

Sheryl L. Wiskur

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EDUCATION

Doctor of Philosophy, Organic Chemistry, University of Texas at Austin, 2003
Adviser: Professor Eric V. Anslyn
Dissertation: "Boronic Acid and Guanidinium Based Synthetic Receptors: New Applications in Differential Sensing"

Bachelor of Science, Chemistry, Arizona State University, Tempe, AZ, 1997
Cum Laude
Undergraduate Research Adviser: Professor Devens Gust

University of Michigan at Flint, 1992-1994
Honors College

PROFESSIONAL EXPERIENCE

2016-Present	Associate Professor	University of South Carolina
2008-2016	Assistant Professor	University of South Carolina
2005-2008	Research Assistant Professor	University of South Carolina
2003-2005	Postdoctoral Associate Adviser: Professor Gregory C. Fu	Massachusetts Institute of Technology
1999-2003	Research Assistant Adviser: Professor Eric V. Anslyn	University of Texas at Austin
1998-2002	Teaching Assistant	University of Texas at Austin
1997	Research Assistant/Sponsored by NSF (Center for the Study of Early Events in Photosynthesis)	Arizona State University
1996	Internship in Chemistry Department	General Motors, Flint, Michigan

FUNDING

USC Office of Research Aspire Award - 2015
USC Office of Research Aspire Award – (Co-PI L Shimizu) 2015
SC EPSCoR SANS Award, 2015
SC EPSCoR Diversity Award, 2012
NSF Early Faculty Development CAREER Award (2011-2016)
ACS – Petroleum Research Fund – Type G
USC Research Foundation – Research and Productive Scholar
South Carolina Scientific – Synthesis and purification of analytical standards
USC Research Foundation, Magellan Scholar Award – Undergraduate Research (2)

HONORS AND AWARDS

NSF CAREER Award (2011-2016)
Division of Organic Chemistry Young Academic Award 2014
USC AI Faculty Partner of the Year 2014
Breakthrough Rising Star – University of South Carolina 2013
In Focus Alumni Magazine Highlight, Spring/Summer 2012

Organic, Reactions, & Processes - Gordon Conference Invited Speaker (2008)
Organic, Reactions, & Processes - Gordon Conference Discussion Leader (2007)
Centenary Assistant Professor (2005-2008)
Dorothy A. Banks Fellowship – UT Austin (2002)
Welch Academic Excellence Fellowship – UT Austin (2001)
Welch Excellence Teaching Award – UT Austin (1999)
NSF Undergraduate Fellowship in Photosynthesis – ASU (1997)
Honors College at The University of Michigan at Flint (1992-1994)
University of Michigan Academic/Honors Scholarship (1992-1994)

PROFESSIONAL ASSOCIATIONS

American Chemical Society, Division of Organic Chemistry
Association of Women in Chemistry (AWIS)
Alpha Chi Sigma, Chemical Fraternity

PRESENTATIONS

Academic Invited Seminars

Tulane University, New Orleans, LA, Dept. of Chemistry and Biochemistry, 2015
Rutgers, New Brunswick, NJ, Dept. of Chemistry and Biochemistry, 2015
University of Alabama – Tuscaloosa, AL, Dept. of Chemistry and Biochemistry, 2014
University of Texas – Austin, Dept. of Chemistry and Biochemistry, 2014
University of Richmond, Richmond, VA, Dept. of Chemistry and Biochemistry, 2014
Winthrop University, Rock Hill, SC, Dept. of Chemistry and Biochemistry, 2013
University of North Carolina – Wilmington, Wilmington, NC, Dept. of Chemistry & Biochemistry, 2013
University of North Carolina – Greensboro, Greensboro, NC, Dept. of Chemistry & Biochemistry, 2013
West Virginia University, Morgantown, WV, Dept. of Chemistry and Biochemistry, 2013
College of Charleston, Columbia, SC, Department of Chemistry and Biochemistry, 2012
Columbia College, Columbia, SC, Division of Biology and Physical Sciences, 2011
Davidson College, Davidson, NC, Department of Chemistry and Biochemistry, 2010
Louisiana State University, Baton Rouge, LA, Department of Chemistry, 2008
University of South Carolina, Columbia, SC, Department of Chemistry and Biochemistry, 2008
Rochester Institute of Technology – Rochester, NY, Department of Chemistry, 2007
University of Nevada – Las Vegas, NV, Department of Chemistry, 2007
George Washington University, Washington, D.C., Department of Chemistry, 2007
Miami University, Oxford, OH, Department of Chemistry and Biochemistry, 2007
Ohio University, Athens, OH, Department of Chemistry and Biochemistry, 2007
University of South Carolina, Columbia, SC, Department of Chemistry and Biochemistry, 2006,
Dartmouth, Hanover, NH, Department of Chemistry, 2006
New Mexico Tech., Socorro, NM, Department of Chemistry, 2006
University of Notre Dame, Notre Dame, IN, Department of Chemistry and Biochemistry, 2006
University of South Carolina, Columbia, SC, Department of Chemistry and Biochemistry, 2005

Conference Invited Seminars

46th Silicon Symposium, UC Davis, CA, 2015
Midwest Regional Meeting ACS, Columbia, MO, 2014
*American Chemical Society National Meeting, San Francisco, CA, 2014 Division of Organic Chemistry
Young Academic Award Symposium*

American Chemical Society, SERMACS, Atlanta, GA, 2013

CASE Conference, Austin, 2013. (Unable to attend due to the birth of my child.)

NSF Physical Organic Workshop, Austin, 2010

NIH Mentoring Workshop, Dallas, 2009

Gordon Research Conference – Organic, Reactions, & Processes – Bryant University, 2008

Industrial Invited Seminars

Bristol-Myers Squibb, New Brunswick, NJ, 2015

Mettler Toledo Information Sharing Event, Durham, NC, 2014

Biogen Idec, Boston, MA, 2005

Saoirse Corporation, Cambridge, MA, 2005

Exxon Mobil, New Jersey, 2004

Bridgestone Firestone, Akron, OH, 2004

Presentations (Submitted)

Gordon Research Conference – Stereochemistry – Salvi Regina University, 2014 (Poster)

American Chemical Society National Meeting, Philadelphia 2012; (Talk).

Gordon Research Conference – Stereochemistry – Salvi Regina University, 2012 (Poster)

American Chemical Society National Meeting, Boston, 2010 (Talk)

Gordon Research Conference – Stereochemistry – Salvi Regina University, 2010 (Poster)

ACS National Meeting, Salt Lake City, 2009 (Talk)

Gordon Research Conference – Organic, Reactions, & Processes – Bryant University, 2009 (Poster)

American Chemical Society, Boston, 2007 (Poster)

Gordon Research Conference – Organic, Reactions, and Processes – Bryant University, 2007 (Poster)

58th Southwest ACS Regional Meeting, Austin, 2002.

ACS National Meeting, Boston, 2002; (Poster).

ACS National Meeting, Boston, 2002; (Talk).

ACS National Meeting, Chicago, 2001; (Poster).

STUDENTS AND POSTDOCTORAL SCHOLARS

Undergraduate Students

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|-----|---------------------|-----|------------------|
| 1. | Barry Roberts | 14. | Timothy Deaton |
| 2. | Ryan Nangreave | 15. | Matthew Mango |
| 3. | John Hodgson | 16. | Suzanne Campbell |
| 4. | Christopher Roberts | 17. | Philip Scott |
| 5. | Latonya Jones | 18. | Preston Gainey |
| 6. | Jeremy Gleaton | 19. | Julia Pribyl |
| 7. | Vincent Slay | 20. | Mary Margavio |
| 8. | Jessica Taylor | 21. | Alejandro Ortega |
| 9. | Ashley Maharana | 22. | Naomi Plummer |
| 10. | Jamin Lester | 23. | Gilly Levy |
| 11. | Richard Craven | 24. | Julia Fountain |
| 12. | Nasse Williams | | |
| 13. | William Mackay | | |

Graduate Students Receiving Ph.D. Degrees

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|----|---------------------------|----|-------------------------|
| 1. | Dieu Nguyen, PhD 2010 | 4. | Yan Zhang, MS 2013 |
| 2. | Sachin G. Patel, PhD 2010 | 5. | Cody Sheppard, PhD 2013 |
| 3. | Maggie Klauck, PhD 2012 | 6. | Ravish Akhani, PhD 2014 |

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|----|------------------------|-----|-------------------------|
| 7. | Robert Clark, PhD 2015 | 9. | Brandon Redden, current |
| 8. | Li Wang, current | 10. | Tian Zhang, current |

Postdoctoral Scholars

1. Marc S. Maynor 2007-2008

Visiting Faculty

1. Julia Baker – Columbia College (Spring 2012 (sabbatical)/Summer 2013)

Student Awards

Graduate

- USC Joseph W. Bouknight Teaching Award – Li Wang (Spring 2016)
- USC Graduate School Travel Grants – Li Wang (Spring 2015)
- Oakwood Products Best Poster Award – Ravish Akhani (Spring 2014)
- ACS – Division of Organic Chemistry Travel Award – Robert Clark (Spring 2013)
- USC Graduate School Travel Grants – Ravish Akhani (Spring 2013)
- GlaxoSmithKline Internship – Cody Sheppard (2012-2013)
- ACS – Division of Organic Chemistry Travel Award – Ravish Akhani (Spring 2012)
- J.R. During Graduate Student Travel Award – Ravish Akhani (Spring 2012)
- ACS – Division of Organic Chemistry Travel Award – Cody Sheppard (Fall 2011)
- J.R. During Graduate Student Travel Award – Maggie Klauck (Fall 2011)
- J.R. During Graduate Student Travel Award – Sachin Patel (Spring 2009)

Undergraduate

- Who's Who Among Students in American Colleges and Universities – Julia Pribyl, 2014
- ACS Undergraduate Award in Organic Chemistry, Julia Pribyl, 2014
- ACS Undergraduate Award in Organic Chemistry, T. Max Deaton, 2013
- Magellan Scholar Julia Pribyl, 2012, \$2000
- Magellan Honors College Fellowship, Julia Pribyl, 2012,
- In Focus Alumni Magazine Highlight, Jessica L. Taylor Spring/Summer 2012
- Magellan Scholar Jessica L. Taylor, 2010, \$3000
- Magellan Scholar, John Hodgson, 2008, \$3000

OTHER PROFESSIONAL ACTIVITIES

Symposium/Conference Organizing

- 65th SERMACS ACS 2013 – 2-day symposium entitled “Approaches to Organic Synthesis Across Disciplines.” Co-Organizer: Daniel Whitehead (Asst. Prof. – Clemson Univ.)

REFEREEING

Journal Reviews

- | | |
|---------------------------------------|---|
| Angew. Chem. Int. Ed. | Molecules |
| ARKIVOC | Nature Chemistry |
| ChemCatChem | Nature Communications |
| Chemical Communications | Organic Chemistry International |
| Chemistry Letters | Organic Letters |
| European Journal of Organic Chemistry | Organic Preparations & Procedures International |
| Journal of Organic Chemistry | Supramolecular Chemistry |
| Journal of Organometallic Chemistry | Synthesis |
| Journal of the American Chemical Soc. | Tetrahedron |
| Letters of Organic Chemistry | Tetrahedron Asymmetry |
| Langmuir | |

Research Proposal Reviews

National Science Foundation
ACS – Petroleum Research Fund
Louisiana Board of Regents' Pilot Funding for New Research (Pfund) program
Northern Illinois University Grant Program
University of South Carolina

Book Reviews

Wiley
Oxford
Cengage

COMMITTEE SERVICE**University**

Women's Faculty Organization Steering Committee (University)
Safety Task Force (University)

Department

Admissions Committee
Industrial Advisory Board
Dry Still Committee
Organic Seminar
AWIS South Carolina Chapter President
Faculty Search Committee – Cancer Therapeutics
Graduate Student Career Workshop

CLASSES TAUGHT

1. CHEM 333 – Organic Chemistry I (Undergraduate)
2. CHEM 334 – Organic Chemistry II (Undergraduate)
3. CHEM 701 – Organic Seminar (Graduate)
4. CHEM 736 – Advanced Organic Synthesis (Graduate)

PUBLICATIONS (*from USC*)

- Clark, R. W.; Akhani, R. K.; Wiskur, S. L. "Polymers and Kinetic Resolutions: The Insolubility of It All" *ChemCatChem* **2016**, *8*, 879-885.
- Wang, L.; Akhani, R. K.; **Wiskur, S. L.** "Diastereoselective and Enantioselective Silylation of 2-Aryl Cyclohexanols" *Org. Lett.* **2015**, *17*, 2408-2411.
- Akhani, R. K.; Clark, R. W.; Yuan, L.; Wang, L.; Tang, C.; **Wiskur, S. L.** "Polystyrene-Supported Triphenylsilyl Chloride for the Silylation-Based Kinetic Resolution of Secondary Alcohols" *ChemCatChem* **2015**, *7*, 1527-1530.
- Akhani, R. K.; Moore, M. I.; Pribyl, J. G.; **Wiskur, S. L.** "Linear Free-Energy Relationship and Rate Study on a Silylation-Based Kinetic Resolution: Mechanistic Insights" *J. Org. Chem.* **2014**, *79*, 2384-2396.
- Clark, R. W.; Deaton, T. M.; Zhang, Y.; Moore, M. I.; **Wiskur, S. L.** "Silylation-Based Kinetic Resolution of α -Hydroxy Lactones and Lactams" *Org. Lett.*, **2013**, *15*, 6132-6135.
- Nguyen, D.; Akhani, R. K.; Sheppard, C. I.; **Wiskur, S. L.** "A Structure-Activity Relationship of Formamides as Organocatalysts: The Significance of Formamide Structure and Conformation." *Eur. J. Org. Chem.* **2013**, 2279-2283.
- Wiskur, S. L.**; Maynor, M. S.; Smith, M. D.; Sheppard, C. I.; Akhani, R. K.; Pellechia, P. J.; Vaughn, S. A.; Shieh, C. "Chiral pyridinyloxazolidine ligands and copper chloride complexes." *J. Coord. Chem.*, **2013**, *66*, 1166-1177
- Klauck, M; Patel, S. G.; **Wiskur, S. L.** "Obtaining Enriched Compounds via a Tandem Enantioselective Reaction and Kinetic Resolution Polishing Sequence." *J. Org. Chem.* **2012**, *77*, 3570-3575.
- Sheppard, C. I.; Taylor, J. L.; **Wiskur, S. L.** "Silylation-Based Kinetic Resolution of Monofunctional Secondary Alcohols." *Org. Lett.* **2011**, *13*, 3794-3797.
- Patel, S. G.; **Wiskur, S. L.** "Mechanistic Investigations of the Mukaiyama Aldol Reaction as a Two Part Enantioselective Reaction." *Tetrahedron Lett.*, **2009**, *50*, 1164-1166.

BOOK CHAPTERS (*from USC*)

- Clark, R. W.; **Wiskur, S. L.**, Silyl Hydrides. In *Science of Synthesis, Knowledge Updates 2015/1*; Oestreich, M., Ransden, C., Wirth, T., Eds; Georg Thieme Verlag KG: Stuttgart, 2015; pp 1-58
- Bicker, K; **Wiskur, S. L.**; Lavigne, J. J. Colorimetric Sensor Design, In *Chemosensors: Principles, Strategies, and Applications*; B. Wang, E. V. Anslyn, Eds.; Wiley Series in Drug Discovery and Development; Wiley: New York, 2011.

PUBLICATIONS (*PhD/Postdoc*)

- Wiskur, S. L.**; Fu, G. C. "Catalytic Asymmetric Synthesis of Esters from Ketenes." *J. Am. Chem. Soc.* **2005**, *127*, 6176-6177.
- Wiskur, S. L.**; Korte, A.; Fu, G. C. "Cross-Couplings of Alkyl Electrophiles Under "Ligandless" Conditions: Negishi Reactions of Organozirconium Reagents." *J. Am. Chem. Soc.* **2004**, *126*, 82-83.
- Wiskur, S. L.**; Lavigne, J. J.; Metzger, A.; Tobey, S.; Lynch, V.; Anslyn, E. V. "Thermodynamic Analysis of Receptors Based on Guanidinium/Boronic Acid Groups for the Complexation of Carboxylates, α -Hydroxycarboxylates, and Diols: Driving Force for Binding and Cooperativity." *Chem. Eur. J.* **2004**, *10*, 3792-3804.

- Manimala, J. C.; **Wiskur, S. L.**; Ellington, A. D.; Anslyn, E. V. "Tuning the Specificity of a Synthetic Receptor Using a Selected Nucleic Acid Receptor." *J. Am. Chem. Soc.* **2004**, *126*, 16515-16519.
- Nguyen, B. T.; **Wiskur, S. L.**; Anslyn, E. V. "Using Indicator-Displacement Assays in Test Strips and to Follow Reaction Kinetics." *Org. Lett.* **2004**, *6*, 2499-2501.
- Piatek, A. M.; Bomble, Y. J.; **Wiskur, S. L.**; Anslyn, E. V. "Threshold Detection Using Indicator-Displacement Assays: An Application in the Analysis of Malate in Pinot Noir Grapes." *J. Am. Chem. Soc.* **2004**, *126*, 6072-6077.
- McCleskey, S. C.; Floriano, P. N.; **Wiskur, S. L.**; Anslyn, E. V.; McDevitt, J. T. "Citrate and Calcium Determination in Flavored Vodkas Using Artificial Neural Networks." *Tetrahedron* **2003**, *59*, 10089-10092.
- Wiskur, S. L.**; Floriano, P. N.; Anslyn, E. V.; McDevitt, J. T. "A Multicomponent Sensing Ensemble in Solution: Differentiation between Structurally Similar Analytes." *Angew. Chem., Int. Ed.* **2003**, *42*, 2070-2072.
- Ait-Haddou, H.; Sumaoka, J.; **Wiskur, S. L.**; Folmer-Andersen, J. F.; Anslyn, E. V. "Remarkable Cooperativity Between a "Zn^{II} Ion and Guanidinium/Ammonium Groups in the Hydrolysis of RNA." *Angew. Chem., Int. Ed.* **2002**, *41*, 4014-4016.
- Wiskur, S. L.**; Ait-Haddou, H.; Lavigne, J. J.; Anslyn, E. V. "Teaching Old Indicators New Tricks." *Acc.Chem. Res.* **2001**, *34*, 963-972.
- Wiskur, S. L.**; Anslyn, E. V. "Using a Synthetic Receptor to Create an Optical-Sensing Ensemble for a Class of Analytes: A Colorimetric Assay for the Aging of Scotch." *J. Am. Chem. Soc.* **2001**, *123*, 10109-10110.
- Wiskur, S. L.**; Lavigne, J. J.; Ait-Haddou, H.; Lynch, V.; Chiu, Y. H.; Canary, J. W.; Anslyn, E. V. "pK_a Values and Geometries of Secondary and Tertiary Amines Complexed to Boronic Acids-Implications for Sensor Design." *Org. Lett.* **2001**, *3*, 1311-1314.
- Ait-Haddou, H.; **Wiskur, S. L.**; Lynch, V. M.; Anslyn, E. V. "Achieving Large Color Changes in Response to the Presence of Amino Acids: A Molecular Sensing Ensemble with Selectivity for Aspartate." *J. Am. Chem. Soc.* **2001**, *123*, 11296-11297.

BOOK CHAPTER (PhD)

- Wiskur, S. L.**; Metzger, A.; Lavigne, J. J.; Schneider, S. E.; Anslyn, E. V.; McDevitt, J. T.; Neikirk, D.; Shear, J. B. "Mimicking the Mammalian Sense of Taste Through Single and Multi-Component Analyte Sensors." in *Chemistry of Taste*; Given, P., Paredes, D., Eds.; ACS Symposium Series 825; American Chemical Society: Washington, D. C., 2002; pp.276-288.