

# Gregory J. Domski, Ph.D.

Assistant Professor  
Department of Chemistry  
Augustana College  
Rock Island, IL 61201

Phone: (309) 794-3482  
Fax: (309) 794-8399  
Email: gregdomski@augustana.edu

## PROFESSIONAL

**Augustana College**, Rock Island, IL (Fall 2008–Present)  
Assistant Professor of Chemistry

**Cornell University**, Ithaca, NY (2003–2008)  
Graduate Research Assistant

**Cornell University**, Ithaca, NY (Fall 2003–Winter 2004)  
Teaching Assistant (Organic Chemistry for the Life Sciences)

## EDUCATION

**Cornell University**, Ithaca, NY (2005–2008)  
Ph.D. in Inorganic Chemistry, August 2008  
Research Advisor: Professor Geoffrey W. Coates

**Cornell University**, Ithaca, NY (2003–2005)  
M.S. in Inorganic Chemistry, June 2005  
Research Advisor: Professor Geoffrey W. Coates

**Augustana College**, Rock Island, IL (1999–2003)  
ACS Certified Bachelor of Arts, Chemistry, *Magna Cum Laude*  
Research Advisor: Professor SonBinh T. Nguyen, Northwestern University

## COURSES TAUGHT

General Chemistry I and II (Lecture and Laboratory)  
Organic Chemistry I and II (Lecture and Laboratory)  
Organic Chemistry III (Laboratory)  
Introductory Inorganic Chemistry (Lecture and Laboratory)  
Advanced Inorganic Chemistry (Lecture and Laboratory)

## RESEARCH INTERESTS

*Development of novel binuclear donor-functionalized N-heterocyclic carbene transition metal complexes for transfer hydrogenation catalysis*

- Synthesis and characterization of phenol, and phosphine functionalized N-heterocyclic carbene ligands and their corresponding transition metal complexes

- Evaluation of the catalytic properties of novel binuclear complexes

*Development of transition metal-based olefin polymerization catalysts*

- Synthesis of early-metal catalysts for living and stereoselective olefin polymerization
- Synthesis of olefin-based block copolymers and end-functionalized polyolefins
- Mechanistic investigation of organometallic reaction processes relevant to olefin polymerization

## PUBLICATIONS

\*undergraduate collaborators are underlined>

1. Domski, G.J.; Hohenboken, S.A.; Swenson, D.C. “*rac-cis,cis*-Dicarbonyldichlorido{1-[2-(diphenylphosphanyl)benzyl]-3-mesitylimidazol-2-ylidene}ruthenium(II) dichloromethane monosolvate” *Acta Crystallographica* **2012**, *E68*, m1121.
2. Domski, G.J.; Pecak, W.H.; Swenson, D.C. “*rac -cis* -Dicarbonylchlorido{1-[2-(diphenylphosphanyl- $\kappa P$ )benzyl]-3-(phenyl- $\kappa C^1$ )imidazole-2-ylidene- $\kappa C^2$ }ruthenium(II) dichloromethane monosolvate” *Acta Crystallographica* **2012**, *E68*, m1224 – m1225.
3. Hartwig, J.H.; Coates, G.W.; Domski, G.J. “Polymerization and Oligomerization of Olefins.” In *Organotransition Metal Chemistry: From Bonding to Catalysis*, Hartwig, J.H. University Science Books: Sausalito, **2009**.
4. Edson, J.B.; Domski, G.J.; Rose, J.M.; Bolig, A.; Brookhart, M.; Coates, G.W. “Living Transition Metal-Catalyzed Alkene Polymerization: Polyolefin Synthesis and New Polymer Architectures.” In *Controlled and Living Polymerizations: From Mechanisms to Applications*, Matyjaszewski, K.; Müller, A.H.E., Eds. Wiley: Darmstadt, **2009**.
5. Niu, A.; Stellbrink, J.; Allgaier, J.; Richter, D.; Hartmann, R.; Domski, G. J.; Coates, G. W.; Fetters, L. J. “Polymerization of 1-Octene by a Pyridylamidohafnium Catalyst: A SEC, HNMR and Small Angle Neutron Scattering Study” *Macromolecules* **2009**, *42*, 1083 –1090.
6. Domski, G. J.; Edson, J. B.; Keresztes, I.; Lobkovsky, E. B.; Coates, G.W. “Synthesis of a New Olefin Polymerization Catalyst Supported by an  $sp^3$ -C Donor via Insertion of a Ligand-appended Alkene into an Hf-C Bond of a Neutral Pyridylamidohafnium trimethyl Complex” *Chem. Commun.* **2008**, 6137–6139.
7. Domski, G. J.; Lobkovsky, E. B.; Coates, G. W. “Polymerization of  $\alpha$ -Olefins with Pyridylamidohafnium Catalysts: Living Behavior and Unexpected Isoselectivity from a  $C_s$ -Symmetric Catalyst Precursor” *Macromolecules* **2007**, *40*, 3510–3513.

8. Domski, G. J.; Rose, J. M.; Coates, G. W.; Bolig, A. D.; Brookhart, M. "Living Alkene Polymerization: New Methods for the Precision Synthesis of Polyolefins" *Prog. Polym. Sci.* **2007**, *32*, 30–92.
9. Cherian, A. E.; Domski, G. J.; Rose, J. M.; Lobkovsky, E. B.; Coates, G. W. "Acid-Catalyzed *ortho*-Alkylation of Anilines with Styrenes: An Improved Route to Chiral Anilines with Bulky Substituents" *Org. Lett.* **2005**, *7*, 5135–5137.
10. Nguyen, S. T.; Paddock, R. L.; Chen, J.; Domski, G. J. "Metal-Ligand Complexes and Related Methods of Chemical CO<sub>2</sub> Fixation" U. S. Pat 6 870 004 B1, 2005.

### POSTER PRESENTATIONS, SEMINARS, AND SYMPOSIA

1. University of Iowa, Inorganic Chemistry Colloquium, Invited Lecture, (December 2012)
2. American Chemical Society National Meeting, Anaheim, CA, Undergraduate Research at the Frontiers of Inorganic Chemistry Poster Session Presentation, (with Wiktor Pecak, March 2011)
3. American Chemical Society National Meeting, Boston, MA, Organometallic Catalyst Poster Session Presentation (August 2007)
4. Cornell Center for Materials Research, Polymer Outreach Program, Poster Session (May 2007)

### GRANTS

#### *External*

1. American Chemical Society Petroleum Research Fund Undergraduate New Investigator Award: *Functionalized, Binuclear N-Heterocyclic Carbene Ligands Bearing Phosphine Donors: Synthesis of Metal Complexes and Applications to Homogeneous Catalysis*, September 1, 2011–August 31, 2013, \$50,000.

#### *Internal*

1. New Faculty Research Award: 2008/09, 2009/10, 2010/11, \$4,000/award.

### HONORS AND AWARDS

- 2007 American Chemical Society Travel Grant Recipient, Cornell University Chapter
- 2003 Phi Beta Kappa, Augustana College, Zeta Chapter
- 2002 A.L. Eliason Scholarship in Chemistry, Augustana College
- 2002 American Chemical Society Division of Analytical Chemistry 2002 Undergraduate Award, Augustana College
- 2001 American Chemical Society Polymer Education Committee, Outstanding Performance in Organic Chemistry, Augustana College
- 1999 Honors Scholarship, Augustana College

## **PROFESSIONAL AFFILIATIONS, SERVICE, AND ACTIVITIES**

1. Reviewer *Chemistry: An Atoms Focused Approach*
2. Reviewer *Macromolecules*
3. Reviewer *Journal of Chemical Education*
4. American Chemical Society, Division of Inorganic Chemistry (2003–Present)
5. American Chemical Society, Illinois-Iowa Section (2008–Present)
6. Sigma Xi, John Deere Chapter (2008–Present)
7. Midwestern Association of Chemistry Teachers in Liberal Arts Colleges (2008–Present)
8. Council on Undergraduate Research (2008–Present)
9. American Chemical Society Student Affiliate Chapter President, Augustana College (2001–2003)
10. American Chemical Society, Student Affiliate Member (2000–2003)

## **SERVICE**

### *To the College*

1. Faculty Senate (Fall 2012–Present)
2. Educational Policies Committee (Fall 2011–Present)
3. Greek Faculty Liaison (Fall 2011–Spring 2012)
4. Institutional Review Board (Fall 2009–Spring 2012)
5. Nominations and Rules (Fall 2009–Present)
6. First Year Advisor (Fall 2009–Present)

### *To the Community*

1. Quad City Animal Welfare Center, Donor/Volunteer
2. Illinois Department of Natural Resources, Volunteer Hunter Safety Instructor