Dr. Stephen Albert Miller

Professor & Associate Chair
Division of Organic Chemistry
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born: April 4, 1972, Muncie, Indiana, USA

Current Research Interests

Sustainable polymers; Polymer synthesis from bio-based feedstocks; Novel polymerization methods; Polymer degradation; Polymer structure/property relationships; Theoretical polymer chemistry; Polymers containing silicon; Environmental chemistry; Computational chemistry; Long Covalent Bond Theory (LCBT), a theory that greatly expands our understanding of bonding in molecules and materials.

Education

Postdoctoral Associate (1/00 - 7/01): Massachusetts Institute of Technology with Prof. Richard R. Schrock
Research: *Design, Synthesis, and Application of Asymmetric Ring-Closing Metathesis Catalysts*

Ph.D., Chemistry (9/94 - 12/00): California Institute of Technology with Prof. John E. Bercaw
Thesis: *Metallocene-Mediated Olefin Polymerization: The Effects of Distal Ligand Perturbations on Polymer Stereochemistry*

M.S., Chemistry (6/93 - 9/94, concurrent with B.S.): Stanford University with Prof. Robert M. Waymouth
Thesis: *Polymerization and Oligomerization of Olefins with Cationic Zirconocenes*

B.S., Chemistry (9/90 - 6/94): Stanford University with Prof. Robert M. Waymouth
Conferred with Distinction; Conferred with Departmental Honors
Honors Thesis: *Cyclopolymerization with Homogeneous Ziegler-Natta Catalysts*

Professional Experience

Professor of Chemistry, Division of Organic Chemistry, University of Florida: **2020–present**
Co-Founder & CTO, U.S. Bioplastics™; **2013–2020**
https://www.facebook.com/usbioplastics/
Co-Founder & CTO, Florida Sustainables™: **2010–2020**
https://www.facebook.com/FloridaSustainables/
Associate Professor of Chemistry, Division of Organic Chemistry, University of Florida: **2007–2020**
Assistant Professor of Chemistry, Division of Organic Chemistry, Texas A&M University: **2001–2007**

Awards and Honors

2018–2020 University of Florida – University Term Professorship
https://clas.ufl.edu/laurels-and-kudos/university-term-professors-2018/
2018 Anderson Scholar Faculty Honoree (selected by UF Anderson Scholar)
https://clas.ufl.edu/undergraduate/anderson-scholars/2018-faculty-honorees/
2018 *Richard A. Glenn Award* for the most outstanding paper/presentation at the 255th ACS National Meeting in the Energy & Fuels Division (ENFL), March 18–22, New Orleans, LA.
https://enfl.aps.anl.gov/awards/r-glenn-award-best-paper-enfl-symposium
2018 AERA 2018 SIG-IT Best Paper Award. P. Antonenko, S. Miller, *et al. Sex differences in mental rotation performance using 2D and 3D molecular representations.* Presented at the 2018 Conference of the American Educational Research Association (AERA), New York, NY.
2017 Anderson Scholar Faculty Honoree (selected by UF Anderson Scholar)
https://clas.ufl.edu/undergraduate/anderson-scholars/2017-faculty-honorees/

2016 Anderson Scholar Faculty Honoree (selected by UF Anderson Scholar, twice in 2016)
https://clas.ufl.edu/undergraduate/anderson-scholars/2016-faculty-honorees/
2015 Kavli Fellow, U.S. Frontiers of Science Symposium (Irvine, California)
http://www.nasonline.org/programs/kavli-frontiers-of-science/past-symposia/2015-usfos.html
2015 TOTAL Chair Visiting Professorship, Balard Foundation, June 7 – 28, Montpellier, France
http://www.polechimie-balard.fr/actualites/840/programme-intervention-stephen-miller-juin-2015.htm
2014 U.S. National Academy of Sciences Arab-American Frontiers of Science Fellow (Muscat, Oman)
http://sites.nationalacademies.org/PGA/dsc/AAFrontiers/PGA_081857
2014 Anderson Scholar Faculty Honoree (selected by UF Anderson Scholar)
https://clas.ufl.edu/undergraduate/anderson-scholars/2014-faculty-honorees/
2014 TUBITAK Visiting Professorship, September 6 – 14, Turkey
2014 2nd Place, Green Chemistry & Engineering Business Plan Competition, U.S. Bioplastics™
https://communities.acs.org/community/science/sustainability/green-chemistry-nexus-blog/blog/2014/06/25/enabling-green-chemistry-innovation-from-the-startup
2014 New Horizons in Science Fellow, U.S.N.A.S. New Horizons in Science Symposium (Mexico City)
http://www.ianas.org/newhorizonsinscience/
2014 *Best Science Paper* Award 2014 for the journal *Green Materials*. Vanderhenst, R.; Miller, S. A. "Polycarbonates from Biorenewable Diols via Carbonate Metathesis Polymerization"
https://www.icevirtuallibrary.com/page/authors/awards-for-papers/previous-awards
2013 National Science Council Visiting Professorship, July 19 – 28, Taiwan
2012 International Educator of the Year, University of Florida, College of Liberal Arts and Sciences, Junior Faculty Rank
2011 Science/Innovation Floridian of the Year, *Florida Trend Magazine*
http://www.floridatrend.com/a56191_florida-science-newsmaker-in-2011
2011 InterAcademy Panel/Annual Meeting of the New Champions Young Scientist Mentor
https://miller.chem.ufl.edu/Miller2011AMNC/index.shtml
2011 Kavli Fellow, Indonesian-American Kavli Frontiers of Science Symposium (Bogor, Indonesia)
https://miller.chem.ufl.edu/YSAP/Miller2011/index.shtml
2011 Cade Prize for Innovation ($50,000), Winner
https://www.cademuseum.org/2011-cade-prize.html
2010 UF CLAS Scholar-Recognized Outstanding Professor
2010 Young Scientist/Entrepreneur Partnership Award, sponsored by the InterAcademy Panel and TWAS, the Academy of Sciences for the Developing World
2010 InterAcademy Panel/Annual Meeting of the New Champions Young Scientist
https://miller.chem.ufl.edu/Miller2010AMNC/index.shtml
2010 Cade Prize for Innovation, Final Four
2009 UF CLAS Scholar-Recognized Outstanding Professor
2008 Kavli Fellow, Japanese-American Kavli Frontiers of Science Symposium (Irvine, California)
2006–2011 National Science Foundation CAREER Award
2003 Petroleum Research Fund (Type G) Grant
2002 Research Corporation Innovation Award
1997 Dow Travel Fellowship Recipient, California Institute of Technology
1994–1997 National Defense Science and Engineering Graduate (NDSEG) Fellowship
1994 National Science Foundation Predoctoral Fellowship (declined to accept the NDSEG Fellowship)
1994 The Marsden Memorial Prize in Chemistry for Undergraduate Research, Stanford University
1993 Undergraduate Summer Scholarship for Research in Polymer Science, American Chemical Society Divisions of Polymer Chemistry and Polymeric Materials, Stanford University
1992 Stanford Center for Materials Research Summer Grant

Memberships

The American Chemical Society https://www.acs.org/
The Global Young Academy https://globalyoungacademy.net/ (Alumnus; ~250 active members)
The Triple Nine Society https://www.triplenine.org/ (Inactive; ~2000 members worldwide)
The George and Josephine Butler Polymer Research Laboratory https://www.butlerpolymerlab.com/
The Center for Macromolecular Science and Engineering https://www.uf-cmse.com/

Publications https://miller.chem.ufl.edu/publications.shtml
Google Scholar: citations = 5098; h-index = 39; i10-index = 66
https://scholar.google.com/citations?hl=en&user=gysistoAAAAJ

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Chemistry World News Article:
https://www.chemistryworld.com/news/4020936.article

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https://doi.org/10.1021/acs.macromol.2c02554

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https://doi.org/10.3389/fchem.2023.1123322
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https://www.frontiersin.org/research-topics/68791/theoretical-and-computational-chemistry-editors-pick-2024/articles

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https://doi.org/10.1021/acs.biomac.2c01022

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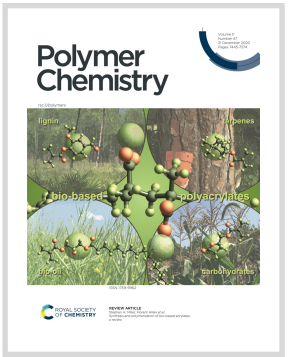

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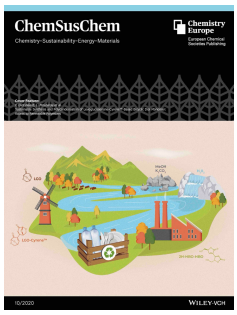

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News Article in *ChemistryViews*: https://www.chemistryviews.org/details/news/11235548/New_Bio-Based_Polyesters_Made_from_Cellulose.html

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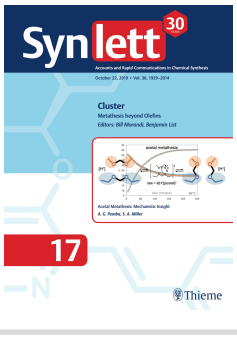
Nominated for the 2019 SYNLETT Best Paper Award competition. https://www.thieme.de/en/thieme-chemistry/journals-synthesis-synlett-best-paper-awards-72162.htm



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2017 Green Chemistry Hot Article: http://pubs.rsc.org/en/journals/articlecollectionlanding?sercode=gc&themeid=e5176bfd-c004-49a2-a653-b7092595300b

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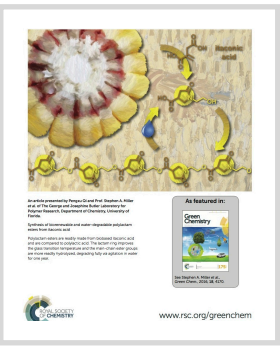

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Green Chemistry Front Cover Graphic (September 2015): http://dx.doi.org/10.1039/c5gc90044a.

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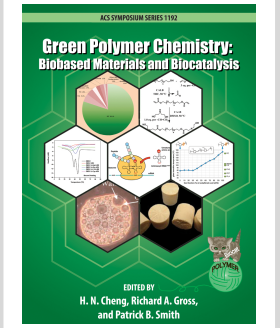

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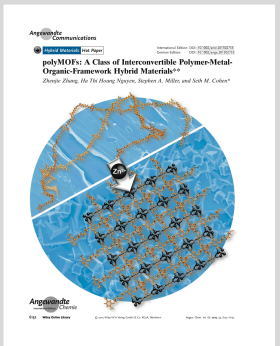

Chemistry World Research Editorial "Floppy polymer defies convention to form rigid framework", by Simon Hadlington, April 30, **2015**.
http://www.rsc.org/chemistryworld/2015/04/floppy-polymer-defies-convention-form-rigid-mof
Chemical & Engineering News Research Editorial "MOFs Made From Flexible Polymers Buck Conventional Wisdom", Mitch Jacoby, 5/7, **2015**.
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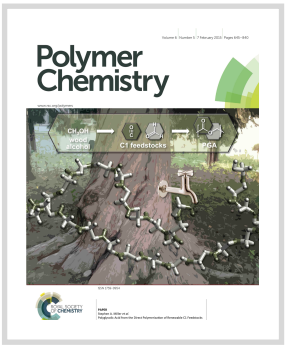

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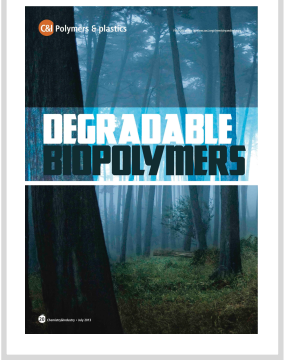

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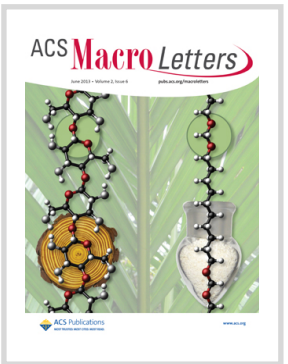

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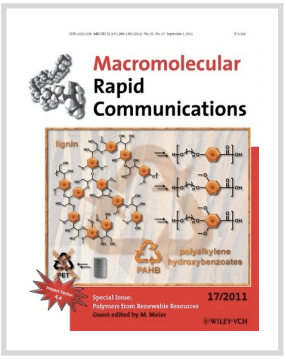

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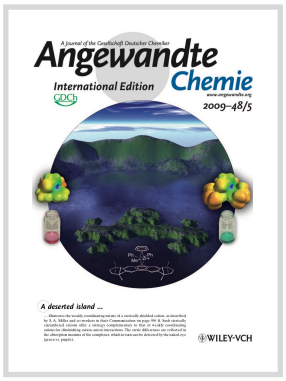

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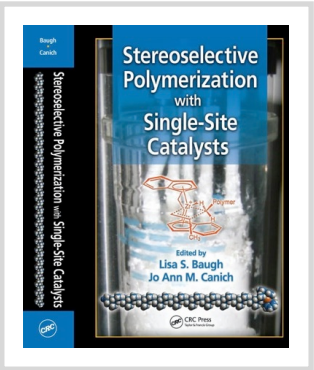

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166. Miller, S. A. “U.S. Bioplastics: Transforming agricultural waste into polyester (PET) and polystyrene (PS) mimics,” invited lecture, Visiting Professorship, Lecture#4, Balard Foundation, Montpellier, France, June 24, 2015.
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155. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, TUBITAK Visiting Professor Lecture Series, Yildiz Technical University, Istanbul, Turkey, September 11, **2014**.

154. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, TUBITAK Visiting Professor Lecture Series, Ankara University, Ankara, Turkey, September 10, **2014**.

153. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, TUBITAK Visiting Professor Lecture Series, Nigde University, Nigde, Turkey, September 8, **2014**.

151. Miller, S. A. “Green Chemistry: Sustainable Polymers from Biorenewable Feedstocks,” invited oral presentation, Inaugural New Horizons in Science Symposium, for the countries of Mexico, Canada, and the United States, Mexico City, Mexico, June 22-23, **2014**.
http://www.ianas.org/newhorizonsinscience/ http://www.ianas.org/newhorizonsinscience/green_chemistry.html#participants

139. Miller, S. A. "Bio-based aromatics: Sustainable building blocks for replacing polyester and polystyrene," invited oral presentation, 4th International Symposium on Functional Materials Science, Shanghai Institute of Ceramics, Shanghai, China, September 27, **2013**.
http://www.rsc.org/ConferencesAndEvents/RSCEvents/International/China/Unilever-2013/index.asp

138. Miller, S. A. "Programming the properties and degradation of renewable polyesters, polycarbonates, and polyoxalates," invited oral presentation, 4th International Symposium on Functional Materials Science, University of Science and Technology of China, Hefei, China, September 25, **2013**.
http://www.rsc.org/ConferencesAndEvents/RSCEvents/International/China/Unilever-2013/index.asp

137. Miller, S. A. "Water-degradable polyacetals from biorenewable feedstocks," invited oral presentation, 4th International Symposium on Functional Materials Science, Peking University, Beijing, China, September 23, **2013**.
http://www.rsc.org/ConferencesAndEvents/RSCEvents/International/China/Unilever-2013/index.asp

150. Miller, S. A. "U.S. Bioplastics: Polyesters from Sugarcane Waste," invited oral presentation, Green Chemistry & Engineering Business Plan Competition, North Bethesda, Maryland, June 18, **2014**. http://www.gcande.org/program/2014-gce-business-plan-competition/
http://www.gofundme.com/GCEBizPlanComp

149. Miller, S. A. "Sustainable Polymers: How to Compete with Traditional Plastics," invited oral presentation, Global Young Academy - Science Session, Pontificia Universidad Católica de Chile, Santiago, Chile, May 22, **2014**. http://gya-santiago2014.cl

148. Miller, S. A. "Status of the Young Scientist Ambassador Program (YSAP) Working Group," invited oral presentation, Global Young Academy - General Assembly, Santiago, Chile, May 21, **2014**. http://www.globalyoungacademy.net

147. Miller, S. A. "Programming the properties and degradation behavior of environmentally responsible polymers," invited oral presentation, High Polymer Research Group Conference 2014, Pott Shrigley, United Kingdom, April 27-May 1, **2014**. http://www.highpolymer.org.uk/

144. Miller, S. A. "Synthesis and Characterization of New Polymers from Biorenewable Feedstocks," invited oral presentation, International Symposium for Green-Innovation Polymers (GRIP2014) & The 13th Symposium of the Research Center for Highly Environmental and Recyclable Polymers, Japan Advanced Institute of Science & Technology, Kanazawa City, Japan, March 7, **2014**.

135. Miller, S. A. "Sustainable polymers: Bio-degradability vs. water-degradability," invited oral presentation, National Science Council, Kaohsiung Medical University, Kaohsiung, Taiwan, July 25, **2013**.

134. Miller, S. A. "Building novel polyolefins with sterically expanded single-site catalysts," invited oral presentation, National Science Council, National Changhua University of Education, Changhua, Taiwan, July 23, **2013**.

133. Miller, S. A. "Dialing the thermal properties of renewable polymers," invited oral presentation, National Science Council, National Chung Hsing University, Taichung, Taiwan, July 22, **2013**.

132. Miller, S. A. "Sustainable Polymers: Dialing the Thermal Properties and Degradation Behavior," invited oral presentation, Gordon Research Conference in Polymers, South Hadley, Massachusetts, June 12, **2013**.
http://www.grc.org/programs.aspx?year=2013&program=polymers

131. Miller, S. A. "Programming the thermal properties and degradation pathways of renewable polyesters, polycarbonates, and polyacetals," invited oral presentation, inaugural Sustainable Polymers ACS Division of Polymer Chemistry Conference, Safety Harbor, Florida, May 21, **2013**.
http://polyacs.net/Workshops/13sustainable/home.htm

130. Miller, S. A. “Status of the Young Scientist Ambassador Program (YSAP) Working Group,” invited oral presentation, Global Young Academy - General Assembly, Halle (Saale), Germany, May 15, **2013**.
http://www.globalyoungacademy.net/

127. Miller, S. A. “AAAS Science Podcast: Designing Bio-Friendly Plastics," invited oral presentation, American Association for the Advancement of Science (AAAS) Annual Meeting, Boston, Massachusetts, February 16, **2013**.
http://www.sciencemag.org/site/multimedia/podcast/index.xhtml#130214
http://c778316.r16.cf2.rackcdn.com/SciencePodcast_130216c.mp3

126. Miller, S. A. “Redesigning Petroleum-Based Plastics with Renewable Feedstocks,” invited oral presentation, Symposium on "Sustainable Chemical Manufacturing in a Resource-Limited World," American Association for the Advancement of Science (AAAS) Annual Meeting, Boston, Massachusetts, February 16, **2013**.
http://www.aaas.org/meetings/2013/

125. Miller, S. A. “Sustainable Polymers Designed to Compete with Petroleum-Based Commodity Thermoplastics,” invited oral presentation, Institute of Chemical and Engineering Sciences (ICES) Scientific Conference, Singapore, October 29, **2012**.
http://icesconference.com.sg/speakers.php

123. Miller, S. A. “Building Novel Polyolefins with Complex Catalysts,” invited oral presentation, 2nd KACST-Oxford Petrochemicals Forum, Riyadh, Saudi Arabia, September 10, **2012**.
http://www.koprcsa.org/2012/en/indexen.asp

120. Miller, S. A. “Competing Against Petroleum-based Plastics with Sustainable Feedstocks,” contributed poster presentation, MACRO 2012, 44th World Polymer Congress, Blacksburg, Virginia, USA, June 26, **2012**.
http://www.cpe.vt.edu/macro2012/

118. Miller, S. A. “The Future of Sustainable Plastics,” invited oral presentation, Global Young Academy - Future of Chemistry Workshop, University of Pretoria, South Africa, May 24, **2012**.
http://www.globalyoungacademy.net/gya-ga-2012-in-south-africa

117. Miller, S. A. “Bridging the International Scientific Gap: The Global Young Academy – Young Scientist Ambassador Program,” invited oral presentation, South African Young Academy of Science (SAYAS) Special General Assembly, Johannesburg, South Africa, May 22, **2012**.
https://miller.chem.ufl.edu/YSAP/
https://globalyoungacademy.net/events/gya-general-assembly-2012/

116. Miller, S. A. “Next-Generation Plastics from Plants Instead of Petroleum,” invited plenary presentation, Global Young Academy - General Assembly, Johannesburg, South Africa, May 21, **2012**.
http://www.globalyoungacademy.net/gya-ga-2012-in-south-africa

113. Miller, S. A. “Functional Group Metathesis Polymerization of Biorenewable Feedstocks,” invited oral presentation, 5th Workshop on Fats and Oils as Renewable Feedstock for the Chemical Industry, Karlsruhe, Germany, March 18-20, **2012**.
http://abiosus.org/kit-workshop-2012.html

108. Miller, S. A. “Building Polyolefins from Complex Catalysts and Evolving Polyolefins away from Petroleum,” invited oral presentation, Advances in Polyolefins 2011, Santa Rosa, California, September 25-28, **2011**.
http://www.polyacs.net/Workshops/11Polyolefins/home.htm

107. Miller, S. A. “Legacy Plan for IAP/WEF Young Scientists,” invited oral presentation, Young Scientist Mentor, World Economic Forum/Annual Meeting of the New Champions, Dalian, China, September 14-16, **2011**.
http://www.weforum.org/events/annual-meeting-new-champions-2011

106. Miller, S. A. “Biorenewable Polymers via Catalytic Functional Group Metathesis” invited oral presentation, ITB One Day Catalysis Symposium on "Catalysis Development Towards Sustainable Chemical Processes", Bandung, Indonesia, July 12, **2011**. http://www.itbcatalysis.or.id/

105. Miller, S. A. “Next-Generation Commodity Plastics from Plants Instead of Petroleum,” invited oral presentation, the Inaugural United States/Indonesia Kavli/US National Academy of Sciences Symposium, Bogor, Indonesia, July 9-11, **2011**.
http://aipi.or.id/index.php/subMenu/372

104. Miller, S. A. “Polymers from Biorenewable Feedstocks,” contributed poster presentation, Gordon Research Conference in Polymers, South Hadley, Massachusetts, June 12-16, **2011**.
http://www.grc.org/programs.aspx?year=2011&program=polymers

101. Miller, S. A. “Polymers from Biorenewable Feedstocks,” invited oral presentation, The Global Young Academy General Assembly, Berlin, Germany, March 20, **2011**.

100. Miller, S. A. “Bridging the International Scientific Gap: The Young Scientist Ambassador Program,” invited oral presentation, The Global Young Academy General Assembly, Berlin, Germany, March 20, **2011**.

98. Miller, S. A. “Exploiting a catalyst's affinity for alpha-olefins,” invited oral presentation, Pacifichem 2010, Honolulu, Hawaii, December 16, **2010**.

97. Miller, S. A. “Biorenewable polyethylene terephthalate (PET) mimics derived from lignin,” invited oral presentation, Pacifichem 2010, Honolulu, Hawaii, December 15, **2010**.

92. Miller, S. A. “The Next Generation of Green Plastics,” invited multi-media presentation, World Economic Forum/Annual Meeting of the New Champions, Science and Tech Zone, Tianjin, China, September 13-15, **2010**.
http://www.weforum.org/events/annual-meeting-new-champions-2010

90. Miller, S. A. “Sustainable Polyethylene Terephthalate (PET) Mimics Derived from Lignin,” invited oral presentation, MACRO 2010, 43rd World Polymer Congress, Glasgow, United Kingdom, July 11-16, **2010**.

89. Miller, S. A. “Tandem Catalyst System for Linear Low Density Polyethylene with Short and Long Branching,” contributed oral presentation, MACRO 2010, 43rd World Polymer Congress, Glasgow, United Kingdom, July 11-16, **2010**.

86. Miller, S. A. “Future Thermoplastics from Single-Site Catalysts,” invited oral presentation, Advances in Polyolefins 2009, Santa Rosa, California, September 22, **2009**.

85. Miller, S. A. “Polyesteracetals: Next Generation Thermoplastics from C1 Feedstocks,” contributed poster presentation, Gordon Research Conference in Polymers (East), South Hadley, Massachusetts, June 24, **2009**.

82. Miller, S. A. "Polyesteracetals via Ring-opening Polymerization," invited oral presentation, 10th Annual Florida Heterocyclic and Synthetic Conference, Gainesville, Florida, March 11, **2009**.

81. Miller, S. A. "Next Generation Thermoplastics from Biorenewable Feedstocks," invited oral presentation, Japanese-American Kavli Frontiers of Science Symposium, National Academy of Sciences, Irvine, California, December 5, **2008**. http://vimeo.com/channels/kfoschemistry#33042266

80. Miller, S. A. "Polymers from Sustainable Economies: Utilization of Biorenewable Carbonyl Compounds," invited oral presentation, MACRO 2008, 42nd World Polymer Congress, Taipei, Taiwan, July 1, **2008**.

77. Miller, S. A. "Branched Polyoxymethylene via Cationic Copolymerization of Trioxane with Cyclic Ethers," invited oral presentation, 9th Annual Florida Hetercyclic and Synthetic Conference, Gainesville, Florida, March 11, **2008**.

76. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Advances in Polyolefins 2007, Santa Rosa, California, September 25, **2007**.

75. Miller, S. A. “Polymers from Alternative Economies,” contributed poster presentation, Gordon Research Conference in Polymers (East), South Hadley, Massachusetts, June 20, **2007**.

69. Miller, S. A. “A sodium-based catalyst for the highly efficient and controlled ring-opening polymerization of lactide,” invited oral presentation, Polymer Technology Industrial Consortium, Texas A&M University, November 3, **2006**.

47. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Advances in Polyolefins 2005, Rohnert Park, California, September 28, **2005**.

44. Miller, S. A.; Irwin, L. J.; Price, C. J.; Schwerdtfeger, E. D. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” contributed poster presentation, Gordon Research Conference in Organometallic Chemistry, Salve Regina University, Newport, Rhode Island, July 11-12, **2005**.

43. Miller, S. A.; Irwin, L. J.; Price, C. J.; Schwerdtfeger, E. D. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Recent Advances in Single-Site Olefin Polymerization Catalysis Symposium, Texas A&M University, College Station, Texas, May 20, **2005**.

37. Miller, S. A.; Irwin, L. J.; Schwerdtfeger, E. D.; Price, C. J. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Gordon Research Conference in Organometallic Chemistry, Salve Regina University, Newport, Rhode Island, July 15, **2004**.

36. Miller, S. A.; Irwin, L. J.; Schwerdtfeger, E. D.; Price, C. J. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” contributed poster presentation, Gordon Research Conference in Organometallic Chemistry, Salve Regina University, Newport, Rhode Island, July 12-13, **2004**.

33. Miller, S. A. “Tacticity control with C_1-symmetric metallocenes: Syndiotactic-hemiisotactic polypropylene,” invited oral presentation, MetCon2004, Houston, Texas, May 13, **2004**.

26. Miller, S. A. “Isotactic Block Length Distribution in Polypropylene: Bernoullian vs. Hemiisotactic,” contributed poster presentation, Gordon Research Conference in Polymers (East), South Hadley, Massachusetts, June 18, **2003**.

25. Miller, S. A. “Isotactic Block Length Distribution in Polypropylene: Bernoullian vs. Hemiisotactic,” invited poster presentation, Symposium on Recent Advances in Epoxidation Catalysis, College Station, Texas, May 16, **2003**.

24. Miller, S. A. “Cyanide-Catalyzed Cyclizations via Aldimine Coupling,” invited poster presentation, Symposium on Recent Advances in Epoxidation Catalysis, College Station, Texas, May 16, **2003**.

22. Miller, S. A. “Isotactic Block Length Distribution in Polypropylene: Bernoullian vs. Hemiisotactic,” invited oral presentation, MetCon2003, Houston, Texas, May 9, **2003**.

20. Miller, S. A. “Enhancing Catalytic Activity with Steric Crowding,” contributed poster presentation, Gordon Research Conference in Organometallic Chemistry, Salve Regina University, Newport, Rhode Island, July 24-25, **2002**.

19. Miller, S. A. “Distal Ligand Effects in Metallocene-Mediated Olefin Polymerization,” invited oral presentation, Hungarian-American Workshop on Molecular Catalyst Design for Green Chemistry, Eötvös University, Budapest, Hungary, May 24, **2002**.

National

218. Miller, S. A. “Resonance Energy: It Isn’t Just for Benzene Anymore,” invited keynote speaker, Lester Andrews Graduate Research Symposium (LAGRS), Mississippi State University, Starkville, MS, September 11, **2025**.
https://lagrs.chemistry.msstate.edu/lagrs2025/keynote_speaker/

217. Miller, S. A. “Amide to Ester Polymerization (ATEP),” invited oral presentation, 2025 Spring National ACS Meeting, Graduate Student Symposium (GSS), San Diego, California, March 23, **2025**.
https://sites.google.com/tamu.edu/gsspc2025

213. Miller, S. A. “Nylon Hybrids from Plants or PET,” contributed oral presentation, 2023 Fall National ACS Meeting, Chemical Recycling and Upcycling of Polymers, San Francisco, California, August 15, **2023**.
https://acs.digitellinc.com/sessions/579686/view

210. Miller, S. A. “Sustainable Polymers from Native Silicon,” invited oral presentation, Green Polymer Chemistry and Sustainability Symposium, POLY, Fall National ACS Meeting, Chicago, Illinois, August 21, **2022**.
https://acs.digitellinc.com/sessions/523315/view

209. Miller, S. A. “Expanding Loop Chemical Recycling of PET,” contributed oral presentation, Design of Polymers toward Upcycling Symposium, POLY, Fall National ACS Meeting, Chicago, Illinois, August 21, **2022**.
https://acs.digitellinc.com/sessions/523536/view

198. Miller, S. A. “Designing polymers for coherent depolymerization,” invited plenary presentation, *U.S. Department of Energy Roundtable*, *Chemical Upcycling of Polymers*, Bethesda, Maryland, April 30, **2019**.

197. Miller, S. A. “Weak link strategies for polymer degradation,” invited oral presentation, *The Fate of Plastics in Water*, 257th National ACS Meeting, Orlando, Florida, March 31, POLY 18, **2019**.
https://plan.core-apps.com/acsorlando2019/abstract/464b511e-412f-4904-a1f0-c76139bd26b5

196. Miller, S. A. “Bioplastics from the Carinata Biomill,” invited oral presentation, *6th Carinata Biomaterials Summit* & *2nd SPARC Annual Meeting*, IFAS-NFREC, Quincy, Florida, March 5, **2019**.

191. Miller, S. A. “Obvious and non-obvious bioaromatics for polymerization,” invited oral presentation, 255th National ACS Meeting, New Orleans, LA, March 21st, POLY 584, **2018**.
https://plan.core-apps.com/acsnola2018/abstract/cffdcc8a-5126-4722-9bb2-5cf1a65c15b8

190. Miller, S. A. “Biofuel and biorenewables from the *carinata* biomill,” contributed oral presentation, 255th National ACS Meeting, New Orleans, LA, March 18th, ENFL 59, **2018**.
https://plan.core-apps.com/acsnola2018/abstract/6f02edf9fa1f10ca80fb6786b0290d16
ENFL Most Oustanding Paper at the 255th ACS National Meeting / Richard A. Glenn Award
http://web.anl.gov/PCS/ENFL/Awards/RAGlennAward/RAGlennAward.html

171. Miller, S. A. “Sustainable Materials from Plants and Sand,” invited oral presentation, United States Kavli Frontiers of Science Symposium, Irvine, California, November 5–7, **2015**.
http://www.nasonline.org/programs/kavli-frontiers-of-science/past-symposia/2015-usfos.html
https://vimeo.com/145890011

169. Miller, S. A. “Sustainable polysiloxanes via siloxane metathesis” contributed oral presentation, 250th National ACS Meeting, Boston, Massachusetts, August 16, POLY 35, **2015**.

https://ep70.eventpilotadmin.com/web/page.php?page=Session&project=ACS15fall&id=2269861

159. Miller, S. A. "Phytochemicals from Cellulosic Bioethanol Waste Streams," invited poster presentation, Consortium for Plant Biotechnology Research (CPBR) Symposium, Washington, D.C., March 3-4, **2015**. http://www.cpbr.org

152. Miller, S. A. "Polyesters from Bio-aromatics," contributed oral presentation, 248th National ACS Meeting, San Francisco, August 13, **2014**, POLY 622.
https://www.acs.org/content/acs/en/meetings/fall-2014.html
Green Polymer Chemistry: Biobased Materials and Biocatalysis

146. Miller, S. A. "Single-site catalysts for increasing the branch content of polyolefins," invited oral presentation, 247th National ACS Meeting, Dallas, Texas, March 19, **2014**.
https://www.acs.org/content/acs/en/meetings/spring-2014.html

145. Miller, S. A. "Polyesters from bio-methanol," contributed oral presentation, 247th National ACS Meeting, Dallas, Texas, March 16, **2014**. https://www.acs.org/content/acs/en/meetings/spring-2014.html

136. Miller, S. A. "Pinpointing the thermal properties of renewable polyesters derived from lignin," invited oral presentation, 246th National ACS Meeting, Indianapolis, Indiana, September 11, **2013**.
http://portal.acs.org/portal/PublicWebSite/meetings/fall-2013/index.htm
"Monomer and Polymer Mimicry with Renewables" a symposium co-organized with Robert Mathers
http://abstracts.acs.org/chem/246nm/meetingview.php?page=session&par_id=576

128. Miller, S. A. "Pinpointing the thermal properties of renewable polycarbonates and polyoxalates," contributed oral presentation, POLY 562, 245th National ACS Meeting, New Orleans, Louisiana, April 11, **2013**.
http://portal.acs.org/portal/PublicWebSite/meetings/spring2013/index.htm

122. Miller, S. A. "Biobased Materials Designed to Compete with Petroleum-based Commodity Thermoplastics," contributed oral presentation, POLY 53, 244th National ACS Meeting, Philadelphia, Pennsylvania, August 19, **2012**.

115. Miller, S. A. "Marine-degradable polyesters and fermentation-free polyesters," invited oral presentation, Next-Generation Renewable Polymers, 243rd National ACS Meeting, San Diego, California, March 28, **2012**.
http://portal.acs.org:80/portal/PublicWebSite/meetings/spring2012/index.htm

110. Miller, S. A. "Next-Generation Commodity Plastics from Plants Instead of Petroleum," invited oral presentation, National Science Foundation SusChEM Workshop, Arlington, Virginia, January 17-19, **2012**. http://engineering.ucsb.edu/suschem/

102. Miller, S. A. "Polyolefin construction with catalysts that favor alpha-olefins vs. ethylene," invited oral presentation, Symposium on "New Synthetic Developments in Polyolefins and Metathesis-Based Polymers", 241st National ACS Meeting, Anaheim, California, March 27, **2011**.

91. Miller, S. A. "Orthogonal control of butyl and long branching in linear low density polyethylene through tandem catalysis," invited oral presentation, 240th National ACS Meeting, Boston, Massachusetts, August 22-26, **2010**.

74. Miller, S. A.; Schwerdtfeger, E. D. "Highly syndiotactic copolymers of propylene and higher alpha-olefins," invited oral presentation, 233rd ACS National Meeting, Chicago, IL, March 28, POLY 535, **2007**.

59. Miller, S. A.; Irwin, L. J.; Price, C. J.; Schwerdtfeger, E. D.; Zeits, P. D. "Unusual Catalytic Behavior of a Sterically Expanded Constrained Geometry Catalyst," invited oral presentation, ACS Award Symposium for James C. Stevens, 231st ACS National Meeting, Atlanta, GA, March 27, BMGT 10, **2006**.

58. Miller, S. A.; Price, C. J.; Schwerdtfeger, E. D.; Irwin, L. J.; Zeits, P. D. "Steric Expansion of Transition Metal Catalysts: Steric versus Electronic Effects," invited oral presentation, ACS Award Symposium for Richard R. Schrock, 231st ACS National Meeting, Atlanta, GA, March 26, INOR 3, **2006**.

31. Miller, S. A. "Syndiotactic-hemiisotactic polypropylene from metallocene catalysts," contributed oral presentation, 227th ACS National Meeting, Anaheim, CA, March 29, INOR 396, **2004**.

30. Miller, S. A. "Carbon-carbon bond-forming reactions via cyanide-catalyzed aldimine coupling," contributed oral presentation, 227th ACS National Meeting, Anaheim, CA, March 28, ORGN 45, **2004**.

Regional

188. Miller, S. A. "Programming the Properties and Degradation of Sustainable Polymers," invited oral presentation, Green Chemistry Symposium, Southeast Regional ACS Meeting, SERMACS 2017, Charlotte, North Carolina, November 7, **2017**.
http://www.sermacs2017.org/

68. Miller, S. A.; Price, C. J.; Schwerdtfeger, E. D.; Zeits, P. D.; Launer, L. M. "Metallocene/MAO olefin polymerization: Catalyst reorganization vs. catalyst activity," invited oral presentation, 62nd Southwest Regional Meeting of the American Chemical Society, Houston, Texas, October 20, **2006**.

34. Miller, S. A. "Tacticity control with C_1-symmetric metallocenes: Syndiotactic-hemiisotactic polypropylene," invited oral presentation, Southwest Catalysis Society Symposium, Houston, Texas, May 14, **2004**.

29. Miller, S. A. "New Materials via Stereoselective Olefin Polymerizations," invited oral presentation, 59th Southwest Regional Meeting of the American Chemical Society, Oklahoma City, Oklahoma, October 27, **2003**.

State

88. Miller, S. A. "Sustainable Polyethylene Terephthalate (PET) Mimics Derived from Lignin," invited oral presentation, Florida Annual Meeting and Exposition (FAME) of the ACS, Tampa, Florida, May 13-15, **2010**.

Local

216. Miller, S. A. "Upcycling Polyethylene Terephthalate (PET)," invited oral presentation, *University of Florida Chemistry Club*, University of Florida, Gainesville, Florida, February 19, **2025**.

215. Miller, S. A. "Ocean Digestible Bioplastics," invited oral presentation, Highlands in Chemistry Seminar Series, Virginia Tech, Department of Chemistry, November 3, **2023**.
https://chem.vt.edu/about-us/highlands.html

211. Miller, S. A. "Sustainable Polymers," invited oral presentation, REWOOD Launch Meeting, Georgia Institute of Technology, Atlanta, Georgia, April 28, **2023** (virtual).

207. Miller, S. A. "Ocean Digestible Bioplastics," invited oral presentation, Polymer and Advanced Materials (PAM) Lecture, School of Polymer Science & Polymer Engineering, University of Akron, January 14, **2022**.
https://calendar.uakron.edu/polymer/event/18211-pam-lecture-prof-stephen-a-miller-university-of
206. Miller, S. A. "Ocean Digestible Bioplastics," invited oral presentation, 2021 POLY PMSE Student Chapter Macromolecular Summer Seminar Series, University of Florida, August 26, **2021** (virtual).
https://mobile.twitter.com/ufpolypmse/status/1430894021199622148/photo/1

203. Miller, S. A. “Programming the Properties and Degradation of Biopolymers for Packaging Applications,” invited oral presentation, ExxonMobil, Baytown, Texas, February 12, **2021** (virtual). https://corporate.exxonmobil.com/Locations/United-States/Baytown-area-operations-overview

195. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, Danimer Scientific, Bainbridge, Georgia, March 4, **2019**.
https://danimerscientific.com/

194. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, University of Georgia, Athens, Georgia, October 18, **2018**.
https://www.chem.uga.edu/

193. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, Mississippi State University, Starkville, Mississippi, September 21, **2018**.
https://www.chemistry.msstate.edu/

187. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, Baylor University, Waco, Texas, October 27, **2017**.

185. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, University of Minnesota, Minneapolis, April 25, **2017**.
https://chem.umn.edu/event/student-seminar-series-professor-stephen-miller

184. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, UF Soft Matter Applied Research and Technology Symposium (SMARTS), University of Florida, Gainesville, January 20, **2017**.
http://tinyurl.com/smartsUF

181. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, Florida State University, Tallahassee, Florida, September 15, **2016**.
https://www.chem.fsu.edu

180. Miller, S. A. “Building novel polyolefins with sterically expanded single-site catalysts,” invited oral presentation, TOTAL Cray Valley, Exton, Pennsylvania, September 14, **2016**.
http://www.crayvalley.com/

179. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, TOTAL Cray Valley, Exton, Pennsylvania, September 14, **2016**.
http://www.crayvalley.com/

176. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, University of Houston, Houston, Texas, March 1, **2016**. http://www.chem.uh.edu

168. Miller, S. A. “Programming the Properties and Degradation of Sustainable Polymers,” invited oral presentation, Université de Reims Champagne-Ardenne, Reims, France, June 30, **2015**.
http://www.univ-reims.fr/

167. Miller, S. A. “Sustainable polymers for packaging applications,” invited oral presentation, AgroParisTech, Reims, France, June 29, **2015**.
http://www.agroparistech.fr

160. Miller, S. A. “Bioplastics vs. Traditional Packaging Plastics,” invited oral presentation, University of Florida Society for Biomaterials, Biomaterials Day 2015, Gainesville, Florida, March 27, **2015**.
http://www.uflbiomaterials.org/#!biomaterials-day-2015/ctnx

158. Miller, S. A. "Programming the Properties and Degradation of Sustainable Polymers," invited oral presentation, Sultan Qaboos University, Muscat, Oman, December 16, **2014**.
http://www.squ.edu.om

TV. Miller, S. A. "U.S. Bioplastics," invited oral/video presentation, FOX 35, WOFL-TV, Orlando, Florida. Aired: August 26, **2014**.
https://www.youtube.com/watch?v=h5YDCKBAeK0
Aired August 31, **2014**.
https://www.youtube.com/watch?v=O10BKUWOqOM

143. Miller, S. A. "Sustainable Polymers: Controlling Thermal Properties and Degradation Behavior," invited oral presentation, University of Tokyo, Japan, March 4, **2014**.

142. Miller, S. A. "Programming the properties and degradation behavior of sustainable polymers," invited oral presentation, PPG Industries, Coatings Innovation Center, Allison Park, Pennsylvania, January 28, **2014**.

141. Miller, S. A. "Sustainable Polymers from Sugarcane Bagasse," invited oral presentation, U.S. Sugar Corporation, Clewiston, Florida, October 31, **2013**.

140. Miller, S. A. "Sustainable Polymers: Degradable Mimics of Commodity Polymers," invited oral presentation, University of Florida, Materials Science and Engineering Department, October 9, **2013**.

129. Miller, S. A. "Redesigning Fossil Fuel-Based Plastics with Biorenewable Feedstocks," invited oral presentation, UNICAMP - Universidade Estadual de Campinas, Sao Paulo, Brazil, April 29, **2013**.
http://www.iqm.unicamp.br/eng/

124. Miller, S. A. "The Miller Research Group: New Polymers for the Commodity Plastics Market," invited oral presentation, Saudi Basic Industries Corporation (SABIC), Riyadh, Saudi Arabia, September 12, **2012**. http://www.sabic.com

121. Miller, S. A. "Polymers from Sustainable Feedstocks," invited oral presentation, Arizona Chemical Company, Savannah, Georgia, August 1, **2012**. http://www.arizonachemical.com/

119. Miller, S. A. "Next-Generation Plastics from Plants Instead of Petroleum," invited oral presentation, Department of Chemistry Leadership Board Meeting, Innovation HUB, Gainesville, Florida, June 22, **2012**.

114. Miller, S. A. "Replacing Petroleum-Based Plastics: Polymers from Sustainable Feedstocks," invited oral presentation, Max Planck Institute for Polymer Research, Mainz, Germany, March 21, **2012**.
http://www.mpip-mainz.mpg.de/

112. Miller, S. A. "Replacing Petroleum-Based Plastics: Polymers from Sustainable Feedstocks," invited oral presentation, Leibniz-Institut für Polymerforschung Dresden, Germany, March 15, **2012**.
http://www.ipfdd.de/

111. Miller, S. A. "Plastics and Recycling," invited oral presentation, J.J. Finley Elementary School, Gainesville, Florida, January 24, **2012**.
http://www.sbac.edu/~finleyjj/index.html

109. Miller, S. A. "Miller Research Group," invited oral presentation, Presentation to Michelin Americas, Gainesville, Florida, October 25, **2011**.
http://michelinman.com/michelincom/about-us/about-us-landing.page

103. Miller, S. A. “Replacing Petroleum-Based Plastics: Polymers from Biorenewable Feedstocks,” invited oral presentation, Center for Particulate and Surfactant Systems / Cytec Industries Symposium, University of Florida, Gainesville, Florida, April 14, **2011**.

99. Miller, S. A. “**Plastics from Wood**” invited oral/video presentation, WCJB-TV ABC, Gainesville, Florida, March 15, **2011**.
http://www.wcjb.com/news/8958/technology-spotlight-3-15-11-plastics-from-wood
Miller, S. A., Cade Prize for Innovation 2011 – Final 4 Video, Gainesville, Florida, March 4, **2011**
http://www.youtube.com/watch?v=Q2HDG49gaLE

96. Miller, S. A. “Next Generation Commodity Polymers: Petroleum vs. Biomass,” invited oral presentation, Southern Methodist University, Dallas, Texas, October 22, **2010**.

95. Miller, S. A. “Next Generation Commodity Polymers: Petroleum vs. Biomass,” invited oral presentation, University of Texas at Dallas, Texas, October 21, **2010**.

94. Miller, S. A. “Sustainable polyethylene terephthalate (PET) mimics derived from lignin,” invited oral presentation, PepsiCo, Purchase, New York, October 18, **2010**.

93. Miller, S. A. “Polyolefin Construction with Catalysts that Favor Alpha-Olefins vs. Ethylene,” invited oral presentation, Hebei University of Technology, Tianjin, China, September 17, **2010**.

87. Miller, S. A. “Next Generation Thermoplastics from Biorenewable Feedstocks,” invited oral presentation, Rollins College, Winter Park, Florida, October 23, **2009**.

84. Miller, S. A. "Next Generation Thermoplastics: Improving Polypropylene and Utilizing Biomass," invited oral presentation, Texas A&M University, College Station, Texas, April 17th, **2009**.

83. Miller, S. A. "Next Generation Commodity Polymers: Petroleum vs. Biomass," invited oral presentation, University of Maryland, College Park, Maryland, April 9th, **2009**.

79. Miller, S. A. "Sterically Expanded Transition Metal Catalysts for Olefin Polymerization," invited oral presentation, DSM, Geleen, the Netherlands, June 18, **2008**.

78. Miller, S. A. "Future Thermoplastics from Single-Site Catalysts," invited oral presentation, RWTH Aachen, Germany, June 17, **2008**.

73. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, ExxonMobil, Baytown Polymer Center, Baytown, Texas, February 27, **2007**.

72. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, University of Akron, Akron, Ohio, January 23, **2007**.

71. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, University of Florida, Gainesville, Florida, January 16, **2007**.

70. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Louisiana State University, Baton Rouge, Louisiana, December 18, **2006**.

67. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Texas A&M University, College Station, Texas, October 2, **2006**.

66. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, University of Wyoming, Laramie, Wyoming, September 27, **2006**.

65. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Colorado State University, Fort Collins, Colorado, September 26, **2006**.

64. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Cornell University, Ithaca, New York, September 14, **2006**.

63. Miller, S. A. “Polymers from Alternative Economies,” invited oral presentation, NSF-REU Symposium Series, College Station, Texas, July 28, **2006**.

62. Miller, S. A. “Catalysis in the Miller Research Group,” Texas Molecular/Sea Lion, invited oral presentation, College Station, TX, May 11, **2006**.

61. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, University of Southern Mississippi, Hattiesburg, Mississippi, April 7, **2006**.

60. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, University of Alabama, Tuscaloosa, Alabama, April 6, **2006**.

57. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, California Institute of Technology, Pasadena, California, March 17, **2006**.

56. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, University of California at San Diego, San Diego, California, March 13, **2006**.

55. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, North Carolina State University, Raleigh, North Carolina, February 8, **2006**.

54. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, University of North Carolina, Chapel Hill, North Carolina, February 7, **2006**.

53. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Indiana University, Bloomington, Indiana, January 27, **2006**.

52. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Purdue University, West Lafayette, Indiana, January 26, **2006**.

51. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Eastman Chemical Company, Longview, Texas, January 16, **2006**.

50. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Dow Chemical Company, Freeport, Texas, December 2, **2005**.

49. Miller, S. A. “Polymer Chemistry at Texas A&M University: An Overview,” invited oral presentation, Dow Chemical Company, Freeport, Texas, December 2, **2005**.

48. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Total Petrochemicals, La Porte, Texas, November 17, **2005**.

46. Miller, S. A. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Dow Chemical Company Presentation, Texas A&M University, College Station, Texas, August 18, **2005**.

45. Miller, S. A.; Irwin, L. J.; Price, C. J.; Schwerdtfeger, E. D. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Emory University, Atlanta, Georgia, August 12, **2005**.

42. Miller, S. A.; Irwin, L. J.; Schwerdtfeger, E. D.; Price, C. J. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Polymer Technology Industrial Consortium, Texas A&M University, April 22, **2005**.

41. Miller, S. A. “Next-Generation Single-Site Catalysts for Synthesizing Recyclable Polyolefins,” invited oral presentation,, American Chemical Society Student Affiliate Chapter Meeting, College Station, TX, January 27, **2005**.

40. Miller, S. A. “Next-Generation Single-Site Catalysts for Olefin Polymerization,” invited oral presentation, Midwestern State University, Wichita Falls, Texas, November 12, **2004**.

39. Miller, S. A.; Reich, B. J. E.; Justice, A. K.; Grill, J. M.; Goss, J. M.; Beckstead, B. T.; Reibenspies, J. H. “Expanding Cyanide Catalysis,” invited oral presentation, IUCCP Symposium, College Station, Texas, October 20, **2004**.

38. Miller, S. A.; Irwin, L. J.; Schwerdtfeger, E. D.; Price, C. J. “Sterically Expanded Transition Metal Catalysts for Olefin Polymerization,” invited oral presentation, Polymer Technology Industrial Consortium, Texas A&M University, October 1, **2004**.

35. Miller, S. A. “Single Site Catalysts for Olefin Polymerization,” invited oral presentation, NSF-REU Symposium Series, College Station, Texas, June 11, **2004**.

32. Miller, S. A. “Syndiotactic-hemiisotactic Polypropylene from Metallocene Catalysts,” invited oral presentation, Polymer Technology Industrial Consortium, Texas A&M University, April 2, **2004**.

28. Miller, S. A. “New Materials via Stereoselective Olefin Polymerizations,” invited oral presentation, Polymer Technology Industrial Consortium, Texas A&M University, October 10, **2003**.

27. Miller, S. A. “Catalytic Formation of Carbon-Carbon Bonds,” invited oral presentation, NSF-REU Symposium Series, College Station, Texas, July 25, **2003**.

23. Miller, S. A. “Isotactic Block Length Distribution in Polypropylene: Bernoullian vs. Hemiisotactic,” invited oral presentation, IUCCP Board Meeting, College Station, Texas, May 15, **2003**.

21. Miller, S. A. “Synthesis and Application of Recyclable Polymers: Polymers 1 through 7,” invited oral presentation, American Chemical Society Student Affiliate Chapter Meeting, College Station, TX, November 7, **2002**.

18. Miller, S. A. “Organometallic Catalysts for Polymerizations and Small Molecule Transformations,” invited oral presentation, IUCCP Board Meeting, College Station, Texas, April 25, **2002**.

17. Miller, S. A. “Distal Ligand Perturbations in Metallocene Mediated Olefin Polymerization,” invited oral presentation, Dow Chemical Company, Chemical Sciences Laboratory, Freeport, TX, February 26, **2002**.

16. Miller, S. A. “Distal Ligand Perturbations in Metallocene Mediated Olefin Polymerization,” invited oral presentation, ExxonMobil Chemical Company, Baytown Polymers Center, Baytown, TX, January 11, **2002**.

15. Miller, S. A. “Olefin Oligomerization Catalysis: New Avenues of Investigation,” invited oral presentation, Sasol Co., Ltd., Austin, Texas, November 26, **2001**.

Postdoctoral Presentations by Dr. Miller (2001)

14. Miller S. A.; Schrock, R. R. "Asymmetric Ring Closing Metathesis (ARCM) with a Molybdenum Alkylidene Species Containing an Enantiomerically Pure Octahydrobinaphtholate Ligand," invited poster presentation, International Symposium on Olefin Metathesis (ISOM), M.I.T., Cambridge, MA, August 5-6, **2001**.

13. Miller, S. A.; Schrock, R. R. "Asymmetric Ring Closing Metathesis (ARCM) with a Molybdenum Alkylidene Species Containing an Enantiomerically Pure Octahydrobinaphtholate Ligand," contributed oral presentation, 221st ACS National Meeting, San Diego, CA, April 4, INOR 625, **2001**.

Graduate Student Presentations by Dr. Miller (1997-2001)

12. Miller, S. A.; Bercaw, J. E. "Distal Ligand Perturbations in Metallocene Mediated Olefin Polymerization," invited oral presentation, University of California at San Diego, January 26, **2001**.

11. Miller, S. A.; Bercaw, J. E. "Distal Ligand Perturbations in Metallocene Mediated Olefin Polymerization," invited oral presentation, Florida State University, January 15, **2001**.

10. Miller, S. A.; Bercaw, J. E. "Distal Ligand Perturbations in Metallocene Mediated Olefin Polymerization," invited oral presentation, University of Illinois (Urbana-Champaign), January 11, **2001**.

9. Miller, S. A.; Bercaw, J. E. "Distal Ligand Perturbations in Metallocene Mediated Olefin Polymerization," invited oral presentation, University of Kansas, January 8, **2001**.

8. Miller, S. A.; Bercaw, J. E. "Distal Ligand Perturbations in Metallocene Mediated Olefin Polymerization," invited oral presentation, Texas A&M University, December 7, **2000**.

7. Miller, S. A.; Bercaw, J. E. "Distal Ligand Perturbations in Metallocene Mediated Olefin Polymerization," invited oral presentation, Georgia Institute of Technology, November 20, **2000**.

6. Miller, S. A.; Bercaw, J. E. "Metallocene Mediated Olefin Polymerization: The Effects of Distal Ligand Perturbation on Polymer Stereochemistry," contributed poster presentation, Advances in Polyolefins II, Napa Valley, CA, October **2000**.

5. Miller, S. A.; Bercaw, J. E. "Isotactic Polypropylene Formation with C_1-Symmetric Metallocene Catalysts," contributed oral presentation, 218th ACS National Meeting, New Orleans, LA, August, INOR 523, **1999**.

4. Miller, S. A.; Bercaw, J. E. "Synthesis of Isotactic-Hemiisotactic and Syndiotactic-Hemiisotactic Polypropylene," contributed oral presentation, 217th ACS National Meeting, Anaheim, CA, March, INOR 19, **1999**.

3. Miller, S. A.; Bercaw, J. E. "Highly Stereoregular Syndiotactic Polypropylene," contributed poster presentation, 217th ACS National Meeting, Anaheim, CA, March, INOR 151, **1999**.

2. Miller, S. A.; Bercaw, J. E. "Amino-Fluorenide Derivatives of Group IV Metallocenes," contributed poster presentation, 213th ACS National Meeting, San Francisco, CA, April, INOR 196, **1997**.

Undergraduate Student Presentation by Dr. Miller (1994)

1. Miller, S. A.; Waymouth, R. M. "Diastereoselectivity in the Cyclopolymerization of alpha,omega-Olefins with Homogeneous Ziegler-Natta Catalysts," contributed poster presentation, 207th ACS National Meeting, San Diego, CA, April, INOR 130, **1994**.

Synergistic Activities

- Faculty mentor for the National Science Foundation – Research Experiences for Undergraduates (NSF-REU) program. Different NSF-REU programs have different target audiences and themes. The UF NSF-REU program historically recruits undergraduates from a cohort of Universities in France and focuses on issues of sustainability. Altogether, I have advised fifteen participants: 2003, 2; 2004, 1; 2005, 1; 2008, 1; 2010, 2; 2011, 1; 2013, 1; 2016, 1; 2017, 1; 2018, 2; 2019, 1; 2021, 1; 2025, 1.

- Active member of the George and Josephine Butler Polymer Research Laboratory (http://butlerlabs.chem.ufl.edu/) and the UF Center for Macromolecular Science and Engineering (http://www.cmse.ufl.edu/).

- Chief Technology Officer of **U.S. Bioplastics™** and **Inventor of Gatoresin™**. U.S. Bioplastics™ was a start-up company (2013-2020) targeting the conversion of ferulic acid and coumaric acid from sugarcane into temperature-resistant polyesters for disposable packaging applications. Initial investors contributed USD $600,000 to our laboratory and pilot scale production efforts.

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Collaborators & Other Affiliations

- **Collaborators:**

Industrial collaborations:
Mr. Yuki Iseki, Sumitomo Petrochemicals.
Kunitoshi Mimura, Mitsubishi Gas Chemical Company, Inc.

Journal publication co-authors:
Sheeja George, David Wright, University of Florida, IFAS
Thomas Rosenau, Antje Potthast, University of Natural Resources and Life Sciences, Vienna, Austria
Florent Allais, AgroParisTech, Reims, France.
Heloise O. Pastore, Universidade Estadual de Campinas (UniCamp), Brazil.
Seth M. Cohen, University of California at San Diego (UCSD).
Chi-Cheih Lin, National Chung-Hsing University, Taiwan.
Tarek M. Madkour, The American University in Cairo, Egypt.

Visiting Professors:
Professor Gholam H. Zohuri, Ferdowsi University, Mashad, Iran (2010);
Professor Tao Jiang, Tianjin University of Science & Technology, Tianjin, China (2010-2011);
Professor Gulsah Kurt, Aksaray University, Turkey (2011);
Professor Abdulhamid A. Alsaygh, King Abdulaziz City for Science & Technology, Saudi Arabia (2011);
Professor Ertugrul Sahmetlioglu, Nigde University, Turkey (2012);
Professor Yessi Permana, Institut of Teknologi Bandung, Indonesia (2012);
Professor Haixia Qi, Nanchang University, China (2014);
Professor Feng Liu, Nanchang University, China (2014);
Professor Zhengzai Cheng, Wuhan University of Science and Technology, China (2016–2017);
Professor Ersen Gökürk, TUBITAK Fellow, Mustafa Kemal University, Antakya, Turkey (2024–2025).

Collaborative Graduate Student Mentorship: Prof. Miller joined a collaboration with Florent Allais, director of AgroParisTech (Reims, France, https://www.agroparistech.fr/). This collaboration is designed to send approximately 4 graduate students to the University of Florida Chemistry Department. Each Ph.D. student will reside at UF for 3 years and then at AgroParisTech (near Reims, France) for 2 years, at which time the student will earn a co-advised Ph.D. These joint students are primarily funded by AgroParisTech. The first student (Florian Diot-Néant) began his studies at UF and joined the Miller Research Group in January, 2016, completed three years at UF, returned to France in January of 2019, and defended his Ph.D. thesis in October of 2020. Together we published 5 manuscripts and our final manuscript with Florian Diot-Néant as the main student author was published in 2022. We are still in contact with Florent Allais and will again consider collaborations when the opportunity arises.

UF Department of Education: Professor Miller has collaborated extensively with UF Professor of Educational Technology, Pavlo Antonenko. Prof. Antonenko is the Principal Investigator of "*SL-CN Project LENS: Leveraging Expertise in Neurotechnologies to Study Individual Differences in Multimedia*

Learning" (https://www.nsf.gov/awardsearch/showAward?AWD_ID=1540888), sponsored by the National Science Foundation (SBE Office of Multidisciplinary Activities, SMA, funded for $765,000). Prof. Miller designed and then rendered 80 pairs of molecules for a study aimed to test the three-dimensional spatial cognition of the subject. Specifically, the subject is asked to assign two molecules as superimposable (SAME) or non-superimposable (DIFFERENT) following any spatial rotations.

- **Graduate Advisors:** Professor Robert M. Waymouth, Stanford University (undergraduate and M.S.); Professor John E. Bercaw, California Institute of Technology (Ph.D.)
- **Postdoctoral Advisor:** Professor Richard R. Schrock, Massachusetts Institute of Technology

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- **Students Mentored:**

50 undergraduates: Tatiana Anthony, James Austin, Charles Branham, Brad Brennan, Ludmila Camargo, Brittany Carl, Dominique Catena, Cristina Chee Kim Ling Perez, Julie Chevillard, Juliette Commodore, Maria Cortez, Frankie Costanza, Caroline Coxwell, Charles Crews, Noémie Dias Rodrigues, Haley Donow, Alejandro Faria, Fabio Ferrari, Jeniree Flores, Jennifer Goss, Morgan Gunter, Amandine Heckmann, Jessica Hvozdovich, Aaron Justice, Marti Kubena, Laura Launer, Ellese Lee, Alan Luna, Hannah Malcolm, Allan Maple, Daniel Marek, Lacey Martin, Ryan Meral, Robert Mitchell, Catherine Mooney, Russell Parks, Jared Peacock, Erik Price, Enita Rastoder, Marcus Reis, Caron Remi, Lisa-Ann Ridley, Joshua Sanders, Emily Spitzberg, Emily Squibb, Jessica Thomas, Laurie Tweed, Alexander Valdes, William Vickery, Matteo Zambrano Carrillo.

50 graduate students: Khalid A. R. Al-Bahily,^ Khalid Alqahtani,^ Brittany T. Beckstead, Parker Boeck, Emma M. Bradic,^ Matthew C. Burnstein,^ Harper Cassady,^ Florian Diot-Néant,* Benjamin R. Duffus, Amr Feteha,* John Garcia,^* Nicole L. Gibbons,* Ersen Göktürk,* Christian Gorsche,^ Joseph M. Grill,* Andrea D. Ilg,^ Christelle Imbert, Levi J. Irwin,* Sabina Kinder, **McKayla Knoebel**, **Christopher Koelbl**, **Cody Layne**, Tanner Lee, Ryan Martin,* Laurent Mialon,^ Robert B. Mitchell, Hipassia Moura, Gholam-Reza Nejabat, Ha Nguyen,* Olivier Nsengiyumva,* James W. Ogle,* Alexander G. Pemba,* Craig J. Price,* Pengxu Qi,* B. Jesse E. Reich,* **Aracelee M. Reverón Pérez**, Nathan P. Rife,^ Mayra Rostagno,* Stephen Sangster,^ Patricia Scheurle, Eric D. Schwerdtfeger,* Steven Shen,* Gabriel N. Short,* **Justin A. Smith**, Yu-Kai Su,* Elizabeth R. Suda,^ Jordan Torgunrud,* Rob Vanderhenst,^ Yohei Yoshinaka,* Paul D. Zeits.

** 22 Ph.D. Students with degrees conferred*
^ 12 M.S. Students with degrees conferred
Present group members listed in bold.

6 postdoctoral scholars: David A. Aubry, Jianfang Chai, Hsuan-Ying Chen, Alexander G. Pemba, Pengxu Qi, Jubo Zhang.

Graduate Student Mentorship

My mentorship of graduate students has been one of the most fulfilling components of this position. Since my arrival at the University of Florida in 2007, **sixteen** students have completed their Ph.D. Degrees under my direction. These students are:

* Ryan T. Martin, Ph. D. in Chemistry, "Marine-Degradable Polyesters Through Incorporation of Esteracetals, and Comparison of a Radical Polymerization MATRIX vs. ROMP Matrix for Molecular Imprinting," December, **2013**. Current Position: CEO of Florida Sustainables.

* Alexander G. Pemba, Ph. D. in Chemistry, "Polyacetals from Bioderived Starting Materials as Potential Replacements for Commodity Packaging Plastics," November, **2013**. Current Position: Intel Corporation, Portland, Oregon.

* Ersen Göktürk, Ph. D. in Chemistry, "An Alternative Approach for Synthesizing Polyglycolic Acid and Its Copolymers from C1 Feedstocks", March, **2014**. Current Position: Assistant Professor at Mustafa Kemal University, Hatay, Turkey.

* John Garcia, Ph. D. in Chemistry, "Synthesis and Characterization of Degradable and Potentially Biorenewable Polyoxalates with Adjustable Thermal Properties," November 18, **2015**. Current Position: Specialist, Intel Corporation, Portland, Oregon.

* Nicole Gibbons, Ph.D. in Chemistry, "Low Density Polyethylene: Using Catalysts to Influence Branching and Molecular Weight," October 28, **2016**. Current Position: Intel Corporation, Portland, Oregon.

* Pengxu Qi, Ph.D. in Chemistry, "Synthesis and Characterization of Biorenewable and Degradable Poly(Ester Amide)s from Itaconic Acid as the Potential Replacement of Incumbent Commodity Plastics," November 7, **2016**.
* Ha Nguyen, Ph.D. in Chemistry, "Replacement of Commodity Plastics by Biorenewable and Degradable Polymers Prepared from Bio-Aromatics," November 8, **2016**. Current Position: Postdoctoral Associate with Prof. Anthony Brennan, Department of Materials Science, UF.
* Amr Feteha, Ph.D. in Chemistry, "Environmentally Friendly Packaging Polymers from Petroleum, Natural Gas, or Biorenewable Feedstocks," March 21, **2017**.
* Mayra Rostagno, Ph.D. in Chemistry, "Aromatic Polyacetals and Polyaldimines as Potential Replacements for Commodity Plastics," March 21, **2017**.
* Olivier Nsengiyumva, Ph.D. in Chemistry, "Polysilicon Acetals and Camphor-derived Polymers as Potential Replacements for Commodity Plastics," July 26, **2018**. Current Position: Professor/Lecturer at Washington Adventist University, Tacoma Park, Maryland.
* Gabriel N. Short, Ph.D. in Chemistry, "Expanding The Properties of Biorenewable Polymers with Bio-Cycles," May 3, **2019**.
* Steven Shen, Ph.D. in Chemistry, "Extraction And Polymerization Of Bioaromatics From Megacrops," December 13, **2019**. Current Position: Research Scientist, Intel Corporation (Portland, Oregon).
* Florian Diot-Néant, Ph.D. in Chemistry, "Green Synthesis of Bio-Based Monomers from Cellulose-Based Levoglucosenone and Preparation of Polyacrylates and Polyesters: Investigating More Sustainable Materials," October 27, **2020**.
* Yu-Kai Su, Ph.D. in Chemistry, "Biorenewable and Water Degradable Polymers: Polyvinyl Ketals, Polyimide-Esters, and Polyacetal-Esters," March 21, **2023**. Current Position: Researcher, Braskem Central Research, Pittsburgh, PA, USA.
* Jordan Torgunrud, Ph.D. in Chemistry, "Silica, Silicates, and Siloxanes: Unraveling their Properties, Depolymerization, and Polymerization," October 12, **2023**. Current Position: Chemistry and Science Teacher, Oak Hall High School.
* Yohei Yoshinaka, Ph.D. in Chemistry, "Design of Eco-Friendly and Water-Degradable Polyamides via Weak-Link Strategies," March 13, **2025**. Current Position: Postdoc at the University of Delaware.

Also during my time at the University of Florida, **ten** students have completed their Masters Degrees under my direction. These students are:
^ Laurent Mialon, Masters in Chemistry, "Synthesis of New Aromatic Polyesters from a Biorenewable Feedstock: Lignin," February 5th, **2010**. Current Position: SNF s.a.s, Lyon, France.
^ Christian Gorsche, Masters in Chemistry, "Synthesis of Polyesteracetals and New Polyesters from Biorenewable Feedstocks", August, **2010**. Current Position: Graduate Student, University of Technology, Vienna, Austria.
^ Rob Vanderhenst, Masters in Chemistry, "Clean and Direct Synthesis of Polycarbonates from Biorenewable Diols via Carbonate Metathesis Polymerization (CaMP)", December, **2011**. Current Position: Beiersdorf AG, Hamburg, Germany.
^ John Jairo Garcia Ocampo, Masters in Chemistry, "Polyalkylene and Polyarylene Oxalates via Ester Interchange", December, **2012**. Current Position: Specialist, Intel Corporation, Portland, Oregon.
^ Elizabeth R. Suda, Masters in Chemistry, "Ferulic Acid and Homovanillic Acid: Biorenewable Monomers for Polydihydroferulic Acid and Polyhomovanillic Acid, Serving as Possible Polyethylene Terephthalate and Polystyrene Mimics," December, **2013**. Current Position: Chemistry Lecturer at Sante Fe College.
^ Emma M. Bradic, M.S. in Chemistry (non-thesis option), May 6, **2014**.
^ Matthew C. Burnstein, M.S. in Chemistry (non-thesis option), May 6, **2014**. Current Position: Technician, Swamphead Brewery, Gainesville, Florida.
^ Khalid Alqahtani, M.S. in Chemistry, "Single Site Catalyst for Novel Ethylene/Propylene Polyolefins", April 18, **2016**. Current Position: SABIC in Riyadh, Saudi Arabia.
^ Harper Cassady, M.S. in Chemistry, "Orthosilicate Alkoxy Exchange and Polymerization," June 30, **2021**. Current Position: Anatomage (3D Anatomy & Virtual Dissection Platform).
^ Stephen Sangster, M.S. in Chemistry, "Viable Commodity Plastics Synthesized from Sugar-Derived Monomers," February 23, **2022**.
Several, non-degree seeking students have worked in my laboratory at UF via international exchange programs, including:

Hsiao-Li Chen, Taiwan
Shih-Hsien Hsu, Taiwan
Christelle Imbert, France
Sabina Kinder, Germany
Hipassia Moura, Brazil
Gholam-Reza Nejabat, Iran
Hsiu-Wei Ou, Taiwan
Patricia Scheurle, Germany
Hisaaki Takeshima, Japan
William Vickery, United Kingdom
Tatiana Anthony, France, undergraduate NSF-REU program
Ludmila Camargo, Brazil, undergraduate NSF-REU program
Cristina Chee Kim Ling Perez, France, undergraduate NSF-REU program
Julie Chevillard, France, undergraduate NSF-REU program
Fabio Ferrari, France, undergraduate NSF-REU program
Amandine Heckmann, France, undergraduate NSF-REU program
Alan Luna, Mexico/France, undergraduate NSF-REU program
Allan Maple, Brazil, undergraduate NSF-REU program
Enita Rastoder, Luxembourg/France, undergraduate NSF-REU program
Noémie Dias Rodrigues, France, undergraduate NSF-REU program
Matteo Zambrano Carrillo, France, undergraduate NSF-REU program

Recently, four of my undergraduate students have departed UF to join Graduate Programs in Chemistry:
Jeniree Flores, Texas A&M University
Erik Price, Case Western University, moved to University of Chicago
Marcus Reis, University of North Carolina, Chapel Hill
Jessica Thomas, University of Delaware
Caroline Coxwell, University of North Carolina, Chapel Hill
Morgan Gunter, Virginia Tech

Several of my students have won multiple academic awards, including those with monetary prizes and/or full travel budgets. For example:
Alexander Pemba:
2012 Butler Polymer Research Award, awarded by the UF Polymer Chemistry Program to one graduate student of the UF Chemistry Department, recognizing excellence in graduate student research, academic achievement, and service to polymer chemistry.
2013 NSF (National Science Foundation) Scholar, full support to attend the 17th Annual Green Chemistry & Green Engineering Conference in Washington, D.C.
Ha Nguyen:
2015 NSF (National Science Foundation) Scholar, full support to attend the 19th Annual Green Chemistry & Green Engineering Conference in Washington, D.C.
2015 ACS Division of Organic Chemistry Travel Scholarship, full support to attend the 6th Annual Graduate Research Symposium in Austin, Texas.
2015 UF Graduate Student Council Travel Grant & UF Office of Research Graduate Student Travel Award**,** for attendance of the 250th ACS Conference in Boston, MA
2015 Procter & Gamble Award, awarded by the UF Chemistry Department to seven graduate students for outstanding research achievement
2016 Ann R. Stasch Summer Fellowship, awarded by the UF Chemistry Department to two female graduate students, recognizing their excellence in research, scholarship, teaching, leadership, and service.
2016 Eastman Organic Chemistry Summer Fellowship, awarded by the Eastman Chemical Company to one graduate student of the UF Chemistry Department for innovation and impact in science, professional development, and excellent commitment to community in and out of the lab.
2016 Butler Polymer Research Award, awarded by the UF Polymer Chemistry Program to one graduate student of the UF Chemistry Department, recognizing excellence in graduate student research, academic achievement, and service to polymer chemistry.

2016 Runner Up for the ACS CELL Graduate Student Award, awarded by the ACS Division of Cellulose & Renewable Material, in collaboration with the Eastman Chemical Company, recognizing graduate student achievement in cellulose and renewable materials research
2016 UF CLAS Travel Award, Graduate Student Council Travel Grant & UF Office of Research Graduate Student Travel Award, for attendance of the 11th Society of Polymer Science, Japan (SPSJ), International Polymer Conference (IPC2016)
Mayra Rostagno:
2016 UF Office of Research Graduate Student Travel Award, for attendance of the ACS Sustainable Polymers 2016, Safety Harbor, Florida
2016 ACS Travel Award, full support for attending the American Chemical Society Summer School on Green Chemistry & Sustainable Energy, Golden, Colorado
2016 NIST Travel Award, for attending the 12th National Graduate Research Polymer Conference, Akron, Ohio
2016 ACS Travel Award, full support for attending the 2016 Graduate Research Symposium (ACS, Organic Chemistry Division), Bryn Mawr, Pennsylvania
2017 UF CLAS Travel Award, Graduate Student Council Travel Grant & UF Office of Research Graduate Student Travel Award, for attendance of the 253rd National ACS Meeting, San Francisco, California
Olivier Nsengiyumva:
2018 Travel Award, National Graduate Research Polymer Conference (NGRPC), University of Minnesota, Minneapolis, MN
Yohei Yoshinaka:
2022 Poster Award (3rd prize) at the 2022 Soft Matter Applied Research and Technology Symposium in Gainesville, FL
2023 Spring 2023 College of Liberal Arts and Sciences Travel Fund to attend ACS Spring 2023 in Indianapolis, IN
2023 Graduate Student Council travel grant to attend ACS Spring 2023 in Indianapolis, IN
2023 Fall 2023 College of Liberal Arts and Sciences Travel Fund to attend Sustainable Polymers 2023 in Safety Harbor, FL
Justin Smith:
2017-2021 University of Florida Graduate School Diversity Enhancement Fellowship, for supplemental funding for graduate studies pending satisfactory academic progress and performance
2024 Dr. Howard and Brenda Sheridan Summer Fellowship, full funding for one summer as a research assistant
Aracelee M. Reverón Pérez:
2024 Tarrant Summer Graduate Research Fellowship, full summer research fellowship support, Gainesville, Florida

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Service – Professional

Global Young Academy (http://www.globalyoungacademy.net/). Active Member, **2011–2016**. Alumnus Member, **2016–present**. The GYA is the voice of young scientists around the world and has ~250 active members, each serving five-year terms. Members work on a variety of global issues that impact young scientists, including the establishment of national young academies and connecting scientists from developed and underdeveloped countries. I am a co-founder and an alumnus group leader of the GYA–Young Scientist Ambassador Program. The GYA is a member of the IAP (Inter Academy Partnership, https://www.interacademies.org/), the global network of science academies that has a membership of 140+ scientific academies from around the world, including the U.S. National Academy of Sciences.

Workshops: Professor Miller was invited to and participated in three NSF-sponsored Workshops (Arlington/Washington, D.C.) and one DOE-sponsored Workshop (Bethesda, MD):
(1) "National Science Foundation SusChEM Workshop," January 17-19, **2012**.
(2) "Bioprivileged Molecules through Integrated Biology and Chemistry," January 5-6, **2017**.
(3) "Frontiers in Polymer Science and Engineering at NSF," August 17-18, **2016**.
(4) "U.S. Department of Energy Roundtable, *Chemical Upcycling of Polymers*," April 30-May 1, **2019**.

Editorial Board Member: Editorial Board member for the journal *Green Materials*, **2013–2025**. https://www.emeraldgrouppublishing.com/journal/jgrma

American Chemical Society

2011-2012, Served on the committee to construct the ACS Exam for Organic Chemistry (ACS Division of Chemical Education Examination)

2013, Symposium Co-organizer (with Prof. Robert Mathers), "Monomer and Polymer Mimicry with Renewables," 246th National ACS Meeting, Indianapolis, Indiana, September 11, 2013.

2019, Symposium Co-organizer (with Prof. Robert Mathers), "The Fate of Plastics in Water," 257th National ACS Meeting, Orlando, Florida, March 31-April 4, 2019.

Service – Department

Associate Chair, Chemistry Department, May 2022–present
Member, Chemistry Chair Search Committee, 2024
Member, Graduate Curriculum Committee, 2024–present
Chair, Graduate Curriculum Committee, 2021–2024
Member, By-Laws Revision Committee, 2023–present
Member, Faculty Awards Committee, 2020
Member, Peer Teaching Evaluation Committee for Lecturer Tammy Davidson (Spring 2019)
Member, Graduate Advising Committee, 2018–2020
Member, Search Committee for Organic Lecturer, 2018
Member, Graduate Standards Committee, 2012–2022
Member, Butler Polymer Award Selection Committee, 2007–present
Member, Leadership Board Liaison Committee, 2013–2022
Member, IT Advisory Committee, 2013–2022
Member, Organic Textbook Selection Committee, 2008–2019
Member, Peer Teaching Evaluation Committee for Lecturer Jeffrey Gower (Fall 2015)
Member or Chair, Chemistry Department Website Committee, 2008–2015, 2018–2022
Chair, Spectroscopy Services Committee 2010–2013
Member, Search Committee for Mass Spectrometry Facility Administrator, 2013
Member, Graduate Admissions Committee (Organic Division Representative), 2009–2011
Member, Graduate Selections & Recruiting (Polymer Area Representative), 2017–2022
Member, Faculty Search Committee, 2011
Member, Graduate Program Review Committee, 2011
Member, Jones Award in Creative Organic Chemistry Committee 2008
Member, Peer Teaching Evaluation Committee for Professor Bill Dolbier (Spring 2008)

In 2010, I coded a new UF Chemistry Website. It went live in April, 2010 and served as our departmental website until a commercial designer created our current website in 2015.

Grants and Contracts

1. Saudi Arabian Government/Saudi Basic Industries Corporation (SABIC): *Isotactic Polypropylene Formation Using Group IV and V Ansa-Metallocene Catalysts*. Dates: 01/01/02 - 12/31/04. Award: $101,346 (Graduate Fellowship to Khalid Al-Bahily).
2. Research Corporation (Innovation Award, RI0808): *Activation of Carbon Dioxide: Polyester Formation via Coordination Polymerization of Carbon Dioxide and Olefin*. Dates: 05/15/02 - 05/14/07. Award: $35,000.
3. The Welch Foundation: *New Polyolefin Architectures from Next-Generation Transition Metal Polymerization Catalysts*. Dates: 06/01/02 - 05/31/05. Award: $150,000.
4. The National Science Foundation (ESI-0083336): *Center for Applications of Information Technology in the Teaching and Learning of Science*. Dates: 06/01/03 - 07/21/06. Subcontract Award: $45,862 (6.67 total months of summer salary; PI: Richard E. Ewing). http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0083336
5. Petroleum Research Fund, American Chemical Society (Type G Grant): *Dimerization, Cyclization, and Polymerization via Aldimine Coupling*. Dates: 07/01/03 - 08/31/05. Award: $35,000.
6. Texas Higher Education Coordinating Board – Advanced Technology Program (a State of Texas Initiative): *Development of Novel Commercial Polyolefins from Nanoscale Catalysts*. Dates: 01/01/04 - 12/31/05. Award: $100,000.
7. Dow Chemical Company and the Texas A&M Dow Chemical Company Endowed Professorship: *Investigation of Isoselective, High-Temperature Olefin Polymerization Catalysts*. Dates: 01/01/04 - 8/22/06. Award: $215,208.
8. Saudi Basic Industries Corporation (SABIC): *Molecular Weight Determination via Gel Permeation Chromatography* (20 samples). Date: 5/30/05. Grant In-Kind: $20,000.
9. The Welch Foundation: *Controlling Polyolefin Architectures with Sterically Expanded Transition Metal Polymerization Catalysts*. Dates: 06/01/05 - 05/31/08. Award: $150,000.
10. The National Science Foundation (CHE-0548197): *CAREER: Catalytic Aldimine Coupling: A Versatile Carbon-Carbon Bond Forming Reaction*. Dates: 01/15/06 - 12/31/11. Award: $500,000. http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0548197
11. Specialty Minerals: *Polymer Nanocomposites*. Dates: 06/01/06 - 08/31/06. Subcontract Award: $5,250 (Summer Graduate Fellowship to Eric D. Schwerdtfeger. Co-PIs: H. J. Sue, Mechanical Engineering; A. Clearfield, Chemistry)
12. National Science Foundation (CHE): *MRI: Acquisition of a Dual Source X-Ray Diffraction Instrument*. Date: 07/01/2008. Award: $261,619. Co-Principal Investigator with five others.
13. Petroleum Research Fund – American Chemical Society (type AC): *Replacing Polyvinyl Chloride with Novel Thermoplastics Derived from Natural Gas*. Dates: 09/01/2008 – 8/31/2010. Award: $100,000.
14. Sumitomo Chemical Company: *Direct Polymerization of Ethylene to Branched Polyethylene*. Dates: 6/1/2008 – 5/31/2013. Award $60,000.
15. Solicore, Inc.: *Structure/Property Approach to Minimizing Agglomeration in Polyimide-Based Electrolytes*. Dates 11/19/2008 – 3/17/2009. Award $7,100.
16. Army Research Office (ARO) – Defense University Research Instrumentation Program (DURIP): *Acquisition of Preparative High Pressure Liquid Chromatography (prep HPLC) Instrumentation for the Butler Polymer Research Laboratory*. Dates: 4/15/2009 – 4/14/2010. Award: $96,000. Co-Principal Investigator with three others.
17. National Science Foundation (CHE-0848236): *Next Generation Thermoplastics from Biorenewable Carbonyl Compounds*. Dates: 7/1/2009 – 6/30/2012. Award: $382,812. http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0848236

18. IUPAC/National Science Foundation (CHE-1058079): *Morphology Control of Olefin Based Homo- and Copolymers in Catalytic Gas-Phase, Slurry and Emulsion Polymerization*. Dates: 10/1/2010 – 9/30/2013. Award: $480,000. This amount shared evenly with one collaborator. The other three collaborators (Dresden, Germany; Mainz, Germany; Sao Paulo, Brazil) are funded separately by IUPAC.
http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=1058079

19. Young Scientist/Entrepreneur Partnership Award, sponsored by the InterAcademy Panel and TWAS, the Academy of Sciences for the Developing World, 2010. Dates: 12/4/2010 – 12/3/2012. Award: $10,000. Collaborator: Fashion Designer Natalia Allen, Design Futurist™
http://www.designfuturist.com/

20. 2011 Cade Prize for Innovation, Winner. Dates: 5/12/2011 – present. Award: $50,000.
http://www.cademuseum.org/experience/prize.aspx

21. National Science Foundation (CHE-1305794): *SusChEM: Polyesters from Sustainable C1 Feedstocks*. Dates: 9/1/2013 – 8/31/2016. Award: $420,000.
http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=1305794

22. U.S. Bioplastics: *Replacing Water Bottle Plastic with Sustainable Polyesters from Sugarcane Waste*. Dates: 5/1/2014 – 4/30/2015. Award: $33,334.
http://usbioplastics.com/

23. Florida High Tech Corridor: *Replacing Water Bottle Plastic with Sustainable Polyesters from Sugarcane Waste*. Dates: 5/1/2014 – 4/30/2015. Award: $50,000. These are matching funds for the U.S. Bioplastics grant of the same title.
http://www.floridahightech.com/

24. Defense University Research Instrumentation Program (DURIP): *Acquisition of Dynamic Mechanical Analyzer and Stress-Controlled Rheometer for the Mechanical Characterization of Advanced Materials*, $224,180, March, 2016. K. Wagener, PI, along with co-PIs: D. Savin, B. Sumerlin, A. Veige, R. Castellano, and S. Miller.

25. National Science Foundation (CHE-1607263): *SusChEM: Building Superior Sustainable Polymers with Bioaromatics*. Dates: 9/1/2016 – 5/31/2021 (with no-cost ext.). Award: $464,640.
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1607263

26. U.S. Department of Agriculture: *Southeast Partnership for Advanced Renewables from Carinata (SPARC)*. Dates: 7/15/2017 – 7/14/2025. David Wright, Lead PI. ~$14,810,000 with approximately 20 other PIs. Miller Award: $271,495.
https://portal.nifa.usda.gov/web/crisprojectpages/1012948-southeast-partnership-for-advanced-renewables-from-carinata-sparc.html
https://www.nifa.usda.gov/grants/programs/bioeconomy-bioenergy-bioproducts-b3-programs/southeast-partnership-advanced-renewables-carinata-sparc

27. National Science Foundation (CHE-1904768): *Sustainable Polymers from Native Silicon*. Dates: 9/1/2019 – 8/31/2025 (with no-cost ext.). Award: $563,813.
https://www.nsf.gov/awardsearch/showAward?AWD_ID=1904768

28. National Science Foundation (CHE-2403778): *Sustainable Polymers via Amide to Ester Polymerization (ATEP)*. Dates: 9/1/2024 – 8/31/2027. Award: $555,000.
https://www.nsf.gov/awardsearch/showAward?AWD_ID=2403778

Teaching: Texas A&M University, 2001-2007

Undergraduate Courses

Course	Course Title	Semester	Enrollment	Co-taught
CHEM 227	Organic Chemistry I	2003 Fall	76	
CHEM 383	Environmental Chemistry	2004 Spring	11	9/27 lectures
		2005 Spring	29	9/27 lectures
		2006 Spring	19	9/27 lectures
CHEM 466	Polymer Chemistry	2003 Spring	72	
	(undergraduate and graduate)	2004 Spring	48	
		2005 Spring	62	
		2007 Spring	75	

Graduate Courses

Course	Course Title	Semester	Enrollment	Co-taught
CHEM 633	Inorganic Chemistry	2006 Fall	6	2/41 lectures
CHEM 642	Organometallic Chemistry &	2001 Fall	30	11/26 lectures
	Homogeneous Catalysis	2002 Fall	22	4/28 lectures
		2003 Fall	25	8/28 lectures
		2004 Fall	31	1/28 lectures
		2005 Fall	18	2/28 lectures
CHEM 646	Physical Organic Chemistry	2001 Fall	25	7/40 lectures
		2004 Fall	25	
		2005 Fall	30	
		2006 Fall	16	

Teaching: University of Florida, 2007-present

Syllabi: https://miller.chem.ufl.edu/teaching.shtml https://www.chem.ufl.edu/syllabi/

Undergraduate Courses

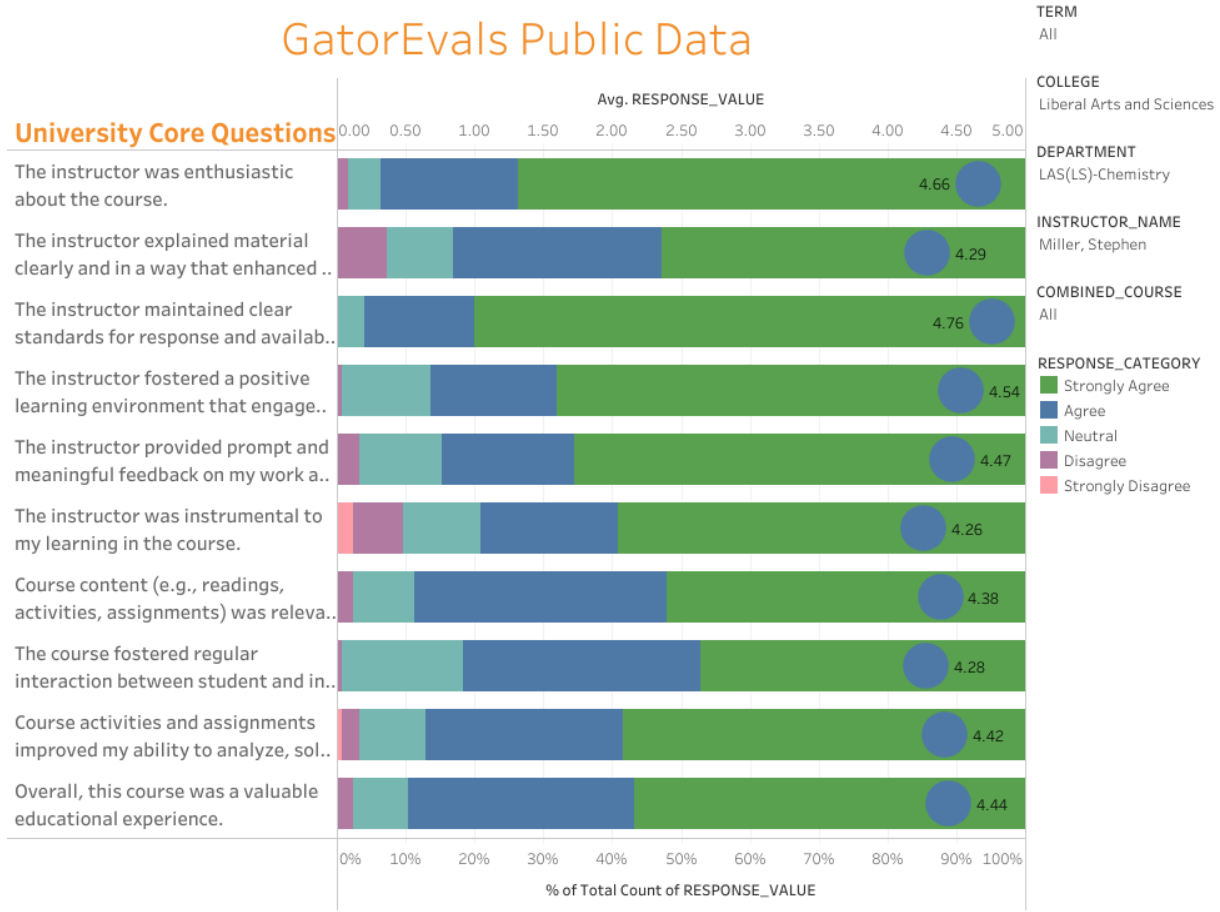
Course	Course Title	Semester	Enrollment
CHEM 2210	Organic Chemistry I	2008 Spring	116
		2008 Fall	131
		2009 Fall	169
		2011 Fall	168
		2013 Spring	157
		2013 Fall	173
		2015 Fall	196
		2016 Spring	181
		2017 Summer	58
		2018 Summer	128
		2019 Summer	73
CHEM 2212	Enhanced Organic Chemistry I (majors)	2016 Fall	41
		2017 Fall	38
	Organic Chemistry I for Majors (renamed)	2018 Fall	37
		2019 Fall	53
CHEM 2213	Enhanced Organic Chemistry II (majors)	2017 Spring	39
		2018 Spring	35
	Organic Chemistry II for Majors (renamed)	2019 Spring	39
		2020 Spring	55
CHEM 4272	The Organic Chemistry of Polymers	2009 Spring	29
		2012 Spring	24

Graduate Courses

Course	Course Title	Semester	Enrollment
CHEM 5275	The Organic Chemistry of Polymers	2007 Fall	15
		2010 Fall	17
		2012 Fall	23
		2020 Fall	14
		2021 Fall	16
CHEM 6225	Physical Organic Chemistry	2010 Spring	20
		2011 Spring	19
		2014 Spring	29
		2015 Spring	20
		2021 Spring	16
		2022 Spring	15
		2023 Spring	20
		2024 Spring	18
CHEM 6271	The Chemistry of High Polymers	2014 Fall	8

Instructor Evaluations

UF Instructor Evaluations, Public Data for Stephen A. Miller (aggregated Fall 2021 – Fall 2024):
https://gatorevals.aa.ufl.edu/public-results/



Selected Written Comments
https://ufl.bluera.com/ufl/

UF CHM 2212, Fall 2024: Dr. Miller is an exceptionally knowledgeable professor who demonstrates a strong enthusiasm for the course material and has a deep belief in the potential of his students.

UF CHM 6225, Spring 2024: Dr. Miller was a blessing this semester because he was really good at explaining. Also, he is super organized, and responsive and has good humor to make the class enjoyable.

UF CHM 6225, Spring 2023: Dr. Miller is a wonderful professor. By the way he teaches his classes and communicate with the students, you can tell he is very committed and passionate about his teaching.

UF CHM 6225, Spring 2022: Great organization, flexible scheduling, general enthusiasm over the course material.

UF CHM 5275, Fall 2021: His office hours were super helpful and educational. His exams were fair and his homework assignments helped with learning the material

UF CHM 6225, Spring 2021: Dr. Miller is very clear and concise in explaining the course material. He is very clear about what is expected in the course and his availability outside of class and in office hours for questions.

UF CHM 5275, Fall 2020: Dr. Miller is very passionate about the subject which makes him a good lecturer. He is approachable and never makes students feel intimidated or stupid for asking questions.

UF CHM 2213, Spring 2020: Dr. Miller has been my favorite professor so far in my time at the University of Florida. He has a gift for teaching content in an accessible an easy to understand way.

UF CHM 2212, Fall 2019: Dr. Miller is an engaging lecturer, and provides clear and coherent explanations of difficult concepts.

UF CHM 2213, Spring 2019: Dr. Miller is a wonderful professor! Would take him again for any class!

UF CHM 2212, Fall 2018: Best college chem teacher I've had yet! Everything about Professor Miller is awesome. He is a phenomenal teacher.

UF CHM 2210, Summer 2018: Dr. Miller's ability to impart his vast knowledge on us contributes to his success as a professor. I feel smarter after every class.

UF CHM 2213, Spring 2018: Best professor I've had. Fantastic professor, fantastic course.

UF CHM 2212, Fall 2017: One of the best professors I've had. I will for sure be taking any classes Dr. Miller offers–he's just that good.

UF CHM 2210, Summer 2017: Dr. Miller is one of the best professors I've had at UF.

UF CHM 2213, Spring 2017: Dr. Miller is one of the best UF instructors I've had so far, if not the best!

UF CHM 2212, Fall 2016: Favorite professor and course thus far. It's a pleasure to go to class each morning.

UF CHM 2210, Spring 2016: Literally the greatest professor I've had at UF

UF CHM 2210, Fall 2015: One of the best professors I have ever had at the University of Florida! Dr. Miller really cares about the students and their progress in his class!

UF CHM 6225, Spring 2015: Dr. Miller clearly has an excellent understanding of the complex material of this class which makes it easy for him to break it down and teach it to students from many different ways.

UF CHM 6271, Fall 2014: His enthusiasm and personal experience with the subject was readily apparent and contributed to my enjoyment of the class.

UF CHM 6225, Spring 2014: I enjoyed Dr. Miller's teaching style. A lot of attention was paid to trends in properties vs structure, and these trends were always explained very well, rather than just pointing them out and moving on.

UF CHM 2210, Fall 2013: One of the best professors I've had at UF and by far the best chemistry professor I've ever had.

UF CHM 2210, Spring 2013: Dr. Miller is literally the best professor at any University. He genuinely wants his students to do well in the class.

UF CHM 5275, Fall 2012: I love him. one of the best professors. I learned a lot from him.

UF CHM 4272, Spring 2012: Dr. Miller is an exceptional lecturer, with an outstanding breadth of knowledge about polymer chemistry and an engaging attitude.

UF CHM 2210, Fall 2011: Professor Miller is an amazing organic chemistry teacher. Organic chemistry is probably the most engaging, challenging, and rewarding class I've taken at UF.

UF CHM 6225, Spring 2011: Dr Miller is an amazing teacher with all best qualities that one would expect. Excellent lecturing skill, huge passion to teach and help student to learn.

UF CHM 6225, Spring 2010: Very personable and always able to help – excellent instructor overall!

UF CHM 2210, Fall 2009: Very personable and very approachable. Made orgo an easy and fun course. Best professor so far at UF.

UF CHM 4272, Spring 2009: One of the best prof. at UF. Dr. Miller is one of the top teachers at this school. Very clear speaker, enthusiastic about the subject.

UF CHM 2210, Fall 2008: One of the best science classes I've taken at UF. Dr. Miller was funny and managed to make chemistry interesting for once.

UF CHM 2210, Spring 2008: Great professor, very encouraging, very approachable, a good teacher—easily transmits ideas and connects concepts back together so the big picture is grasped.

UF CHM 5275, Fall 2007: Great explanations, material was clear and interesting. Always willing to help when asked and very approachable. Great teacher.

References

Prof. John E. Bercaw – California Institute of Technology (Ph.D. Advisor)
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California Institute of Technology
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Prof. Maurice S. Brookhart – University of North Carolina at Chapel Hill
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Prof. Richard R. Schrock – Massachusetts Institute of Technology (Postdoctoral Advisor)
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