fe and Ru Containing Organometallic Complexes," 224th *ACS National Meeting*, Boston, MA, August 2002.
16. C. R. de Denus and **M. Richardson**. "Synthesis of Inorganic Complexes Containing Substituted Bipyridyl Ligands," 224th *ACS National Meeting*, Boston, MA, August 2002.
17. C. R. de Denus and **A. Dann**. "Synthesis of Compounds with Photoluminescent Properties," 224th *ACS National Meeting*, Boston, MA, August 2002.
18. C. R. de Denus and **C. Pierce**. "Synthesis of Novel Inorganic Materials," 224th *ACS National Meeting*, Boston, MA, August 2002.
19. C. R. de Denus and **S. McKeivitt**. "Formation of Organo-iron and Ruthenium Containing Oligomeric and Polymeric Materials," 222th *ACS National Meeting*, Chicago, IL, August 2001.
20. C. R. de Denus and **C. Pierce**. "Synthesis and Characterization of a New Cyclotriphosphazene Trimer," 222th *ACS National Meeting*, Chicago, IL, August 2001.
21. C. R. de Denus and **H. Lavender**. "A New Cyclotriphosphazene Host and Its Abilities for Inclusion Adduct Formation," 222th *ACS National Meeting*, Chicago, IL, August 2001.
22. C. R. de Denus and **J. Hoerner**. "Oligomer and Polymer Synthesis from Ironcyclopentadienyl Complexes," 46th Annual Undergraduate Research Symposium, Rochester Institute of Technology, Rochester, NY, April 2001.

23. C. R. de Denus and **L. von Bereghy**. "Synthesis and Electrochemical Studies of Organoiron and Ruthenium Complexes," 46th Annual Undergraduate Research Symposium, Rochester Institute of Technology, Rochester, NY, April 2001.
24. C. R. de Denus and **J. Hoerner**. "Polymer Synthesis Using Iron and Ruthenium Containing Monomers," 2nd Annual Undergraduate Research Symposium, Hobart and William Smith Colleges, Geneva, NY, April 2001.
25. C. R. de Denus and **L. von Bereghy**. "Synthesis and Electrochemical Studies of Organoiron and Ruthenium Complexes," 2nd Annual Undergraduate Research Symposium, Hobart and William Smith Colleges, Geneva, NY, April 2001.
26. C. R. de Denus and **L. M. Hoffa**. "Synthesis and Characterization of Oligomeric and Polymeric Materials Containing Metal Centers," 45th Annual Undergraduate Research Symposium, University of Rochester, Rochester, NY, April 2000.
27. C. R. de Denus and **J. B. Unger**. "Synthesis and Clathration Studies of the Tris(2,3-Anthracenedioxy)cyclotriphosphazene Trimer," 45th Annual Undergraduate Research Symposium, University of Rochester, Rochester, NY, April 2000.
28. C. R. de Denus, H. R. Allcock and R. Prange. "Differences Between Initiator/Terminator Properties of Phosphazene Materials," 219th ACS National Meeting, San Francisco, CA, March 2000.
29. H. R. Allcock and C. R. de Denus. "NMR Spectroscopy for the Study of Polyphosphazene Structures," 219th ACS National Meeting, San Francisco, CA, March 2000.
30. C. R. de Denus, **L. M. Hoffa**, A. S. Abd-El-Aziz, and E. K. Todd. "Formation of Metal Containing Oligomeric and Polymeric Materials," 219th ACS National Meeting, San Francisco, CA, March 2000.
31. C. R. de Denus, **L. M. Hoffa**, A. S. Abd-El-Aziz, and E. K. Todd. "New Organometallic Polymers Containing Metal Moieties," 1st Annual Undergraduate Research Symposium, Hobart and William Smith Colleges, Geneva, NY, March 2000.
32. A. S. Abd-El-Aziz, E. K. Todd and C. R. de Denus. "Design of Iron- and Ruthenium-Containing Polymers," 217th ACS National Meeting, New Orleans, August 1999.
33. A. S. Abd-El-Aziz, K. M. Epp and C. R. de Denus. "Building Blocks of Aromatic Ethers and Thioethers: Synthesis and Polymerization," 215th ACS National Meeting, Dallas, March 1998.
34. A. S. Abd-El-Aziz and C. R. de Denus. "Cyclic and Open Chain Polyethers," 80th Canadian Society for Chemistry Conference and Exhibition, Windsor, Ontario, June 1997.
35. A. S. Abd-El-Aziz, C. R. de Denus, K. M. Epp, K. Tran and A. White. "The Use of Organoiron in Polymer Synthesis," 31st International Conference on Coordination Chemistry, Vancouver, British Columbia, August 1996.
36. C. R. de Denus, K. Tran and A. S. Abd-El-Aziz. "Metal Mediated Polyaromatic Ether Synthesis," 31st International Conference on Coordination Chemistry, Vancouver, British Columbia, August 1996.
37. A. S. Abd-El-Aziz, C. R. de Denus, K. M. Epp and S. Smith. "Electrochemical Studies of Mono- and Polyiron Arene Complexes," International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, December 1995.
38. A. S. Abd-El-Aziz, C. R. de Denus, A. A. Dembek and P. J. Fagan. "HeteroPolymetallic Arene Complexes: Synthesis and Characterization," 78th Canadian Chemical Conference and Exhibition, Guelph, Ontario, May 1995.
39. A. S. Abd-El-Aziz, C. R. de Denus and K. M. Epp. "Controlled Molecular Design of Oligomeric and Polymeric Arenes with Pendent Metal Moieties," 78th Canadian Chemical Conference and Exhibition, Guelph, Ontario, May 1995.
40. A. S. Abd-El-Aziz, C. R. de Denus and K. M. Epp. "Synthesis and Electrochemical Studies of Oligomeric Polyethers Containing Metallic Species," 208th ACS National Meeting, Washington, D.C., August 1994.
41. A. S. Abd-El-Aziz and C. R. de Denus. "Controlled Molecular Design of Oligomeric Organoiron Arenes," 30th International Conference on Coordination Chemistry, Kyoto, Japan, July 1994.
42. A. S. Abd-El-Aziz, C. R. de Denus and J. Bzikot. "A New Route to Polyethers and Polythioethers," 77th Canadian Chemical Conference and Exhibition, Winnipeg, Manitoba, May 1994.
43. A. S. Abd-El-Aziz and C. R. de Denus. "A Synthetic Approach to Polymeric Complexes," 207th ACS National Meeting, San Diego, March 1994.
44. A. S. Abd-El-Aziz, D. Schriemer and C. R. de Denus. "Iron Complexes in the Synthesis of Aromatic Polyethers," 33rd National Organic Chemistry Symposium, Bozeman, Montana, June 1993.

45. A. S. Abd-El-Aziz, D. Schriemer and C. R. de Denus. "Synthetic Routes to Functionalized Aromatic Ethers and Thioethers Using Arene-Diiron Complexes," *76th Canadian Chemical Conference and Exhibition*, Sherbrooke, Quebec, May 1993.
46. A. S. Abd-El-Aziz and C.R. de Denus. "A Versatile Approach to the Synthesis of Polyethers," 7th Annual Western Canadian Undergraduate Chemistry Conference, Lethbridge, Alberta, May 1993.
47. A. S. Abd-El-Aziz, C. R. de Denus, K. Lezynska and D. Schriemer. "Photochemical Liberation of Some Important Organic Compounds From Their Iron Complexes," *The Second International Conference of Solar Energy Storage and Applied Photochemistry*, Cairo, Egypt, January 1993.
48. A. S. Abd-El-Aziz and C. R. de Denus. "The Use of Organo-iron Complexes in the Synthesis of Substituted Arylated Cyanoacetates," *29th International Conference on Coordination Chemistry*, Lausanne, Switzerland, July 1992.
49. A. S. Abd-El-Aziz and C. R. de Denus. "Studies in S_NAr Reactions of Chlorobenzenes Complexed to Ironcyclopentadienyl Moiety With Cyanoacetates," *75th Canadian Chemical Conference and Exhibition*, Edmonton, Alberta, May 1992.
50. A. S. Abd-El-Aziz, S. Tesfalidet and C. R. de Denus. "Synthesis of Some Alkanoic Acid Esters Via the Aid of Organo-iron Complexes," 6th Annual Western Canadian Student Conference, Vancouver, British Columbia, May 1992.

External Grant Activity

1. The National Science Foundation-Major Research Instrumentation Grant, submitted Jan 2007, \$342,000 (co-investigators Justin Miller, Erin Pelkey) "Acquisition of a 400 MHz NMR.
2. WFL-BOCES Mini Grant, "Fun With Science: Just For You and Me", 2006, \$679.68.
3. The American Chemical Society-Petroleum Research Fund, Type G Grant, "Preparation and Investigation of Terpyridine Containing Polymers with Metal Ions Incorporated into the Polymer Backbone," 2004, \$35,000. (30% acceptance rate)
4. The Council on Undergraduate Research, Undergraduate Student Summer Research Fellowships in Science, "Synthesis of Novel Organometallic Polymers," 2002, \$3,500. (21 awardees, 8 in chemistry)
5. The National Science Foundation-Major Research Instrumentation Grant, September 2001, \$85, 395. Funding for a High Performance Gel Permeation Chromatograph.

Internal Grants and Awards

1. Hobart and William Smith Colleges Faculty Research Grant, 2008-2009, \$2,540.
2. Hobart and William Smith Colleges Center for Teaching and Learning 2007 Teaching and Learning Grant Award, \$1,500.
3. Hobart and William Smith Colleges Faculty Start-up Grant, 2000-2006, \$42,100.
4. Hobart and William Smith Colleges Faculty Research Grant, 2007-2008, \$1,207.
5. Hobart and William Smith Colleges Faculty Research Grant, 2006-2007, \$1,150.
6. Hobart and William Smith Colleges Faculty Research Grant, 2004-2005, \$1,200.
7. Hobart and William Smith Colleges Faculty Research Grant, 2003-2004, \$1,800.
8. Hobart and William Smith Colleges Faculty Research Grant, 2002-2003, \$2,000.
9. Hobart and William Smith Colleges Faculty Research Grant, 2001-2002, \$1,150.
10. Hobart and William Smith Colleges Faculty Research Grant, Feb. 2002-May 2002, \$ 550.

HWS Undergraduate Research Students (* indicates an Honors student)

1. **Kristen Kush '12**, Preparation of Molecular Wire Candidates, Spring 09-present.
2. **Jessica Cook '10**, Fun With Science: Teaching Third Grade Students Through Experiential Learning, Spring 2009.
3. **Cecilia Teye '09**, Preparation of Molecular Wire Candidates, Summer 2007.
4. **Paige Myers '09**, Preparation of Molecular Wire Candidates, Summer 2008, Fall 08, Spring 09.
5. **Christopher Hurley '09**, Preparation of Molecular Wire Candidates, Summer 2007 & 2008, Spring 09.
6. **Rafe Mattingly '08**, Preparation of Molecular Wire Candidates, Summer 2007.

7. **Deirdra Evers '08**, Synthesis of Molecular Wire Candidates, Summer 2006-May 08.
8. **Stephanie Czajkowski '08**, Synthesis of Molecular Wire Candidates, Summer 2006.
9. **Nekai Johnson '08**, Synthesis of Molecular Wire Candidates, Summer 2005.
10. **Leila Saber-Khiabani '08**, Synthesis of Molecular Wire Candidates, Summer 2005.
11. **Evan Brown '08**, Synthesis of Molecular Wire Candidates, Summer 2005.
12. **Heather Condurso '07**, Preparation of Substituted 4'-terpyridines, Summer 2004.
13. **Philip Place '06**, Studies of Biodiesel Production for SAGA Waste Oil, Fall 2005.
14. **Megan Treharne '06**, Preparation of Biodiesel Fuel from Vegetable, Olive, and Canola Oils: A Comparative Study of Reaction Conditions and Fuel Yield, Fall 2005, Spring 2006.
15. ***Pria Young '06**, Synthesis of Substituted Chlorocarbonyl Ferrocene Molecular Wire Candidates, Summer 2003, 2004, 2005, Aug. 05-May 06.
16. ***Angela Dann '05**, Synthesis of Ruthenium Complexes Containing Bipyridine and Terpyridine Units, Summer 2002, 2003, Aug 03-May 05.
17. **Clarence Rolle '05**, Synthesis and Characterization of Cobalt Containing Molecular Wire Candidates, Summer 2003, 2004, Aug 03-Dec 03, Jan. 05-May 05.
18. **Gil Carr '06**, Investigation of the Preparation of Biodiesel using HWS Waste Oil (joint student with T. Curtin and L. Joseph), Jan. 04-May 04.
19. **Lisa Rasbach '06**, Investigation of the Preparation of Biodiesel using HWS Waste Oil (joint student with T. Curtin and L. Joseph), Jan. 04-May 04.
20. **Caterina Caiazza '05**, Preparation of Unique Inorganic Ruthenium Complexes, Aug. 03-Dec. 03.
21. **Sarah Green '04**, Synthesis of 1,1'-Dichlorocarbonyl Ferrocenes and Their Reactions with Amine-terminated Heterocyclic Ligands, Aug. 03-Dec. 03.
22. **Carmela Provenzano '04**, Synthesis and Reactivity of Substituted Chlorocarbonyl Ferrocenes, Aug. 03-Dec. 03.
23. **Lauren Wendell '03**, Instrumental Methods of Analysis in Forensic Chemistry, Jan. 03-May 03.
24. **Philip Baker '03**, Electrochemical Investigations of Novel Inorganic Materials, Summer 2002, Aug. 02-May 03.
25. **Sheila McKevitt '03**, Synthesis of New Ruthenium Containing Polymers, Summer 2001, Jan.03-May 03.
26. **Jaclyn Toner '03**, Synthesis and Characterization of Photoluminescent Polymers, Summer 2001, Aug. 02-Dec. 02.
27. **Chassidy Pierce '02**, Synthesis and Reactivity of Substituted 2,2'-bipyridines and Phosphazene Clathration Studies, Summer 2001, 2002, Aug. 01-Dec. 01.
28. **Malcolm Richardson '05**, Synthesis and Electrochemical Studies of Terpyridine Substituted Organometallics, Summer 2002.
29. **Heather Lavender '04**, Synthesis and Reactivity of Phosphazene Clathrate Systems, Summer 2001.
30. **Emily Oakes '01**, Inclusion Studies of Cyclotriphosphazenes with Aromatic Side Groups, Feb. 01-May 01.
31. **Lauren von Bereghy**, Electrochemical Investigations of Iron and Ruthenium Arene Complexes, Jan. 01-May 01.
32. **Joshua Hoerner '01**, Synthesis and Electrochemical Studies of Iron Containing Materials, Aug. 00-May 01.
33. ***Lacey M. Hoffa '00**, Synthesis and Characterization of Metal Containing Oligomeric and Polymeric Materials, Aug. 99-June 00.
34. **John Unger '00**, Synthesis, Characterization, and Conformational Analysis of Tris(1,2-anthracenedioxy)cyclotriphosphazene, Jan. 00-Mar. 00.

Sponsored Student Grants and Awards-External

1. Angela Dann, NSF Research Experience for Undergraduates in Polymer Interfaces and Macromolecular Assemblies, IBM laboratories, California, Summer 2004.
2. Caterina Caiazza, Barry M. Goldwater Scholarship Recipient, 2004-2005 academic year.
3. Caterina Caiazza, General Motors Fuel Cell Activities Internship Program, Rochester, summer 2004.
4. Lisa Rasbach, National Wildlife Federation's (NWF) Campus Ecology Fellow, 2004.
5. Caterina Caiazza, Lunar Planetary Institute and NASA Johnson Space Center Summer Internship, Houston, summer 2003.

6. Chassidy Pierce, American Chemical Society Undergraduate Travel Grant, Boston, 2002.

Sponsored Student Grants and Awards-Internal

1. Philip Place, Environmental Research Grant, "Biodiesel Production from SAGA Waste Oils," \$1000, 2005-06.
2. Hobart and William Smith Provost Summer Science Fellowship, 2007, 2 x \$3400 stipend
3. Hobart and William Smith Provost Summer Science Fellowship, 2005, 2 x \$3400 stipend
4. Hobart and William Smith Provost Summer Science Fellowship, 2004, \$3400 stipend
5. Hobart and William Smith Provost Summer Science Fellowship, 2003, \$3400 stipend
6. Hobart and William Smith Provost Summer Science Fellowship, 2002, \$3400 stipend
7. Gil Carr, Kloman Fellowship Fund, "Biodiesel Feasibility Study at Hobart and William Smith Colleges," \$750, 2004.
8. Lisa Rasbach, Environmental Research Grant, "Biodiesel Feasibility Study at Hobart and William Smith Colleges," \$500, 2004.

Geneva Community Science Outreach for Elementary School Students

1. West Street Elementary School, Geneva, NY, April 2004-present.
2. Children's Hours School, Geneva, NY, May 2004.
3. Hai Timiai (WS Senior Honor Society) at HWS, February 2004.
4. Geneva Boys and Girls Club, 2001.
5. Lyons Elementary School, 2007-present.

Society Memberships

Member, The American Chemical Society
Member, The Council of Undergraduate Research
Member, Sigma Xi, The Scientific Research Society
Member, The Chemical Institute of Canada
Member, The Canadian Society of Chemistry

Professional Activities

Reviewer, *Journal of Inorganic and Organometallic Polymers*
Reviewer, *International Journal of Science and Technology*
Reviewer, *Macromolecules*
Reviewer, American Chemical Society-Petroleum Research Fund Proposals
Reviewer, National Science Foundation Proposals
Reviewer, John Wiley and Sons

Courses Taught

Molecules That Matter, lecture and laboratory
Chemical Reactivity, lecture and laboratory
Introductory Organic Chemistry, lecture and laboratory
Intermediate Organic Chemistry, lecture and laboratory
Forensic Chemistry, lecture and laboratory
Instrumental Analysis, lecture and laboratory
Advanced Inorganic Chemistry, lecture and laboratory
Chemistry Senior Seminar
Chemistry and Crime, First Year Seminar

Hobart and William Smith Colleges Service

Departmental Service:

Department Chair (2007-2010)
Search Committee for one-year biochemistry chemistry position (2009)
Search Committee for tenure-track biochemistry position (2008)
Review I Committee for Justin Miller (2007)
Search Committee for one-year chemistry position (2007)
Search Committee for tenure-track physical chemistry position (2007)
Review II Committee for Erin Pelkey (2006)
Search Committee for tenure-track physical chemistry position (2005)
Review I Committee for Erin Pelkey (2004)
Review II Committee for Carol Parish (2002)
Search Committee for 1-year chemistry replacement position (2001)
Search Committee for Teacher-Scholar in Chemistry Department (2001)
Chemistry Department Seminar Coordinator (2000-2001)
Search Committee for tenure-track organic chemistry position (2000-2001)
Search Committee for 1-year chemistry replacement position (2000)
ACS Student Affiliates/Chemistry Student Association Advisor (Winter 1999-Jan 2004)

College-wide Service:

Chair, Committee on Academic Affairs (2009-2011)
Search Committee for NCAA Compliance Coordinator (2009)
Search Committee for Instructional and Research Technology Leader (2009)
NCAA Faculty Athletic Representative (2008-present)
Chair-Elect, Committee on Academic Affairs (2008-09)
Committee Member for Fulbright, Rhodes, Marshall and Goldwater Candidates (2007-present)
Sigma Xi Geneva Chapter, president (May 2008- May 2009)
Committee of Academic Affairs Subcommittee on Athletics (2008-present)
Committee of Academic Affairs Subcommittee on Information Technology (2008-2009)
Service Learning Advisory Council (2008-present)
Library Committee (2008-2009)
Committee of Academic Affairs Subcommittee on Honors (2003-2006)
Search Committee for William Smith Director of Athletics (summer 2005)
Search Committee for tenure-track experimental physics position (2005)
Search Committee for temporary physical chemistry position (2005)
Sigma Xi Geneva Chapter, Executive Committee member (May 2002- May 2005)
Coordinator of Rhodes Scholar Committee for Cathy Caiazza (Fall 2004)
William Smith Club Hockey Coach (2003-2007)
Committee of Academic Affairs Subcommittee on Athletics (2002-2007)
HWS Faculty Representative, Barry Goldwater Fellowship Program (2001-2006)
Environmental Studies Committee (2001-present)
Sigma Xi Geneva Chapter Delegate for conference in Raleigh, NC. (2001)

Academic Fellowships, Honors and Awards

Natural Sciences and Engineering Research Council of Canada (NSERC)
Postdoctoral Fellowship (1997-1999)
NSERC PGS-B Postgraduate Scholarship (1995-1997)
NSERC PGS-A Postgraduate Scholarship (1993-1995)
Sigma Xi, Scientific Research Society, Award for Excellence in Science (1993)
Second place in Oral competition at the 7th Annual Western Canadian Student Conference in Lethbridge, Alberta (1993)
University of Winnipeg, Student of Distinction (1991-1993)

University of Winnipeg Chemistry Club President (1992-1993)
University of Winnipeg Chemistry Club of 1988 Scholarship (1992)
University of Winnipeg Chemistry Faculty Scholarship (1992)
University of Winnipeg Academic Proficiency Scholarship (1992)
University of Winnipeg Chemistry Department Travel Award (1992)
University of Winnipeg Chemistry Club Vice-President (1991-1992)
University of Winnipeg Board of Regents Special Entrance Scholarship (1988)