

Alexander Ryan Lippert, Ph.D.

Department of Chemistry, Center for Drug Discovery, Design, and Delivery (CD4), and
Center for Global Health Impact (CGHI), Southern Methodist University
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Education and Training

- 2009–2012 **University of California, Berkeley, Berkeley, California**
Postdoctoral Studies in Chemical Biology
Advisor: Prof. Christopher J. Chang
- 2007–2008 **University of Pennsylvania, Philadelphia, Pennsylvania**
Ph.D. in Synthetic Chemistry
Advisor: Prof. Jeffrey W. Bode
- 2003–2007 **University of California, Santa Barbara, Santa Barbara, California**
Ph.D. candidate in Synthetic Chemistry
Advisor: Prof. Jeffrey W. Bode
- 1998–2003 **California Institute of Technology, Pasadena, California**
B.S. in Chemistry
Advisor: Prof. Linda Hsieh-Wilson

Positions

- 2012–present **Southern Methodist University, Dallas, Texas**, Assistant Professor of Chemistry
- 2016–present **Biolum Sciences, LLC, Dallas, Texas**, Chief Science Officer

Honors, Awards, and Affiliations

- (7) Sam Taylor Fellowship (2016-2017)
- (6) Member, Cognitive Science Research Cluster, Southern Methodist University (2015-present)
- (5) Member, Center for Global Health Impact (CGHI), Southern Methodist University (2014–present)
- (4) Member, Biopsychosocial Research Cluster, Southern Methodist University (2013–present)
- (3) Member, Center for Drug Discovery, Design, and Delivery (CD4), Southern Methodist University (2012–present)
- (2) Robert H. De Wolfe Teaching Fellowship (2007)
- (1) Member, American Chemical Society (2004–present)

Publications and Patents

Affiliated with Southern Methodist University (Underline = undergraduate; Underline italicized = high school author; * = Corresponding author)

- (29) Reeves, A. G.; Subbarao, M.; **Lippert, A. R.*** "Imaging Acetaldehyde Formation During Ethanol Metabolism in A549 Cells using a Hydrazinyl Naphthalimide Fluorescent Probe." *Anal. Methods* **2017**, accepted.
- (28) Kroll, J. L.; Chelsey, C. A.; Reeves, A. G.; Bruemmer, K. J.; **Lippert, A. R.**; Ritz, T.* "Sensitivity of Salivary Hydrogen Sulfide to Psychological Stress and its Association with Exhaled Nitric Oxide and Affect." *Physiol. Behav.* **2017**, accepted.
- (27) Patel, S. K.; Cao, J.; **Lippert, A. R.*** "A Volumetric Three-Dimensional Digital Light Photoactivatable Dye Display." *Nature Commun.* **2017**, accepted.
- (26) **Lippert, A. R.*** "Unlocking the Potential of Chemiluminescence Imaging." *ACS Cent. Sci.* **2017**, *3*, 269–271. doi: 10.1021/acscentsci.7b00107.
- (25) Lippert, A. R.*; Cao, J. "1-(Cyanomethyl)tetrahydro-1H-thiophen-1-ium Bromide." *e-EROS Encyclopedia of Reagents for Organic Synthesis* **2016**, 1–4.
- (24) Patel, S. K.; **Lippert, A. R.** (Southern Methodist University) "System and Method for a Three-Dimensional Optical Switch Display (OSD) Device." U.S. Patent Application 62,293,128, filed October 7, 2016.
- (23) Quimbar, M. E.; Krenek, K. M.; **Lippert, A. R.*** "A chemiluminescent platform for smartphone monitoring of H₂O₂ in human exhaled breath condensates." *Methods* **2016**, *109*, 123–130. doi: 10.1016/j.ymeth.2016.05.017.
- (22) Terrell, J. B.; **Lippert, A. R.**; Raicevic, S. (LMG Innovations, LLC) "Chemiluminescent Spray and Methods Related Thereto." U.S. Provisional Patent Application 62,331,896, filed May 19, 2016.
- (21) Cao, J.; Campbell, J.; Liu, L.; Mason, R. P.; **Lippert, A. R.*** "In Vivo Chemiluminescent Imaging Agents for Nitroreductase and Tissue Oxygenation." *Anal. Chem.* **2016**, *88*, 4995–5002. doi: 10.1021/acs.analchem.6b01096.
- (20) Cao, J.; Lopez, R.; Thacker, J. M.; Moon, J. Y.; Jiang, C.; Morris, S. N. S.; Bauer, J. H.; Tao, P.; Mason, R. P.; **Lippert, A. R.*** "Chemiluminescent Probes for Imaging H₂S in Living Animals." *Chem. Sci.* **2015**, *6*, 1979–1985. doi: 10.1039/C4SC03516J.
- (19) **Lippert, A. R.***; Dickinson, B. C.; New, E. J. "Imaging Mitochondrial Hydrogen Peroxide in Living Cells." *Methods Mol. Biol.* **2015**, *1264*, 231–243. doi: 10.1007/978-1-4939-2257-4_21.
- (18) Lin, V. S.; **Lippert, A. R.***; Chang, C. J.* "Azide-Based Fluorescent Probes: Imaging Hydrogen Sulfide in Living Systems." *Methods Enzymol.* **2015**, *554*, 63–80. doi: 10.1016/bs.mie.2014.11.011.
- (17) Bruemmer, K. J.; Merrikhihaghi, S.; Lollar, C. T.; Morris, S. N. S.; Bauer, J. H.; **Lippert, A. R.*** "¹⁹F Magnetic Resonance Probes for Detecting Peroxynitrite in Living Cells Using an Oxidative Decarbonylation Reaction." *Chem. Commun.* **2014**, *50*, 12311–12314. doi: 10.1039/C4CC04292A.
- (16) Krenek, K. M.; **Lippert, A. R.** (Southern Methodist University) "Composition, Device and Imaging System for Analysis Using Chemiluminescent Probes", U.S. Patent Application 14,741,141, filed June 16, 2015.

- (15) Lollar, C. T.; Krenek, K. M.; Bruemmer, K. J.; **Lippert, A. R.*** "Ylide Mediated Carbonyl Homologations for the Preparation of Isatin Derivatives." *Org. Biomol. Chem.* **2014**, *12*, 406–409. doi: 10.1039/C3OB42024H.
- (14) **Lippert, A. R.*** "Designing Reaction-Based Probes for the Selective Detection of Hydrogen Sulfide." *J. Inorg. Biochem.* **2014**, *133*, 136–142. doi: 10.1016/j.jinorgbio.2013.10.010.
- (13) Lin, V. S.; **Lippert, A. R.**; Chang, C. J.* "Cell-trappable fluorescent probes for endogenous hydrogen sulfide signaling: Imaging H₂O₂-dependent H₂S production." *Proc. Natl. Acad. Sci. USA* **2013**, *110*, 7131–7135. doi: 10.1073/pnas.1302193110.

Unaffiliated with Southern Methodist University

- (12) **Lippert, A. R.**; Chang, C. J.* (The Regents of The University of California, Oakland, CA) "Compositions and Methods for Imaging", U.S. Patent 13,816,620, filed August 22, 2011, and issued August 15, 2013.
- (11) Michel, B. W.; **Lippert, A. R.**; Chang, C. J.* "A Reaction-Based Fluorescent Probe for Selective Imaging of Carbon Monoxide in Living Cells Using a Palladium-Mediated Carbonylation." *J. Am. Chem. Soc.* **2012**, *124*, 15668–15671.
- (10) **Lippert, A. R.**; Lin, V.; Chang, C. J.* (The Regents of The University of California, Oakland, CA) "Fluorescent Probes for Reactive Sulfur Species", U.S. Patent 13,493,253, filed June 10, 2011, and issued Dec 27, 2012.
- (9) **Lippert, A. R.**; Van De Bittner, G. C.; Chang, C. J.* "Boronate Oxidation as a Bioorthogonal Reaction Approach for Studying the Chemistry of Hydrogen Peroxide in Living Systems." *Acc. Chem. Res.* **2011**, *44*, 793–804.
- (8) **Lippert, A. R.**; New, E. J.; Chang, C. J.* "Reaction-Based Fluorescent Probes for the Selective Imaging of Hydrogen Sulfide in Living Cells." *J. Am. Chem. Soc.* **2011**, *133*, 10078–10080.
- (7) **Lippert, A. R.**; Keshari, K. R.; Kurhanewicz, J.; Chang, C. J.* "A Hydrogen Peroxide-Responsive Hyperpolarized ¹³C MRI Contrast Agent." *J. Am. Chem. Soc.* **2011**, *133*, 3776–3779.
- (6) **Lippert, A. R.**; Naganawa, A.; Keleshian, V. L.; Bode, J. W.* "Synthesis of Phototrappable Shapeshifting Molecules for Adaptive Guest Binding." *J. Am. Chem. Soc.* **2010**, *132*, 15790–15799.
- (5) **Lippert, A. R.**; Gschneidtnr, T.; Chang, C. J.* "Lanthanide-Based Luminescent Probes for Selective Time-Gated Detection of Hydrogen Peroxide in Water and Living Cells." *Chem. Commun.* **2010**, *46*, 7510–7512.
- (4) **Lippert, A. R.**; Keleshian, V. L.; Bode, J. W.* "Dynamic Supramolecular Complexation by Shapeshifting Organic Molecules." *Org. Biomol. Chem.* **2009**, *7*, 1529–1532.
- (3) Ju, L.; **Lippert, A. R.**; Bode, J. W.* "Stereoretentive Synthesis and Chemoselective Amide-Forming Ligations of C-Terminal Peptide α -Ketoacids." *J. Am. Chem. Soc.* **2008**, *130*, 4253–4255.
- (2) **Lippert, A. R.**; Kaeobamrung, J.; Bode, J. W.* "Synthesis of Oligosubstituted Bullvalones: Shapeshifting Molecules Under Basic Conditions." *J. Am. Chem. Soc.* **2006**, *128*, 14738–14739.
- (1) Khidekel, N.; Arndt, S.; Lamarre-Vincent, N.; Lippert, A.; Poulin-Kerstien, K. G.; Ramakrishnan, B.; Qasba, P. K.; Hsieh-Wilson, L. C.* "A Chemoenzymatic Approach toward Rapid and Sensitive Detection of O-GlcNAc Posttranslational Modifications." *J. Am. Chem. Soc.* **2003**, *125*, 16162–16163.

Awards

Principal Investigator Awards for Research Support (\$1,039,495)

NSF

1653474

7/1/2017–7/1/2022

\$611,598 in funds to support stipends, supplies, and travel the project, "CAREER: Triggered Energy Transfer Chemiluminescence for In Vivo Imaging."

Role: PI

Sam Taylor Fellowship

12/8/2016-11/17/2017

\$1,989 in funds to support the project, "A 'Chemical Nose' Test for Spice/K2 Cannabinoids and Synthetic Derivatives."

Role: PI

LMG Innovations, LLC

1/4/2016-1/3/2016

\$52,583 in funds to support the project, "Development of a chemiluminescent spray for the detection of analytes."

Role: PI

University Research Council

12/18/2015–5/31/2017

\$4,985 in funds to buy supplies and equipment for the project, "Development and Prototyping of a Volumetric Three-Dimensional Optical Switch Display (OSD) Device."

Role: PI

NIGMS

R15GM114792

10/1/2015–9/31/2018

\$333,375 in funds to support stipends, supplies, travel, and participant reimbursement for the project, "Chemical Probes for Imaging Reactive Sulfur, Oxygen, and Nitrogen Species in Living Cells and Clinical Samples"

Role: PI

Dean's Research Council Grant

7/1/2015–6/31/2016

\$29,965 in funds to support stipends, supplies, travel, and participant reimbursement for the project, "Smartphone Monitoring of Airway Inflammation During Psychosocial Stress in Asthma."

Role: co-PI

CD4 Seed Funds

12/19/2013–unrestricted

\$2,500 in funds from the Center for Drug Discovery, Design, and Delivery (CD4) to obtain preliminary data for the project, "Chemiluminescent Molecular Imaging Probes for the Detection and Management of Prostate Cancer."

Role: PI

CD4 Seed Funds

12/19/2013–unrestricted

\$2,500 in funds from the Center for Drug Discovery, Design, and Delivery (CD4) to obtain preliminary data for the project, "Optimization of Lead Drug Hits to Inhibit the Multi-drug Resistant Protein."

Role: co-PI

Mentored Awards for Research Support (\$91,350)

Hamilton Undergraduate Research Award (Shreya Patel)

9/2/2015–5/6/2016

\$3,000 from the Hamilton Foundation for an academic year undergraduate research stipend for the project titled, "Volumetric 3D Digital Photoactivatable Dye (3D Light PAD) Displays."

Role: mentor

Engaged Learning Program (Stefan Raicevic)

2/6/2016–5/15/2017

\$2,000 from the Engaged Learning Program to support the project titled, "Development of a Chemiluminescent Aerosol Spray for Aerial Detection of H₂S and Other Compounds."

Role: mentor

Engaged Learning Program (Shreya Patel)

2/6/2016–5/15/2017

\$2,000 from the Engaged Learning Program for reagents and supplies for the undergraduate research project titled, "Rhodamine-Derived Optical Switch for Three-Dimensional Image Generation."

Role: mentor

Hamilton Undergraduate Research Award (Maureen Lohry)

5/17/2016–8/8/2016

\$2,000 from the Hamilton Foundation for a summer undergraduate research stipend for the project titled, "Chemiluminescent reagents for detecting superoxide using an acyl transfer reaction."

Role: mentor

Hamilton Undergraduate Research Award (Miguel Quimbar)

9/2/2015–5/6/2016

\$3,000 from the Hamilton Foundation for an academic year undergraduate research stipend for the project titled, "Chemiluminescent Platform for Smartphone Monitoring of Respiratory Disease."

Role: mentor

Biehl Graduate Fellowship (Jian Cao)

8/26/2015–5/6/2016

\$24,500 to support graduate stipend for the project, "Triggered Energy Transfer Chemiluminescence for In Vivo Imaging."

Role: mentor

Puerto Rico Louis Stokes Alliance for Minority Participation (Natanael Corsino)

6/1/2015–8/31/2015

\$4,800 to support stipend, transportation, lodging, and meals for a visiting student from the University of Puerto Rico to perform the undergraduate research project titled, "Tracking Cellular Uptake of Titanium with Fluorescence Microscopy."

Role: co-mentor with Prof. Arthur Tinoco

Big iDeas and Cox Business Plan Competitions (Miguel Quimbar, Edward Allegra, Jack Reynolds)

2/20/2015–unrestricted

\$37,050 in funds to support the start-up company "BioLum Sciences, LLC" with the aim to commercialize a chemiluminescent platform for smartphone monitoring of airway oxidative stress.

Role: mentor

Engaged Learning Program (Audrey Reeves)

2/6/2015–1/15/2017

\$2,000 from the Engaged Learning Program for reagents and supplies for the undergraduate research project titled, "Visualizing the Chemistry of Human Health and Disease with Fluorescent Probes."

Role: mentor

Engaged Learning Program (Miguel Quimbar)

2/6/2015–1/15/2017

\$2,000 from the Engaged Learning Program for reagents and supplies for the undergraduate research project titled, "Development of a Smartphone-based Chemiluminescent Point-of-care Imaging Device."

Role: mentor

Hamilton Undergraduate Research Award (Kevin J. Bruemmer)

8/26/2013–5/6/2014

\$3,000 from the Hamilton Foundation for an academic year undergraduate research stipend for the project titled, "Detection of Peroxynitrite using Chemical Shift-Switching ¹⁹F Magnetic Resonance Probes."

Role: mentor

Hamilton Undergraduate Research Award (Christina T. Lollar)

5/17/2013–8/8/2013

\$2,000 from the Hamilton Foundation for a summer undergraduate research stipend for the project titled, "Sulfur Ylide Method for the Synthesis of Benzil Derivatives."

Role: mentor

Engaged Learning Program (Christina T. Lollar)

3/26/2013–10/15/2015

\$2,000 from the Engaged Learning Program for reagents and supplies to support the undergraduate research project titled, "Sulfur Ylide Method for the Synthesis of Benzil Derivatives."

Role: mentor

Engaged Learning Program (Kevin J. Bruemmer)

3/26/2013–10/15/2014

\$2,000 from the Engaged Learning Program for reagents and supplies for the undergraduate research project titled, "Detection of Peroxynitrite using Chemical Shift-Switching ¹⁹F Magnetic Resonance Probes."

Role: mentor

Licensed Intellectual Property

- (2) **BioLum Sciences, LLC.** Krenek, K. M.; Lippert, A. R. (Southern Methodist University) "Composition, Device and Imaging System for Analysis Using Chemiluminescent Probes", U.S. Patent Application 14,741,141, filed June 16, 2015. *BioLum Sciences, LLC develops smartphone-based devices for home monitoring of asthma.*
- (1) **Sigma-Aldrich.** Lippert, A. R.; Lin, V.; Chang, C. J. (The Regents of The University of California, Oakland, CA) "Fluorescent Probes for Reactive Sulfur Species", U.S. Patent 13,493,253, filed June 10, 2011, and issued Dec 27, 2012. *Sigma-Aldrich sells the fluorescent probe SF7-AM for use in fluorescence detection of biological hydrogen sulfide.*

Presentations and Conference Abstracts

Invited Talks

- (26) **Cornell University**, Invited Speaker (June 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (25) **John Hopkins University**, Invited Speaker (May 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (24) **Perot Museum of Nature and Science**, Social Science "Elemental" Invited Speaker (April 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (23) **First American Gasotransmitter Symposium**, Atlanta, GA, Invited Speaker (April 2017), "From Cells to Humans: Chemical Strategies for Imaging Gasotransmitters and Related Species."
- (22) **Baylor University**, Invited Speaker (April 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (21) **Texas Christian University**, Invited Speaker (March 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (20) **University of Texas, Austin**, Invited Speaker (March 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (18) **University of Denver**, Invited Speaker (March 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (17) **Texas A&M**, Invited Speaker (March 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (16) **University of Oklahoma**, Invited Speaker (February 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (15) **DFW Young Investigators Symposium**, Invited Speaker (January 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (14) **University of Texas, Arlington**, Invited Speaker (January 2017) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (13) **University of California, Berkeley**, Invited Speaker (November 2016) "Shaping Light and Matter to Image and Visualize the Chemistry of Life."
- (12) **American Chemical Society Southwest Regional Meeting in Galveston**, Invited Speaker (November 2016) "Responsive Chemiluminescent Imaging Probes for Whole Animal Imaging."
- (11) **The STEMPREP Program at SMU**, Invited Speaker (April 2016) "Shaping Light and Matter to Illuminate the Chemistry of Life."
- (10) **Global and Public Health (SMU)**, Invited Speaker (April 2016) "Monitoring Asthma with Smartphones and Glowticks."
- (9) **Illinois State University**, Invited Speaker (April 2016) "Shaping Light and Matter to Illuminate the Chemistry of Life."
- (8) **Pacificchem**, Invited Speaker (December 2015) "Illuminating Reductase Activity in Hypoxia with Chemiluminescent Probes."

- (7) **University of Texas, Dallas**, Invited Speaker (September 2015) "Shaping Light and Matter to Illuminate the Chemistry of Life."
- (6) **University of Mississippi**, Invited Speaker (January 2015) "Reaction-based chemical probes for reactive sulfur, oxygen, and nitrogen species."
- (5) BME-Cancer Imaging Program Seminar Series, Invited Speaker, **UT Southwestern** (April 2014) "Reaction-based chemical probes for biologically generated sulfur, oxygen, and nitrogen species."
- (4) Keck Seminar Series, Invited Speaker, **Rice University** (April 2014) "Reaction-based chemical probes for biologically generated sulfur, oxygen, and nitrogen species."
- (3) **American Chemical Society Southwest Regional Meeting in Waco**, Invited Speaker (November 2013) "Reaction-based molecular imaging probes for visualizing disease biomarkers."
- (2) **Center for Drug Design, Discovery, and Delivery, SMU**, Invited Speaker (March 2013). "Chemical Probes for Imaging Hydrogen Sulfide and Peroxynitrite in Living Systems."
- (1) **American Peptide Symposium**, Invited Speaker, Young Investigator Lecture (June 2011). "Hydrogen Peroxide Responsive Hyperpolarized ^{13}C MRI Contrast Agents."

Other Talks and Posters

- (15) Artificial Molecular Switches & Motors Gordon Conference in Holderness, NH (June 2017). "Advanced photoswitch displays for volumetric 3D image generation."
- (14) American Chemical Society National Meeting in San Francisco (April 2017). "Advanced photoswitch displays for volumetric 3D image generation."
- (13) Nitric Oxide Gordon Conference in Ventura, CA (February 2017). "From Cells to Humans: Chemical Strategies for Imaging Reactive Species."
- (12) Bioorganic Gordon Conference in Proctor Academy (June 2016). "From Cells to Humans: Chemical Strategies for Imaging Reactive Species."
- (11) American Chemical Society National Meeting in San Diego (March 2016). "Triggered Energy Transfer Chemiluminescence for In Vivo Imaging."
- (10) American Chemical Society Southwest Regional Meeting in Ft. Worth (November 2014) "Illuminating reactive biomolecules with chemiluminescent probes."
- (9) American Chemical Society Southwest Regional Meeting in Ft. Worth (November 2014) "Reactive Nitrogen Species in Stress and Depression."
- (8) American Chemical Society National Meeting in San Francisco (August 2014). "Reactive Nitrogen Species in Stress and Depression."
- (7) Bioorganic Gordon Conference in Proctor Academy (June 2014). "Small Molecule Imaging Probes for Reactive Sulfur, Oxygen, and Nitrogen Species."
- (6) Bioorganic Gordon Conference in Proctor Academy (June 2013). "New Fluorescence and Magnetic Resonance Probes for ONOO^- ."
- (5) UT Southwestern Symposium and Training XXI: Frontiers in Molecular Imaging (May 2013). "Magnetic Resonance Detection of Peroxynitrite Using the Oxidative Decarbonylation of Isatin Derivatives."

- (4) Bioorganic Gordon Research Conference (June 2010). "New Reaction-Based Probes for H₂O₂ and O₂⁻."
- (3) American Chemical Society National Meeting in San Francisco (March 2010). "Lanthanide-based luminescent probes for hydrogen peroxide."
- (2) American Chemical Society National Meeting in Philadelphia (August 2008). "Functionalized bullvalenes: Adaptive organic molecules."
- (1) American Chemical Society National Meeting in San Francisco (September 2006). "Polysubstituted bullvalone: A base triggered adaptive organic molecule."

Manuscript, Grant Review, and Professional Service

- (1) **Manuscript Review.** Nature Communications, Nature Chemical Biology, Journal of the American Chemical Society, Angewandte Chemie, Chemical Science, Chemical Communications, Chemistry: A European Journal, Organic Letters, Analytical Chemistry, ACS Chemical Biology, ACS Chemical Neuroscience, Free Radicals in Biology and Medicine, Sensors and Actuators B: Chemical, Textile Research Journal, ChemBioChem, Biochimica et Biophysica Acta, Acta Chimica Acta, Tetrahedron Letters, ACS Applied Materials & Interfaces, Photochemical & Photobiological Sciences, Scientific Reports, Organic & Biomolecular Chemistry, Synlett, Talanta, Journal of Luminescence, RSC Advances, ACS Central Science, Nanoscale, Analyst
- (2) **Ad Hoc Grant Review.** National Science Foundation, ACS Petroleum Research Fund, Human Science Frontiers Program
- (3) Chair for the "Advanced Materials Technologies, Systems & Processes" Session of the Organic Chemistry Division at the 253rd American Chemical Society National Meeting in San Francisco in April 2017.
- (4) Chair for the "Biologically Related Molecules and Processes" Session of the Organic Chemistry Division at the 248th American Chemical Society National Meeting in San Francisco in April 2017.

Courses Taught at Southern Methodist University

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| (5) | Mechanisms in Organic, Bioorganic, and Organometallic Chemistry
Fall 2016 | CHEM 5308 |
| (4) | Advanced Inorganic Laboratory
Fall 2016 | CHEM 5192 |
| (3) | Organic Chemistry II
Summer 2015, Spring 2016, Spring 2017 | CHEM 3372 |
| (2) | Organic Chemistry I
Fall 2013, Spring 2014, Fall 2014, Spring 2015, Summer 2015, Fall 2015 | CHEM 3371 |
| (1) | Modern Aspects of Chemistry
Fall 2012, Fall 2013, Fall 2014, Fall 2015 | CHEM 6220 |

Students Mentored at Southern Methodist University

Current Graduate Students

- (4) Luca Scott Ryan, 1st year PhD student
- (3) Maha Aljowni, 3rd year PhD student

(2) Weiwei An, 3rd year PhD student

(1) Jian Cao, 4th year PhD student

Current Undergraduate Students

(5) Anthony Spearman, Junior

(4) Serene Zidan, Sophomore

(3) Minaz Zad, Freshman

(2) Natalie Focht, Junior

(1) Maureen Lohry, Junior

Alumni

(13) Shreya Patel, (B.S., 2017), PhD program in Chemistry at UCLA

(12) Stefan Raicevic, (B.S., 2017)

(11) Audrey Reeves, (B.S., 2017), PhD program in Chemistry at UC Berkeley

(10) Miguel Quimbar, (B.A., 2017), CTO BioLum Sciences, LLC

(9) Sara Merrikhihaghi Lange (M.S., 2016)

(8) Tristan Smyth (B.S., 2016), EMT

(7) Natanael Corsino, Visting Scholar, University of Puerto Rico

(6) Siti Nur Sarah Morris (M.S., 2015) PhD Program at UC Berkeley

(5) Jock Thacker (B.S., 2015) Medical School at St. George's University

(4) Kevin Bruemmer (B.S., 2014) PhD program in Chemistry at UC Berkeley (Advisor: Prof. Chris Chang)

(3) Christina Lollar, B.S. (B.S., 2014), PhD program in Chemistry at Texas A&M (Advisor: Prof. Hongcai Zhou)

(2) Katherine Krenek, (B.S., 2014) Medical School at UT Southwestern Medical Center

(1) Julian Spears, (B.A., 2014)