

Pamela J. Lombardi, Ph.D.

Assistant Professor of Chemistry
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EDUCATION

Dartmouth College, Hanover, NH, 1997—2001
A.B., *magna cum laude*, with High Honors in Chemistry

Columbia University, New York, NY, 2001—2006
Ph.D., Chemistry, September 2006
M.Phil., Chemistry, May 2005
M.A., Chemistry, May 2002

- *Ph.D. Dissertation*: Strained Silacycles in the Development of New Asymmetric Reactions

Boston College, Chestnut Hill, MA, 2006—2009
Postdoctoral Fellow

TEACHING EXPERIENCE

Full Time:

Assistant Professor of Chemistry—Stonehill College, Easton, MA
August 2009—Present

- General Chemistry I Lecture and Lab; General Chemistry II Lecture
- Organic Chemistry I and II Lecture and Laboratory

Part Time:

Summer Bridge Program Science Instructor—Stonehill College, Easton, MA
Summer 2010 and 2011

- *Taught the science component of a summer program for incoming freshmen*

Guest Lecturer—Boston College, Chestnut Hill, MA
February 2008

- Class Title: Organometallic Chemistry
- *Prepared and presented three lectures on olefin metathesis for first-year graduate students*

Teaching Assistant—Columbia University, New York, NY
September 2001- December 2002
Organic Chemistry I (Fall 2001 and Fall 2002)
Organic Chemistry II (Spring 2002)

- *Led three weekly discussion sections per semester; graded homeworks and exams; created and graded quizzes for discussion sections*

COURSES TAUGHT

Spring 2013	Organic Chemistry I Lecture (three sections)	
Fall 2012	General Chemistry I Lecture and Laboratory	(two sections)

Spring 2012	Chemistry and Biochemistry Seminar and Thesis <i>Maternity Leave</i>
Fall 2011	General Chemistry I Lecture and Laboratory (two sections)
Spring 2011	Organic Chemistry I Lecture (two sections) Organic Chemistry I Laboratory (two sections)
Fall 2010	General Chemistry I Lecture and Laboratory (two sections) Organic Chemistry II Lecture
Spring 2010	General Chemistry II Lecture Organic Chemistry I Lecture Organic Chemistry I Laboratory (two sections)
Fall 2009	General Chemistry I Lecture and Laboratory Organic Chemistry I Laboratory (two sections)

INTERNSHIPS, DIRECTED STUDIES, AND THESIS ADVISING

In-Semester

Spring 2013	S. Murray, Faculty Advisor for IDEAS "Chemistry of Cupcakes"
Fall 2012	J. Chalmers, Teaching Internship
Fall 2011	M. Eno, Thesis Advising

Summer

2013:	N. Khubchandani, <i>Enantioselective Cu-Catalyzed Allylic Oxidations Using Amino Acid Based Ligands</i>
2013:	R. Morrison, <i>Enantioselective Metal Catalyzed Allylic Oxidations Using N-Heterocyclic Carbenes</i>

OTHER CURRICULUM, COURSE and INSTRUCTIONAL INNOVATIONS

Spring 2013	Revised Organic I laboratory "Nucleophilic Substitution Reactions: SN ₁ vs SN ₂ Chemistry" to aid in a more inquiry-based experiment.
Spring 2013	Improved the experiment titled "Kinetics: Nucleophilic Substitution Reactions" for Organic Chemistry I laboratory to illustrate both SN ₁ and SN ₂ reactions on the same molecule.
Spring 2012	Created a curriculum map for the Chemistry Department
Fall 2012	Implemented Sapling Learning online homework into General Chemistry courses.
Fall 2010	Taught Organic Chemistry II for the first time. Implemented WileyPlus online homework into General Chemistry I courses.
Spring 2010	Taught General Chemistry II and Organic Chemistry I for the first time.
Fall 2009	Taught General Chemistry I for the first time. Developed new laboratory for the General Chemistry Food and Nutrition Theme titled "Extraction and Identification of Organic Molecules in Orange Peels Using GC/MS".

SCHOLARSHIP

Publications

1. "Synthesis and Chemistry of Highly Fluorinated Oxepane-2,7-diols" Lombardi, P. J.; Gan, Y.; Lemal, D. M. *Collect. Czech. Chem. Commun.* **2002**, 67, 1486-1492.
2. "Highly Diastereo- and Enantioselective Reagents for Aldehyde Crotylation" Hackman, B. M.; Lombardi, P. J.; Leighton, J. L. *Org. Lett.* **2004**, 6, 4375-4377.
3. "A Simple and General Chiral Silicon Lewis Acid for Asymmetric Synthesis: Highly Enantioselective [3 + 2] Acylhydrazone-Enol Ether Cycloadditions" Shirakawa, S.; Lombardi, P. J.; Leighton, J. L. *J. Am. Chem. Soc.* **2005**, 127, 9974-9975.
4. "An Efficient Total Synthesis of Manzacidin C" Tran, K. T.; Lombardi, P. J.; Leighton, J. L. *Org. Lett.* **2008**, 10, 3165-3167.
5. "H-Bonding as a Control Element in Stereoselective Ru-Catalyzed Olefin Metathesis", Hoveyda, A. H.; Lombardi, P. J.; O'Brien, R. V.; Zhugralin, A. R. *J. Am. Chem. Soc.* **2009**, 131, 8378-8379.
6. "Synthesis, Isolation, Characterization, and Reactivity of High-Energy Stereogenic-at-Ru Carbenes: Stereochemical Inversion through Olefin Metathesis and Other Pathways," Khan, R. K. M.; Zhugralin, A. R.; Torker, S.; O'Brien, R. V.; Lombardi, P. J.; Hoveyda, A. H. *J. Am. Chem. Soc.* **2012**, 134, 12438-12441.

Presentations

1. "Approaches Toward the Synthesis of Perfluorocyclooctyne", Lombardi, P. J.; Lemal, D. M. ; *Poster Presentation*, Beckman Scholar Symposium, July **2000**, University of California, Irvine, Irvine, CA.
2. "Strained Silacycles in Organic Synthesis: Asymmetric Allylation and Crotylation" Lombardi, P. J., Hackman, B. H., Ng, P. Y., Leighton, J. L. *Oral Presentation*, 226th ACS National Meeting, September 7-11, **2003**, New York, NY, ORGN-256
3. "Strained Silacycles in Organic Synthesis: Asymmetric Allylation and Crotylation" Lombardi, P. J., Leighton, J. L. *Poster Presentation*, Pfizer Diversity in Organic Chemistry Symposium, September 16-17, **2004**, Pfizer Global Research and Development, Groton, CT.
4. "Silicon as a Lewis Acid in Asymmetric Synthesis" Lombardi, P. J., Leighton, J. L. ; *Poster Presentation*, 39th National Organic Symposium, June 12-16, **2005**, University of Utah, Salt Lake City, UT.
5. "Silicon as a Lewis Acid: Enantioselective Reduction of Ketone-Derived Hydrazones" Lombardi, P. J.; Leighton, J. L. *Oral Presentation*, Pfizer Diversity in Organic Chemistry Symposium, September 29-30, **2005**, Pfizer Global Research and Development, Groton, CT.

GRANTS SUBMITTED

Students:

“Enantioselective Cu-Catalyzed Allylic Oxidations Using Amino Acid Based Ligands”,
Submitted by Nisha Khubchandani, December, 7, 2012 to Stonehill College SURE
program (funded)

“Enantioselective Metal Catalyzed Allylic Oxidations Using N-Heterocyclic Carbenes”,
Submitted by Ryan Morrison, December, 7, 2012 to Stonehill College SURE program.
(funded)

“Enantioselective Metal Catalyzed Allylic Aminations Using N-Heterocyclic Carbenes”,
Submitted by Matthew Doherty, December, 7, 2012 to Stonehill College SURE program.
(not funded)

ACTIVITIES**Memberships:**

- The American Chemical Society

Fellowships, Awards, Prizes and Honors

- Pfizer Diversity in Organic Chemistry Graduate Research Fellowship, 2004
- Jack Miller Award for Excellence in Teaching—Columbia University, 2003
- Chandler T. White Research Prize — Dartmouth College, 2001
- Tarbell Organic Chemistry Book Prize — Dartmouth College, 2001
- Presidential Scholar—Dartmouth College, 2000-2001
- Beckman Scholar Research Fellowship for Undergraduates, 1999-2000

Work in Progress

Development of enantioselective allylic oxidation reactions using novel N-heterocyclic carbene and peptide ligands

COLLEGE AND COMMUNITY**Committees:**

Provost's Advisory Committee on Diversity (2012—Present)
Learning Management System Task Force (2013—Present)
Academic Appeals Board (2013—Present)

Departmental Activities:

Wrote Departmental Self-Study (Spring of 2012)
Implemented Chemistry and Biochemistry Variety Show (2011—Present)

Special Activities:

Residence Life—Community Associate, (2010 – Present)
Science Open House Mock Class (Spring 2010)
Freshman Orientation Advising (2011—Present)