

SHARON M. SMITH STRICKLAND
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EDUCATION

Ph.D., 1988, University of South Carolina, Department of Chemistry and Biochemistry, Columbia, SC

Dissertation: Two Approaches Toward the Synthesis of Nagilactone F

Research Director: Professor Stephen D. Burke

M.S., 1981, University of South Carolina, Department of Chemistry and Biochemistry, Columbia, SC

Thesis: Investigation of the Intramolecular Diels-Alder Reaction of Substituted 1-(2'-propenoxy)-3-(trans-trimethylsilylvinyl)-cyclohex-2-enes

Thesis Director: Professor Stephen D. Burke

B.A., 1978, Francis Marion University, Department of Chemistry, Florence, SC

TEACHING:

Associate Professor of Chemistry

Converse College, Spartanburg, SC

2006 to Present

- Courses Taught:
 - Chemistry Courses: Organic Chemistry I, Organic Chemistry II, Biochemistry I, Biochemistry II, Quantitative Analysis, Environmental Chemistry, General Chemistry I, General Chemistry II, Concepts of Chemistry (for non-science majors), The Chemistry of Environmental Issues (First Year Seminar), Advanced Organic Chemistry, Advanced Forensic Chemistry, Spectroscopic Identification of Organic Structures, and all laboratory sections for these courses
 - Interdisciplinary Courses: Ideas and Culture, CheMystery, Lab Science Management
 - Honors Courses: CheMystery, Cosmetic Chemistry (DIS), Medicinal Chemistry (DIS)
 - Graduate Courses: Teaching Forensics Using Guided Inquiry, Lab Science Management
- The use of the Socratic method, in-class practice problems, and real-world examples enables students to be active participants in small lecture settings (2-35 students per class).
- Successfully integrating research into teaching

Visiting Assistant Professor of Chemistry

Furman University, Greenville, SC

2005 to 2006

- Courses taught: Organic Chemistry and Biochemistry
- The use of the Socratic method and in-class practice problems enables students to be active participants in small lecture settings (11-30 students per class).

Visiting Assistant Professor of Chemistry

University of Toledo, Toledo, Ohio

2002 to 2005

- Courses taught: General Chemistry I, General Chemistry II, Organic Chemistry I, Organic Chemistry II, and all recitation sections for these courses
- Use of plastic cards, animations, demonstrations, and practice problems yield active learning experiences for my general chemistry students (150-240 students per class)

- Use of the Socratic method and short in-class assignments has increased accountability for my organic chemistry students (10-80 students per class)

Instructor of Chemistry

Ben Lippen High School, Columbia, SC

1996 to 2002

- Courses taught: Honors Chemistry and Advanced Placement Chemistry, including all labs for these courses
- The use of the guided inquiry method of instruction in Advanced Placement Chemistry led to AP Exam scores of 5 (5 students) and 4 (2 students) for my class of 7 students (Scale = 1-5, with 5 being the highest score)

Adjunct Assistant Professor of Chemistry

University of South Carolina, Columbia, SC

Summer 1988, 1992 to 1997

- Courses taught: General Chemistry I, General Chemistry II, Organic Chemistry I, and Organic Chemistry II
- 60-150 students per class

Visiting Assistant Professor of Chemistry

Francis Marion University, Florence, SC

1987 to 1991

- Courses taught: General Chemistry I, General Chemistry II, Physical Science, General Chemistry I Lab, General Chemistry II Lab, Organic Chemistry I Lab, Organic Chemistry II Lab, and Physical Chemistry Lab
- 30-40 students per lecture section
- Revised the General Chemistry Laboratory Manual

Graduate Teaching Assistant

University of South Carolina, Columbia, SC

1978 to 1979

- Courses taught: General Chemistry I Lab and Recitation, General Chemistry II Lab and Recitation, Organic Chemistry I Lab, and Organic Chemistry II Lab

PROFESSIONAL DEVELOPMENT AND CONTINUING EDUCATION:

- Active Learning in Organic Chemistry Virtual Workshop (June 1-17, 2021). Funded by the National Science Foundation, this **national workshop** is an outcome of a curriculum development initiative associated with the Organic Education Resources, a cCWCS community of scholars (<https://www.organicers.org/>). This three-week virtual workshop enables instructors to develop and incorporate active learning exercises into their Organic Chemistry courses. I was accepted to be one of 30 fellows in this national workshop, where I developed an active-learning strategy for my Organic Chemistry I and Organic Chemistry II courses that I will implement during the next academic year. Acceptance into the workshop also carries a commitment to be a regular participant in an active learning group with other workshop fellows for the next 12 months.
- Active Learning Workshop for Analytical Chemistry Instructors, **national follow-up workshop** (Indiana University, June 15-19, 2020). Funded by the National Science Foundation, this workshop is an outcome of a curriculum development initiative associated with the Analytical Sciences Digital Library (<http://www.aslib.org>) and would have enabled instructors to develop new

active learning exercises to complement the ones already developed. This workshop was cancelled on March 30, 2020 because of the global COVID-19 pandemic.

- Active Learning Workshop for Analytical Chemistry Instructors, **regional follow-up workshop** (College of Charleston, December 6-7, 2018). Funded by the National Science Foundation, this workshop is an outcome of a curriculum development initiative associated with the Analytical Sciences Digital Library (<http://www.aslib.org>) and enables instructors to develop and incorporate active learning exercises into a variety of Analytical Chemistry courses. Each participant conducted one of the group activities that he/she had designed.
- Participation in the Nuts and Bolts workshop at the 25th Biennial Conference on Chemical Education (BCCE 2018) at the University of Notre Dame (August 2018).
- Active Learning Workshop for Analytical Chemistry Instructors workshop (Indiana University, July 17-21, 2017). Funded by the National Science Foundation, this **national workshop** is an outcome of a curriculum development initiative associated with the Analytical Sciences Digital Library (<http://www.aslib.org>) and enables instructors to develop and incorporate active learning exercises into a variety of Analytical Chemistry courses. I was accepted to be one of 20 fellows in this national workshop, where I developed a 6-week laboratory sequence for the Quantitative Analysis lab (CHM 251L) that I continue to use and develop. I also developed several group activities that I continue to use in CHM 251 (Quantitative Analysis) and in CHM 204 (Organic Chemistry II).
- cCWCS/POGIL-IC Writing mini-workshop (Coastal Carolina University, June 6-8, 2014). This workshop is part of the Chemistry Collaborations, Workshops and Community of Scholars (cCWCS) program, sponsored by the National Science Foundation. I was accepted to be one of 18 fellows in this **national workshop**, entitled “**Writing POGIL-in-Context Activities for use in General Chemistry.**” I wrote a POGIL-IC activity for General Chemistry entitled “Birds of a Feather Flock Together”.
- Participation in the following workshops at the 23rd Biennial Conference on Chemical Education (BCCE 2014) at Grand Valley State University (August 2014):
 - “Get Engaged: Developing and Assessing Effective Activities to Teach Challenging Concepts Get Engaged: Developing and Assessing Effective Activities to Teach Challenging Concepts” (August 3, 2:00-5:00 PM). My group developed an activity using Legos to model buffer solutions.
 - “A Sophomore Organic Lab Research Experience: Distributed Drug Discovery (D3) for Neglected Diseases” (August 4, 9:30 AM-5:00 PM).
 - “Inquiry-Based Activities Exploring Light and Atomic Structure” (August 5, 2:00-5:00 PM).
- Participation in the following workshops at the 22nd Biennial Conference on Chemical Education (BCCE 2012) at Pennsylvania State University (August 2012):
 - “Writing or Reviewing for the Journal of Chemical Education” (July 29, 2:00-5:00 PM, led by Norbert J. Pienta, Editor-in-Chief for the Journal of Chemical Education).
 - “Publishing Chemical Education Research in the Journal of Chemical Education” (July 30, 9:30AM-12:30 PM, also led by Norbert J. Pienta).
 - “NMR Teaching Techniques Across the Undergraduate Curriculum” (July 30, 2:00-5:00 PM).

- Further development of extraction procedures (October 17-18, 2011; August 20-21, October 15-16, December 6-7, 2012), Hollings Marine Institute, James Island, SC.
- Metabolomics Extraction Procedures, May 31-June 2, 2011, Hollings Marine Institute, Charleston, SC
- Use of Vernier Probes in Laboratory Experiments, March 2011, Vernier Software and Technology, Columbia, SC.
- Chemistry in Context Workshop, December 2-4, 2010, Washington, DC. I applied and was invited to participate in the American Chemical Society workshop “Teaching Chemistry in the Context of Sustainability” in Washington, D.C. There were only 35 spots in this **national workshop**, which was led by current and former authors of the textbook Chemistry in Context, which we use for CHM 150, Concepts of Chemistry.)
- Faculty Workshop on Critical Thinking, September 16-17, 2010, Presbyterian College, Clinton, SC.
- Participation in the following workshops at the 21st Biennial Conference on Chemical Education (BCCE 2010) at North Texas State University (August 2010):
 - Qualitative Educational Research: Design and Implementation Workshop (Parts 1 and 2), August 2010, Biennial Conference on Chemical Education, Denton, TX.
 - Forensics Lab Workshop entitled “Who Killed Mona Lott?” August 2010, Biennial Conference on Chemical Education, Denton, TX.
- Chemical Information Retrieval course, Fall Semester 2010, Wofford College.
- NMR (Nuclear Magnetic Resonance Spectroscopy) Camp, May 24-28, 2010, Hollings Marine Institute, James Island, SC.
- Summer Research Fellow, June-August, 2007, collaborating with Dr. Linda Shimizu from the Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC.
- The Art of Grantsmanship, March 8-10, 2007, Council on Undergraduate Research Conference, Washington, DC.
- Organic synthesis project in support of the polymer research of Dr. Ken Shimizu, January-February 2002, Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC.
- Organic synthesis project in support of the polymer research of Dr. Ken Shimizu, June-July 2001, Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC.
- Design and construction of a database to organize and store information concerning water samples collected by the environmental research group of Dr. Tim Shaw, August-November, 1999, Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC.

- Mass Spectrometry Technical Staff Assistant, 1980-1981, Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC.
- Graduate Research involving the total synthesis of natural products via the development of new technology, focused on efforts toward the total synthesis of Nagilactone F. These efforts included the synthesis of silicon-substituted dienes and their corresponding allylic ethers and the systematic study of the scope of the intramolecular Diels-Alder reaction involving these allylic ethers. A second approach involved the study of asymmetric Claisen rearrangements and the analysis of the diastereomeric products. Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC.

SCHOLARSHIP:

PRESENTATIONS

ORAL PRESENTATIONS: (Student names are underlined, and **presenter names** are in bold.)

Dziewior, Courtney; Strickland, Sheri. “Synthetic Efforts Toward the Development of Stimuli-Responsive Programmable Polymers” 260th National Meeting of the American Chemical Society, Virtual (August 17-20, 2020). (**Oral presentation at the national level**)

Strickland, Sheri. “Science Meets Soft Skills: Active Learning in the Quantitative Analysis Lab” 26th Biennial Conference on Chemical Education. (Abstract accepted March 31, 2020. Because of the global COVID-19 pandemic, the 26th Biennial Conference on Chemical Education was terminated on April 2, 2020, by the Executive Committee of the Division of Chemical Education, American Chemical Society; and, therefore, this **oral presentation at the national level** could not be given as intended.)

Strickland, Sheri. “Who Cares About Intermolecular Forces?” Columbia College, Columbia, S.C. (April 2019).

Strickland, Sheri; **Brock, Melissa**. “Active Learning in Organic Chemistry: Development of a Spartan Molecular Modeling Activity on Carboxylic Acid Derivatives” 25th Biennial Conference on Chemical Education; University of Notre Dame, Notre Dame, Indiana (August 2018). (**Oral presentation at the national level**)

Strickland, Sheri; Brown, Laura. “Chemystery: A Chemistry/English Interdisciplinary Course” 25th Biennial Conference on Chemical Education; University of Notre Dame, Notre Dame, Indiana (August 2018). (**Oral presentation at the national level**)

Strickland, Sheri. “Using Think Alouds to Understand from the Students’ Perspective: What did They Really Learn from our Reaction Mechanism Animations?” 23rd Biennial Conference on Chemical Education; Grand Valley State University, Allendale, Michigan (August 2014). (**Oral presentation at the national level**)

Strickland, Sheri. “CSI: Converse: a Forensics Summer Workshop at Converse College” 22nd Biennial Conference on Chemical Education, Pennsylvania State University, State College, Pennsylvania (August 2012). (**Oral presentation at the national level**)

Kaur, Kiranpreet; Prince, Maurie; Strickland, Sheri; Steele, Edna. “The Effects of Lead on the Metabolites of *Eisenia fetida*” South Carolina Independent Colleges and Universities Student/Faculty Undergraduate Research Program Symposium, Greer, S.C. (February 2011).

Kaur, Kiranpreet; Prince, Maurie; Strickland, Sheri; Steele, Edna. “The Effects of Lead on the Metabolites of *Eisenia fetida*” 7th Annual USC Upstate Research Symposium, USC Upstate, Spartanburg, S.C. (March 2011).

Strickland, Sheri; Brown, Peter; **King, Madonna; Childs, Antigone**. “Snapshots Don’t Tell the Whole Story of Reaction Mechanisms” 21st Biennial Conference on Chemical Education, University of North Texas, Denton, Texas (August 2010). (**Oral presentation at the national level**)

Strickland, Sheri. “Critical Evaluation of New Ideas in Sustainability: We Can, But Should We?” **American Chemical Society National Meeting**, San Francisco, California (March 2010).

Brown, Peter; Strickland, Sheri; King, Madonna. “Explaining Organic Chemistry with Computer Graphics” 6th Annual USC Upstate Research Symposium, USC Upstate, Spartanburg, S.C. (March 2010).

King, Madonna; Childs, Antigone; Strickland, Sheri; Brown, Peter. “Improving Student Comprehension through Visual Representation and Comparing Various Techniques” South Carolina Independent Colleges and Universities Student/Faculty Undergraduate Research Program Symposium, Greer, S.C. (February 2010).

Begley, Mallory and Strickland, Sheri. “The Effects of Pesticides Used on Local Produce” South Carolina Independent Colleges and Universities Student/Faculty Undergraduate Research Program Symposium, Greer, S.C. (February 2009).

Strickland, Sheri; Brown, Peter; King, Madonna. Abbreviated version of “Explaining Organic Chemistry with Computer Graphics” Wild Wednesday, Converse College, Spartanburg, S.C. (May 2009).

Strickland, Sheri; Brown, Peter; King, Madonna. “Explaining Organic Chemistry with Computer Graphics” Board of Visitors Presentation, Converse College, Spartanburg, S.C. (April 2009).

Strickland, Sheri; Erturk, Neval. “CSI: Converse! Cultivating Scientific Interest with a Unique Interdisciplinary Workshop” SERMACS 2008 (Southeastern Regional Meeting of the American Chemical Society), Nashville, TN (November 2008).

Strickland, Sheri; Erturk, Neval. “CSI: Converse! Cultivating Scientific Interest with a Unique Interdisciplinary Workshop” Science Forum; Converse College, Spartanburg, S.C. (November 2008).

Strickland, Sheri. “The Impact of One Demonstration” USC Upstate University Chemistry Club, USC Upstate University, Spartanburg, S.C. (October 2008).

POSTER PRESENTATIONS: (Student names are underlined, and presenter names are in **bold**.)

Dziewior, Courtney; Strickland, Sharon; Li, Ping; Shimizu, Ken D. “Synthesis of Stimuli-Responsive, Programmable Polymers Through Ring-Opening Metathesis-Cross Metathesis” April meeting of the Western Carolinas Section of the American Chemical Society, Virtual (April 2021).

Dziewior, Courtney; Strickland, Sharon; Li, Ping; Shimizu, Ken D. “Synthesis of Stimuli-Responsive, Programmable Polymers Through Ring-Opening Metathesis-Cross Metathesis” 12th Annual INBRE Science Symposium, Virtual (January 2021).

Leone, Kimberly; Strickland, Sheri; Mansewitsch, Alex; Shimizu, Ken D. “Synthesizing the Arm Component of a Molecular Torsional Balance for Measuring London Dispersion Forces” 12th Annual INBRE Science Symposium, Virtual (January 2021).

Strickland, S.M.S.; Vik, E.C.; Li, P.; and Shimizu, K.D. “Quantitative Study of Van der Waals Interactions in Organic Solvents using N-Arylimide Molecular Balance” SERMACS 2019 (Southeastern Regional Meeting of the American Chemical Society), Savannah, GA. (October 2019).

Dziewior, Courtney; Strickland, Sharon M., “Synthesis of Stimuli-Responsive Programmable Polymers: Will Ethyl Acrylate, Maleic Acid, or Heat Work?” 2019 Meeting of the South Carolina EPSCoR/IdEA, Greenville, SC (April 2019).

Leone, Kimberly; Strickland, Sharon M. “Synthetic Efforts Toward Stimuli-Responsive Programmable Polymers: Methodology Study of the ROM-CM Reaction of Strained Alkenes” 2019 Meeting of the South Carolina EPSCoR/IdEA, Greenville, SC (April 2019).

Dziewior, Courtney; Strickland, Sharon M., “Synthesis of Stimuli-Responsive Programmable Polymers: Will Ethyl Acrylate, Maleic Acid, or Heat Work?” SCAS 2019 (South Carolina Academy of Science), Francis Marion University, Florence, SC (March 2019). **PLEASE NOTE that Courtney was awarded first place in the Chemistry Poster Presentations.**

Dziewior, Courtney; **Leone, Kimberly**; Strickland, Sharon M.; Li, Ping; Shimizu, Ken D. “Synthetic Efforts Toward the Synthesis of Stimuli-Responsive Programmable Polymers: Methodology Study of the ROM-CM Reaction of Norbornene and Related Strained Alkenes” SERMACS 2018 (Southeastern Regional Meeting of the American Chemical Society), Augusta, GA. (August 2018).

Dziewior, Courtney; **Leone, Kimberly**; Strickland, Sharon M.; Li, Ping; Shimizu, Ken D. “Synthetic Efforts Toward the Synthesis of Stimuli-Responsive Programmable Polymers: Methodology Study of the ROM-CM Reaction of Norbornene and Related Strained Alkenes” INBRE Research Conference, Columbia, S.C. (August 2018).

Morgan, J.D.; Strickland, S.M.S.; Li, P.; and Shimizu, K.D. “Quantitative Assessment of Carbonyl Lone Pair—Pi Interactions Using a Small Molecule Model” SCAS 2018 (South Carolina Academy of Science), Presbyterian College (April 2018). **PLEASE NOTE that Jessica was awarded first place in the Chemistry Poster Presentations.**

Strickland, S.M.S.; **Morgan, J.D.**; Li, P.; and Shimizu, K.D. “Quantitative Assessment of Carbonyl Lone Pair—Pi Interactions Using a Small Molecule Model” 2018 Meeting of the South Carolina EPSCoR/IdEA, Columbia, SC (April 2018).

Strickland, Sheri; Li, Ping; Shimizu, Ken D. “Using ^{19}F NMR Spectroscopy to Assess the Strength of Aromatic Pi-Pi Interactions in Molecular Balances” 253rd National Meeting of the American Chemical Society, San Francisco, CA (April 2017). (**Poster presentation at the national level**)

Morgan, Jessica; Strickland, Sheri. “Evaluation of the Pi-Stacking Interaction between Pyrene and 1,8 Naphthalic Imides”, SERMACS 2016 (Southeastern Regional Meeting of the American Chemical Society, Columbia, SC (October 2016).

Li, Ping; Maier, Josef M.; Hwang, Jungwun; Smith, Mark D.; Strickland, Sheri; Shimizu, Ken D. “Color Switching of Organic Charge-Transfer Complex of Pyrene and Naphthalenediimide” 249th National meeting of the American Chemical Society, Denver, Colorado (March 2015). (**Poster presentation at the national level**)

Bobo, Victoria; Strickland, Sheri. “Colorimetric Molecular Sensors for Monitoring Stress and Strain in Synthetic Blood Vessels (current progress)” Western Carolinas ACS Student Awards Banquet, Furman University (April 2015).

Bobo, Victoria; Strickland, Sheri. “Colorimetric Molecular Sensors for Monitoring Stress and Strain in Synthetic Blood Vessels (current progress)” SERMACS 2014 (Southeastern Regional Meeting of the American Chemical Society), Nashville, TN (October 2014).

Bobo, Victoria; Strickland, Sheri. “Colorimetric Molecular Sensors for Monitoring Stress and Strain in Synthetic Blood Vessels (current progress)” Western Carolinas ACS Student Awards Banquet, Furman University (April 2014).

Karambizi, Natacha; Strickland, Sheri. “Measurement of Weak Pi-Pi Interactions using a Molecular Balance” Western Carolinas ACS Student Awards Banquet, Furman University (April 2014).

Strickland, Sheri; **Erturk, Neval.** “Teaching Science Through Forensic Case Studies” 2010 International Conference on Education and New Learning Technologies, Barcelona, Spain (July 2010). (**Poster presentation at the international level**)

SEMINARS AND WORKSHOPS (*Led by Dr. Sheri Strickland*)

- Strickland Sheri. “Murder at the Shoe Factory” South Carolina Junior Academy of Science Fall Symposium, Converse College, Spartanburg, SC (November 2019).
- Strickland, Sheri; Mattison, Libba. “Forensic Fiber Analysis” South Carolina Junior Academy of Science Fall Symposium, Furman University, Greenville, SC (November 2012).
- Strickland, Sheri; Mattison, Libba. “Who Killed Anita Break?” South Carolina Junior Academy of Science Fall Symposium, Furman University, Greenville, SC (November 2012).
- Strickland, Sheri. “History, Visualization and Analysis of Fingerprints” CSI: Converse 2011, Converse College, Spartanburg, SC (July 2011).
- Strickland, Sheri. “The Case of the Bungled Burglary” CSI: Converse 2011, Converse College, Spartanburg, SC (July 2011).
- Strickland, Sheri. “Who Killed Anita Break?” CSI: Converse 2011, Converse College, Spartanburg, SC (July 2011).

- Strickland, Sheri. "History, Fingerprinting and an Introduction to Physical Evidence" CSI: Converse 2010, Converse College, Spartanburg, SC (June 2010).
- Strickland, Sheri. "The Case of the Missing iPod" CSI: Converse 2011, Converse College, Spartanburg, SC (June 2010).
- Strickland, Sheri. "The Use of FT-IR (Fourier Transform Infrared Spectroscopy) to Identify An Unknown White Powder" CSI: Converse 2011, Converse College, Spartanburg, SC (June 2010).
- Strickland, Sheri. "The Case of the Bungled Burglary" CSI: Converse 2011, Converse College, Spartanburg, SC (June 2010).
- Strickland, Sheri; McCoy, Monica. "Forensic Investigation: Physical Evidence and Interviewing" Creative Minds Conference and Scholarship Day, Converse College, Spartanburg, SC (February 2010).
- Strickland, Sheri; McCoy, Monica. "Forensic Investigation: Physical Evidence and Interviewing" Creative Minds Conference and Scholarship Day, Converse College, Spartanburg, SC (February 2009).
- Strickland, Sheri; McCoy, Monica. "Forensic Investigation: Physical Evidence and Interviewing" Creative Minds Conference and Scholarship Day, Converse College, Spartanburg, SC (November 2008).
- Strickland, Sheri. "Fingerprinting and an Introduction to Physical Evidence" CSI: Converse 2009, Converse College, Spartanburg, SC (June 2009).
- Strickland, Sheri. "The Case of the Missing iPod" CSI: Converse 2009, Converse College, Spartanburg, SC (June 2009).
- Strickland, Sheri. June 2009, Spectroscopy: FT-IR and UV-Vis, CSI: Converse 2009, Converse College, Spartanburg, SC
- Strickland, Sheri, "The Case of the Bungled Burglary" CSI: Converse 2009, Converse College, Spartanburg, SC (June 2009).
- Strickland, Sheri; Woodfin, Edward. "Science at the Crossroads of History" Creative Minds Conference and Scholarship Day, Converse College, Spartanburg, SC (March 2008).
- Strickland, Sheri. "Did These Pieces of Evidence Come from the Scene of the Crime?" South Carolina Junior Academy of Science Workshop, USC Upstate University, Spartanburg, SC (February 2008).
- Strickland, Sheri. "Fingerprinting and an Introduction to Physical Evidence" CSI: Converse 2008, Converse College, Spartanburg, SC (June 2008).
- Strickland, Sheri. "The Case of the Missing iPod" CSI: Converse 2008, Converse College, Spartanburg, SC (June 2008).
- Strickland, Sheri. "Who Kidnapped Jason Worthy" CSI: Converse 2008, Converse College, Spartanburg, SC (June 2008).
- Strickland, Sheri. "The Smallpox Case" CSI: Converse 2008, Converse College, Spartanburg, SC (June 2008).
- Strickland, Sheri. "History, Visualization and Analysis of Fingerprints" CSI: Converse 2007, Converse College, Spartanburg, SC (June 2007).
- Strickland, Sheri. "The Case of the Missing iPod" CSI: Converse 2007, Converse College, Spartanburg, SC (June 2007).
- Strickland, Sheri. "The Drug Bust Case" CSI: Converse 2007, Converse College, Spartanburg, SC (June 2007).
- Strickland, Sheri. "The Environmental Pollution Case" CSI: Converse 2007, Converse College, Spartanburg, SC (June 2007).

- Strickland, Sheri; Erturk, Neval. “CSI: Converse!” Middle School Workshop, Barnet Room, Converse College, Spartanburg, SC (March 2007).
- Strickland, Sheri; Erturk, Neval. “CSI: Converse!” Middle School Workshop, Spartanburg County Public Library, Spartanburg, SC (February 2007).
- Strickland, Sheri. “What Fruits and Vegetables Can Tell Us about Acids and Bases” Middle and Elementary School Academy of Science Workshop, Lander University, Greenwood, SC (October 2006).

PUBLICATIONS

Strickland, Sharon M.S.; Manzewitsch, Alex; Li, Ping; Vik, Erik C.; Shimizu, Ken D. “Investigation of CH-Pi Interactions and their Correlation with Solvent-Accessible Surface Area” (In progress)

Dziewior, Courtney; Strickland, Sharon; Li, Ping; Shimizu, Ken D. *Synthesis of Stimuli Responsive, Programmable Polymers Through Ring-Opening Metathesis-Cross Metathesis*, Senior Honors Thesis, Nisbet Honors Program, Converse College (May 2021).

Leone, Kimberly; Strickland, Sheri; Mansewitsch, Alex; Shimizu, Ken D. *Synthesizing the Arm Component of a Molecular Torsional Balance for Measuring London Dispersion Forces*, Senior Honors Thesis, Nisbet Honors Program, Converse College (May 2021).

Strickland, Sheri; Magnin, David; Baker, Julia. *Foundations of Organic Chemistry: A Workbook Approach, Volumes I and II*. Linus Publications, Inc., **2019**.

Strickland, Sheri “Excel Tutorial”, included on the Active Learning site of the Analytical Sciences Digital Library, **2019**. (Please see [https://community.asdlib.org/activelearningmaterials/activities/.](https://community.asdlib.org/activelearningmaterials/activities/))

Strickland, Sheri “Case Study: Arsenic Analysis”, included on the Active Learning site of the Analytical Sciences Digital Library, **2019**. (Please see [https://community.asdlib.org/activelearningmaterials/activities/.](https://community.asdlib.org/activelearningmaterials/activities/))

Dziewior, Courtney S.; Strickland, Sharon M. S.; Li, Ping; Shimizu, Ken D. “Synthesis of Stimuli-Responsive Programmable Polymers Through Ring-Opening--Metathesis Cross--Metathesis (ROM-CM)”. *Journal of the South Carolina Academy of Science* **2019**, 17(2).

Li, Ping; Vik, Erik C.; Maier, Josef M.; Karki, Ishwor; Strickland, Sharon M.S.; Umana, Jessica M.; Smith, Mark D.; Pellechia, Perry J.; Shimizu, Ken D. “Electrostatically Driven CO-Pi Aromatic Interactions”. *Journal of the American Chemical Society* **2019**, 141, 12513-12517, **DOI: 10.1021/jacs.9b06363 (a national peer-reviewed publication and the flagship journal of the American Chemical Society)**.

Maier, Josef M.; Li, Ping; Yehl, Christopher J.; Strickland, Sharon M.S.; Shimizu, Ken D. “Measurement of Solvent OH—Pi Interactions Using a Molecular Balance”. *Journal of the American Chemical Society* **2017**, 139, 6550-6553, **DOI: 10.1021/jacs.7b02349 (a national peer-reviewed publication and the flagship journal of the American Chemical Society)**.

Li, Ping; Maier, Josef M.; Hwang, Jungwun; Smith, Mark D.; Strickland, Sheri; Shimizu, Ken D. "Solvent-Induced Reversible Solid-State Colour Change of an Intramolecular Charge-Transfer Complex". *Chemical Communications* **2015**, *51*, 14809-14812. DOI: 10.1039/c5cc06140g (a national peer-reviewed publication).

Schrock, Tracey B.; Bearden, Daniel W.; **Strickland, Sheri**; and Steele, Edna J. Effects of Heat on the Stability and Composition of Metabolomic Extracts of the Earthworm *Eisenia fetida*. *Metabolomics* **2015**, *12*(3) 1-7; DOI: 10.1007/s11306-016-0967-z (a national peer-reviewed publication). This article is available online at <http://link.springer.com/article/10.1007/s11306-016-0967-z>.

Kaur, Kiranpreet; Prince, Maurie; Strickland, Sheri; Steele, Edna. "The Effects of Lead on the Metabolites of *Eisenia fetida*", *Proceedings of the 7th Annual SC Upstate Research Symposium*, Spartanburg, SC, March 2011.

Strickland, Sheri. "Critical Evaluation of New Ideas in Sustainability: We Can, But Should We?" Chapter 8 of *Sustainability in the Chemistry Curriculum*, Middlecamp, C.H., Jorgensen, A., Eds., ACS Symposium Series, Volume 1087; American Chemical Society: Washington, DC, 2011; pp. 81-90. (a national peer-reviewed publication)

Strickland, Sheri; Erturk, Neval. "Teaching Science through Forensic Case Studies", *Proceedings of the 2010 International Conference on Education and New Learning Technologies*, Barcelona, Spain, July 5-7, 2010.

Brown, Peter; Strickland, Sheri; and King, Madonna. "Explaining Organic Chemistry with Computer Graphics", *Proceedings of the 6th Annual SC Upstate Research Symposium*, Spartanburg, SC, 2010.

Burke, S. D.; Kort, M. E.; Strickland, S. M. S.; Organ, H. M.; Silks, L. A., III. "Enantioselective Synthesis of Nagilactone F Via Vinylsilane-Terminated Cationic Cyclization," *Tetrahedron Letters* **1994**, *35*, 1503-1506. (a national peer-reviewed publication)

Burke, S.D.; Strickland, S.M.S.; Organ, H.M.; Silks, L.A. III. "Enantioselective Synthesis of the Nagilactone Ring System via Vinylsilane-Mediated Polyene Cyclization". *Tetrahedron Letters* **1989**, *30*, 6303-6. (a national peer-reviewed publication)

Burke, S.D.; Silks, L.A. III.; Strickland, S.M.S. "Remote Functionalization and Molecular Modeling. Observations Relevant to the Barton and Hypoiodite Reactions". *Tetrahedron Letters* **1988**, *29*, 2761. (a national peer-reviewed publication)

Strickland, Sheri. *Two Approaches to the Synthesis of Nagilactone F*. Ph.D. Dissertation, University of South Carolina, Columbia, SC, 1988.

Burke, Steven D.; Strickland, Sharon M. Smith; Powner, Tory H. "Silicon-Substituted Dienes in the Intramolecular Diels-Alder Reaction: Nagilactone Model Studies". *Journal of Organic Chemistry* **1983**, *48*, 454-459. (a national peer-reviewed publication)

Burke, Steven D.; Murtiashaw, Charles W.; Dike, Meera S.; Strickland, Sharon M. Smith; Saunders, Jeffrey O. "Vinylsilane-Mediated Spiroannulation. Synthesis of Spiro[4.5]decadienones". *Journal of Organic Chemistry* **1981**, *46*, 2400-2402. (a national peer-reviewed publication)

Strickland, Sheri. *Investigation of the Intramolecular Diels-Alder Reaction of Substituted 1-(2-propenoxy)-3-(trans-trimethylsilylvinyl)-cyclohex-2-enes*. Master's Thesis, University of South Carolina, Columbia, SC, 1981.

GRANTS (Student names are in bold.)

Pettit-Bacovin, Terra, Strickland, Sheri. "Downstream From Myrtle Beach; an Analysis of Water Quality at Winyah Bay" SCICU (South Carolina Independent Colleges and Universities) \$3,675. Duration of Grant: May-December, 2021.

Strickland, Sheri. SC-INBRE (South Carolina IDeA Networks of Biomedical Research Excellence) \$17,735 "Molecular Balances for Measuring Aromatic Interactions Involving Amino Acid Side Chains" Duration of Grant: May-August, 2021.

Strickland, Sheri; Shimizu, Ken. NSF (National Science Foundation) Supplemental Award 2018-2019 "Comprehensive Models of Non-Covalent Interactions" \$26,729. Duration of Grant: 8/1/2018-12/31/2019. This funded my sabbatical work as a Visiting Research Professor in Ken Shimizu's lab at the University of South Carolina, February 5 – August 15, 2019.

Strickland, Sheri; Shimizu, Ken. EPSCoR GEAR-CRP 2018 "Programmable Polymers Based on Restricted Rotation formed by Free Radical Polymerization" \$60,000. Duration of Grant: 5/1/2018 to 4/30/2019.

Co-PI Strickland, Sheri; PI Shimizu, Ken. NSF Supplement 2015 "Supplement: Molecular balance for measuring molecular-level anion effects on amino acids" \$26,455. Duration of Grant: 7/2015 to 8/2016.

Strickland, Sheri; Shimizu, Ken. EPSCoR GEAR-CRP 2013 "Colorimetric Molecular Sensors for Monitoring Stress and Strain in Synthetic Blood Vessels" \$100,000. Duration of Grant: 5/2013 to 12/2016.

Karambizi, Natacha; Strickland, Sheri. "The Measurement of Weak Halogen-Pi Interactions Using a Molecular Balance" South Carolina Independent Colleges and Universities 2013.

Strickland, Sheri; Steele, Edna. "The Metabolic Effects of Exposure to Sub-lethal Concentrations of Lead on Earthworms" Converse College, Faculty Development Committee Funds 2012.

Kaur, Kiranpreet; Prince, Maurie; Steele, Edna; Strickland, Sheri. "Detecting the Effects of Lead on *Eisenia fetida* through Metabolite Analysis" South Carolina Independent Colleges and Universities 2011.

Childs, Antigone; Pena, Daniella; Smith, Chelsea; Erturk, Neval; Keen, Richard; Strickland, Sheri. "The Impact of Textbook Annotations on Higher Order Thinking Skills" Converse College, Nisbet Honors Program 2010.

Childs, Antigone; Sberna, Madonna; Strickland, Sheri; Brown, Peter. "Explaining Organic Chemistry with Computer Graphics" South Carolina Independent Colleges and Universities 2009.

Begley, Mallory; Strickland, Sheri. “*The Effect of Pesticides Used on Local Produce*” South Carolina Independent Colleges and Universities 2008.

Brown, Peter, Strickland, Sheri, and **Sberna, Madonna.** “Explaining Organic Chemistry Using Computer Graphics” Converse College, Creative Collaboration Funds 2008.

Strickland, Sheri. “The Synthesis of Bis-Urea Macrocycles” Converse College, Faculty Development Committee Funds 2007.

ADDITIONAL SCHOLARSHIP

- Peer reviewer for Chapters 1 and 2 of Organic Chemistry: A Learner-Centered Approach (2019)-- Textbook written by Rick Mullins, published by Pearson.
- Peer reviewer for a scholarly article submitted to the Journal of Chemical Education (2019). (**a national, peer-reviewed journal**)
- Peer reviewer for Chapter 16 of Pedagogic Roles of Animations and Simulations in Chemistry Courses (edited by J. Suits et al, ACS Symposium Series; American Chemical Society: Washington D.C. 2013).
- Member of the Planning Committee and Symposium Organizer for Symposium 77 (Engaging Students using Forensics), August 2012, *22nd Biennial Conference on Chemical Education*, Penn State University, State College, Pennsylvania (**Symposium organizer for a national conference-- Please see <http://bcceprogram2012.haydenmcneil.com/2012-bcce-committee-members/>**).
- Peer reviewer for three scholarly articles submitted to the national journals Metabolomics and Environmental Pollution, 2011.
- Peer reviewer for grant applications submitted to the Department of Energy Office of Science Graduate Fellowship Program, 2010 and 2011
- Chair, Breakout Session 5: Environmental Issues, March 26, 2010. 6th Annual USC Upstate Research Symposium; USC Upstate University, Spartanburg, SC.

PROFESSIONAL MEMBERSHIPS

- American Chemical Society (Chemical Education Division and Organic Chemistry Division)
- Western Carolina Section of the American Chemical Society
- South Carolina Academy of Science

CERTIFICATIONS

Flinn Scientific Laboratory Safety Certification (2020)

SC-AAS (South Carolina Adopt a Stream) Certification (2021)

AWARDS

- Service to Students Above and Beyond Award (2013)
- Converse College Creative and Scholarly Achievement Award (2016)
- Alpha Lambda Delta Favorite Professor Award (2019)

SERVICE

SERVICE TO THE COLLEGE AND PROFESSION

- Judge, Undergraduate Poster Presentations, 2021 South Carolina Academy of Science, Virtual. (March 2021)

- Judge, Undergraduate Poster Presentations, 2020 South Carolina Academy of Science, Francis Marion University, Florence SC. (Because of the COVID-19 pandemic, this meeting was cancelled.)
- Judge, Undergraduate Poster Presentations, 2019 South Carolina Academy of Science, Francis Marion University, Florence SC (March 2019).
- Judge, Undergraduate Poster Presentations, 2018 Meeting of the South Carolina INBRE, Columbia, SC (August 2018).
- Judge, Undergraduate Poster Presentations, 2018 Meeting of the South Carolina EPSCoR/IdEA, Columbia, SC (April 2018).
- Judge, Undergraduate Poster Presentations, 2017 Meeting of ABRCMS, Phoenix, AZ (Annual Biomedical Conference for Minority Students, November 2017).

- Assistant Chair of the Biology, Chemistry, and Physics Department (June 2021-present)
- Program Director for the Chemistry and Biochemistry Programs (2019-present)
- Manager of the Chemical Stockroom for Phifer Hall (2016-Present)
- Secretary for the departmental meetings of the Biology, Chemistry, and Physics Department (2016-Present)
- Academic Advisor
 - Chemistry and Biochemistry Majors Advisor (2009-Present)
 - Freshman Advisor (2010-2016)
- Chair of the Chemistry Department, (August 2012-August 2013)
- Director of the Chemistry Program (January-April 2014)

- Faculty Advisor for TriBeta Honor Society (August 2020-Present)
- CSI: Converse forensics summer workshop for high school students (2006-2011)
 - Co-Director
 - Curriculum Designer and Instructor
- Converse College Faculty Advisor for the KAUST Discovery Scholarship (2009-2011)
- Faculty Advisor for Honor Board (2008-2009)
- Reviewer
 - Reviewer of Converse applications for the Jo Anne J. Trow Undergraduate Scholarships, 2009 and 2010
 - Reviewer of applications for the Judy Binder Research Grant Competition (sponsored by Tri Beta), 2010
 - Reviewer of Converse application for the Goldwater Scholarships, 2008
- Admissions Events
 - Interviewer for Presidential Scholarships (2014 - Present)
 - Facilitator for SOAP (2014) and SOAR (2015, 2018)
 - Chemistry Department Representative at Accepted Student Days, 2011 - Present
 - Chemistry Department Representative at Prospective Student Days, 2010 - Present
 - Chemistry Department Representative, Spring Spectacular, 2010
 - Chemistry Department Representative, Academic Fair at Purple Friday, 2010
 - Mock class teacher, Creative Minds Conference and Scholarship Day (Admissions/recruiting event)—February 2008; November 2008; February 2009; February 2010
 - Designer of “The Best Bubble Formula” activity for Girls’ Day 2008
 - Chemistry Department Representative, All-Star Fair 2007

- Chemistry Department contact person making recruitment telephone calls to prospective students during Admissions Contact Campaigns 2007 and 2008
- Committees
 - Faculty Development Committee (2020- Present)
 - Search Committee for Biology Lab Assistant—hired Emily Walker (2018)
 - Search Committee for Mathematics Faculty—hired Dr. Joe Barrera (2018)
 - Search Committee for Physics Faculty—hired Dr. Maddy Behravan (2017)
 - Search Committee for Chemistry Faculty—hired Dr. Jennifer Hawk (2015)
 - Search Committee for Chemistry Faculty—hired Dr. Will Case (2014)
 - Technology Advisory Committee (2013-2016)
 - Faculty Environment Committee (2015-2018)
 - Faculty Senate, Converse College (2011-2014)
 - Admissions Committee, Converse College (2008-2011)
 - Ad Hoc Committees for Tenure and Promotion: 2008, 2009, 2020
- VCOM (The Edward Via College of Osteopathic Medicine) Liaison for Converse College, 2014-2016
- Sponsor of community speakers
 - Professor Ken Shimizu (Professor and Chair of the Department of Chemistry and Biochemistry, University of South Carolina), 2018 (CHM 307 Seminar Speaker)
 - Solicitor Barry Barnette (7th District Solicitor, Spartanburg County), 2007-2011 (CSI: Converse)
 - Officer Joe Pharis (Spartanburg County K-9 Officer, with his dog Sawyer), 2011 (CSI: Converse)
 - Officer Nate Cantrell (Spartanburg County K-9 Officer, with his dog Igor), 2007-2010 (CSI: Converse)
 - Lieutenant Beth Stuart (Forensic Chemist, Spartanburg Sheriff's Office), 2008-2011 (CSI: Converse)
 - Professor Paige Ouzts (Blood Spatter Expert and Associate Professor of Physics, Lander University), 2007 (CSI: Converse)
 - Officer Randy Bogan (Spartanburg Sheriff's Office), 2009 (CSI: Converse)
 - Mr. Rusty Clevenger (Coroner, Spartanburg County), 2007-2008 (CSI: Converse)
 - Mr. Jeff Hollifield (Expert in Forensic Optical Microscopy), 2007-2008 (CSI: Converse)
 - Professor Linda Shimizu (University of South Carolina, Columbia), 2008 (Science Forum speaker)
- Service to Converse College Students
 - Faculty Sponsor, Sophomore Ring Ceremony (2007-2011, 2013-2020)
 - Host of Freshmen Orientation Dinners: 2007, 2008, 2010, and 2011 (at my home)
 - Participant in Faculty-Staff Move-In, 2006-2009, 2013
 - Judge for 1889 Week Skit/Song, Dance, and Big Banners Competitions, 2007
 - Designer and facilitator of a Valentine's Day card-making event for Montgomery by Moonlight, 2009 and 2010
 - Designer and facilitator of a scrapbooking event for the Faculty Visitors Program, 2007-2016
 - Participant in Partner Day, 2007-2009
 - Participant in the Tri Beta fundraiser "Humans vs. Zombies", 2010-2014
 - Nominated for the Faculty Involvement and Collaboration Award, 2010
 - Nominated for the Service to Students Above and Beyond Award, 2014

SERVICE TO THE COMMUNITY

- Member of the Dorman High School STEM Advisory Board (2020-Present)
- Piedmont Region III Science Fair Judge
 - Judge of the Converse Award, Piedmont Region III Science Fair, USC Upstate, 2013-2018, 2021
 - Captain of all Senior High Judges, Piedmont Region III Science Fair, USC Upstate, 2010 & 2018
 - Judge, Senior High Chemistry Projects, Piedmont Region III Science Fair, USC Upstate, 2008-2012, 2018
 - Judge, Middle School Chemistry Projects, Piedmont Region III Science Fair, USC Upstate, 2007
- Director (with Dr. Jerry Howe) of the National Chemistry Week chemical demonstrations conducted by Converse chemistry students at Westgate Mall, Spartanburg, SC; 2008 and 2010
- Participant (with Dr. Neval Erturk, four of my CHM 150 students, and several of her BIO 150 students) in Lake Sweep, a community effort to pick up trash around Lake Bowen, 2008
- Member of the Board of Directors of the Spartanburg Science Center, 2007-2009
- Classroom Reader, Roebuck Elementary School (With my youngest son, I read to his class weekly, 2006-2010.)
- Volunteer photographer of new employees, McAlister's Deli, Spartanburg, SC, 2008 – Present
- Swim Meet Timer for the Converse Marlins Swim Team, 2013-2017
- Roebuck Baptist Church, 2007-Present
 - Sunday School participant
 - Member of the Budget Committee (2014-2017)
 - Member of the Roebuck Baptist Church Choir, 2016-Present

Outside References Available Upon Request

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