Neil K. Garg

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Education

California Institute of Technology, Pasadena, CA

- Ph.D. in Organic Chemistry, March 2005
- Graduate Research Assistant, July 2000 to March 2005
- National Defense Science and Engineering Graduate Fellow

New York University, New York, NY

- Bachelor of Science Degree in Chemistry (with honors), May 2000
- Minor Degree in Mathematics, May 2000
- Magna Cum Laude

Professional and Academic Experience

Kenneth N. Trueblood Endowed Chair in Chemistry and Biochemistry: Dept. of Chemistry & Biochemistry, University of California, Los Angeles, CA

- Kenneth N. Trueblood Endowed Chair in Chemistry and Biochemistry: July 2018 to present; Full Professor: July 2013 to June 2018; Associate Professor: July 2012 to June 2013; Assistant Professor: July 2007 to June 2012
- Discovered methods for generating reactive heterocyclic aryne, alkyne, and allene intermediates, such as indolynes, pyridynes, piperidynes, and azacyclic allenes for use in complex molecule synthesis.
- Developed 'interrupted Fischer indolization' methodology to access the fused indoline ring systems observed in a variety of bioactive molecules.
- Discovered nickel-catalyzed methodologies for cross-coupling phenol derivatives, such as aryl pivalates, carbamates, sulfamates, and carbonates.
- Discovered the first catalytic method to activate amide C–N bonds, which allows for the conversion of amides to esters and ketones using non-precious metal catalysis.
- Completed syntheses of the drugs flurbiprofen (anti-inflammatory) and linezolid (antibacterial), and the heterocyclic natural products physovenine, phenserine, debromoflustramine B, indolactam V, pendolmycin, teleocidin A-2, lyngbyatoxin A, aspidophylline A, picrinine, akuammiline, pseudo-akuammigine, tubingensin A, tubingensin B, and five elusive welwitindolinone alkaloids, including the MDR inhibitor *N*-methylwelwitindolinone C isothiocyanate.

Vice Chair for Education: Dept of Chemistry & Biochemistry, University of California, Los Angeles, CA

• July 2012 to September 2016

National Institutes of Health Postdoctoral Fellow: University of California, Irvine, CA

- NIH Pathway to Independence Fellow: December 2006 to June 2007
- NIH Ruth Kirschstein NRSA Postdoctoral Fellow: May 2005 to November 2006

• Completed the first total synthesis of the complex alkaloid (–)-sarain A, under the direction of Professor Larry E. Overman.

Graduate Research Assistant: California Institute of Technology, Pasadena, CA

- July 2000 to March 2005
- National Defense Science & Engineering Graduate Fellow
- Completed the total syntheses of dragmacidin D (protein phosphatase inhibitor) and dragmacidin F (HIV antagonist) as a graduate student in the laboratory of Prof. Brian M. Stoltz.
- Synthesized fluorescently-labeled deoxynucleoside triphosphate derivatives for single-molecule DNA sequencing technology in collaboration with the laboratory of Prof. Stephen R. Quake.

Teaching Assistant: California Institute of Technology, Pasadena, CA

- Graduate level organic synthesis (Fall 2001, Fall 2002)
- Undergraduate organic chemistry (Spring 2001) and general chemistry (Fall 2000, Winter 2001)

Teaching Assistant: New York University, New York, NY

- Undergraduate honors general chemistry (1999–2000)
- Undergraduate general chemistry (1998–1999)

Undergraduate Research Assistant: University of Louis Pasteur, Strasbourg, France

- May 1999 to August 1999
- Performed research in organic synthesis and supramolecular chemistry under the direction of Professor Mir Wais Hosseini (NSF Research Experience for Undergraduates program).

Undergraduate Research Assistant: New York University, New York, NY

- September 1997 to June 2000
- Performed independent undergraduate research in organic and inorganic synthesis under the guidance of Professor Marc Walters.

Honors and Awards

- ASBMB Award for Exemplary Contributions to Education, 2019
- Fellow of the American Chemical Society, 2018
- Blavatnik Award for Young Scientists, Finalist, 2018
- Robert Foster Cherry Award for Great Teaching, Grand Prize Winner, 2018
- Robert Foster Cherry Award for Great Teaching, Finalist, 2017
- HHMI Professors Competition, Finalist, 2017
- Royal Society of Chemistry's Higher Education Award, 2017
- Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis, 2017
- Mitsui Chemicals Catalysis Science Award of Encouragement, 2016
- Fellow of the Royal Society of Chemistry, 2016
- Royal Society of Chemistry's Merck Award, 2016
- Guggenheim Fellowship, 2016
- Thieme-IUPAC Prize, 2016
- Tetrahedron Young Investigator Award, 2016
- California's US Professor of the Year, Carnegie Foundation for the Advancement of Teaching, 2015
- UCLA Herbert Newby McCoy Award, 2015
- UCLA Gold Shield Faculty Prize, 2015
- Novartis Chemistry Lectureship, 2015–2016
- Arthur C. Cope Scholar Award, 2015
- UCLA Distinguished Teaching Award & Eby Award for the Art of Teaching, 2014

- Mortar Board National Honors Society, UCLA Honorary Faculty Member Award, 2014
- Dr. Robert Stevenson Faculty-in-Residence Award, UCLA Office of Residential Life, 2014
- Bristol-Myers Squibb Unrestricted Grant in Synthetic Organic Chemistry, 2013
- UCLA Bruinwalk's Professor of the Year, 2013
- Camille Dreyfus Teacher-Scholar Award, 2013
- S. T. Li Prize for Achievements in Science and Technology, 2012
- ACS Green Chemistry Institute Pharmaceutical Roundtable Grantee Award, 2012
- A. P. Sloan Research Fellowship, 2012
- Glenn T. Seaborg Award, 2012
- Roche Excellence in Chemistry Award, 2012
- UCLA Hanson–Dow Award for Excellence in Teaching, 2011
- UCLA Herbert Newby McCoy Award, 2011
- AstraZeneca Excellence in Chemistry Award, 2011
- Amgen Young Investigator Award, 2011
- Eli Lilly Grantee Award, 2010
- DuPont Young Professor Award, 2010
- NSF CAREER Award, 2010
- Thieme Chemistry Journal Award, 2010
- UCLA Faculty Research Grant, 2010
- Boehringer Ingelheim New Investigator Award, 2009
- UCLA Faculty Career Development Award, 2008
- UCLA Faculty Research Grant, 2008
- National Institutes of Health Pathway to Independence Award, 2006–2010
- National Institutes of Health Ruth Kirschstein Postdoctoral Fellowship, 2005–2006
- Herbert Newby McCoy Thesis Award at the California Institute of Technology, 2005
- Dow Chemical Company Travel Fellowship, 2002
- National Defense Science & Engineering Graduate Fellowship, 2001–2004
- Phi Beta Kappa, 2000
- George Granger Brown Scholarship Award in Chemistry, 2000
- American Institute of Chemists Prize, 2000
- New York University Outstanding Teaching Assistant Award, 1999
- National Science Foundation Research Experience for Undergraduates Fellowship, 1999

Teaching

Undergraduate Courses

Chemistry 14D: Organic Reactions and Pharmaceuticals

8.83 / 9.00 (2010; 256 students); 8.91 / 9.00 (2011; 354 students); 8.94 / 9.00 (2012; 375 students); 8.87 / 9.00 (2013; 381 students); 8.87 / 9.00 (2014; 374 students); 8.86 / 9.00 (2015; 361 students)

Chemistry 89: Honors Seminar for Chemistry 14D

8.93 / 9.00 (2010; 20 students); 8.95 / 9.00 (2011; 41 students); 8.90 / 9.00 (2012; 40 students);
8.94 / 9.00 (2013; 41 students); 9.00 / 9.00 (2014; 42 students); 9.00 / 9.00 (2015; 40 students)

Chemistry 30BL: Organic Chemistry Laboratory I

• 8.89 / 9.00 (2016; 87 students)

Chemistry 19: Fiat Lux

• Chemicals, Friends or Foes: 4.9 / 5.0 (2011; 19 students); 5.0 / 5.0 (2012; 18 students)

- Breaking Bad: 5.0 / 5.0 (2013; 18 students); 5.0 / 5.0 (2014; 18 students); 4.91 / 5.0 (2015; 20 students)
- Designing and Innovating: 4.9 / 5.0 (2018; 14 students)

Chemistry 147: Careers in Chemistry & Biochemistry

• 8.83 / 9.00 (2015; 60 students)

Chemistry 192C/D: Undergraduate Assistant Education Practicum for Chem 14D

- 9.00 / 9.00 (Spring 2015; 9 students); 9.00 / 9.00 (Fall 2015; 6 students); 9.00 / 9.00 (Winter 2016; 6 students); 9.00 / 9.00 (Spring 2016; 6 students); 9.00 / 9.00 (Spring 2017; 5 students);
- 9.00 / 9.00 (Fall 2017; 2 students); 9.00 / 9.00 (Winter 2018; 2 students); 9.00 / 9.00 (Spring 2018; 7 students)

Graduate Courses

Chemistry 210: Advanced Topics in Chemical Research

• 8.58 / 9.00 (2016; 30 students)

Chemistry 244A: Organic Synthesis

• 8.75 / 9.00 (2007; 20 students); 8.50 / 9.00 (2008; 20 students); 8.59 / 9.00 (2009; 27 students)

Chemistry 249B: Problems in Advanced Organic Chemistry

• 8.92 / 9.00 (2008; 18 students); 8.83/ 9.00 (2011; 19 students)

Chemistry 241F: Pharmaceutical Chemistry

• 8.63 / 9.00 (2009; 26 students); 8.91 / 9.00 (2011; 49 students)

Media Coverage

<u>Research</u>

"<u>Azacyclic Allenes Harnessed</u>", Chemical and Engineering News, 2018.

"Modeling Reduces Nickel Needed in Catalytic Reactions", Chemical and Engineering News, 2017.

<u>"John Simon Guggenheim Memorial Foundation 2016 Fellows"</u>, NY Times Newspaper Announcement, 2016.

"Top Research of 2015: Nickel Shines as a Catalyst", Chemical and Engineering News, 2015.

"<u>Amides Succumb to Suzuki–Miyaura Coupling, Thanks to Nickel Catalyst",</u> Chemical and Engineering News, 2015.

"<u>Chemists Find A Simple Approach to Activating Amide C–N Bonds"</u>, Chemical and Engineering News, 2015.

<u>"Arthur C. Cope Scholar Awards"</u>, Chemical and Engineering News, 2015.

"Piperidynes Take a New Number", Chemical and Engineering News, 2015.

<u>"Chemists Spruce Up Nickel Aminations"</u>, Chemical and Engineering News, 2014.

"Simple Method for Aryl Methyl Ketones", Chemical and Engineering News, 2014.

"Pyridynes Provide Access to Drug-Like Compounds", UCLA Chemistry and Biochemistry, 2013.

"UCLA Ranks Second in Nation in Number of 2012 Alfred P. Sloan Fellows", UCLA Newsroom, 2012.

"Alfred P. Sloan Research Fellowships 2012", NY Times Newspaper Announcement, 2012.

"Changeup Yields Indole Alkaloid", Chemical and Engineering News, 2011.

"Professor Wins 2011 AstraZeneca Excellence in Chemistry Award", UCLA Newsroom, 2011.

"<u>What Does the Eli Lilly Grant Provide to Academic Researchers</u>", Chemical and Engineering News, 2011.

"Chemistry Professor Receives Young Faculty Awards", UCLA Newsroom, 2010.

"The Next Generation of Scientific Leadership", Chemical and Engineering News, 2009.

Education

<u>"Student-Developed Tool Brings 3D Molecular Models to Smartphone Screen"</u> Daily Bruin, 2018.

"Inspired Teaching Rewarded", NY Times Newspaper Announcement, 2018.

<u>"Neil Garg Wins Robert Foster Cherry Award for Great Teaching"</u>, Chemical and Engineering News, 2018.

<u>"UCLA's Neil Garg Wins Country's Leading Teaching Award and its \$250,000 Prize"</u> UCLA Newsroom, 2018.

"Organic Chemistry App Game: Science Does Not Have to Be Scary" ChemistryViews, 2018.

<u>"This Standing-Room-Only Class Features Music Videos, a Gaming App and...Breathalyzers"</u> EdSurge, 2018.

"Professor and Former Students Develop Organic Chemistry Game App" Daily Bruin, 2017.

"Chemistry Professor Nominated for Award Honoring Teaching Ability" Daily Bruin, 2017.

"Chemistry Professor Neil Garg to Deliver Free, Public Lecture" UCLA Newsroom, 2017.

"Color Your Own Chemistry", Chemical and Engineering News, 2017.

<u>"Professor Neil Garg Publishes Kid-Friendly Organic Chemistry Book"</u> Daily Bruin, 2017.

"Garg Wins 2017 Royal Society of Chemistry Teaching Award" UCLA Newsroom, 2017.

"Organic Chemistry Sizzles for BACON Students Around the World" UCLA Newsroom, 2016.

"Bringing Home the Bacon", Chemistry World Magazine, 2016.

<u>"Neil Garg named 2015 Carnegie Foundation for the Advancement of Teaching California Professor of the Year",</u> UCLA Newsroom, 2015.

<u>"UCLA's Neil Garg Reveals His Award-Winning Teaching Techniques in TEDx Talk"</u> UCLA Newsroom, 2015.

<u>"Chemistry Education for the YouTube Generation",</u> Chemical and Engineering News, 2015.

<u>"Chemistry Professor Neil Garg Honored with Gold Shield Faculty Prize"</u> UCLA Newsroom, 2015.

"Professor's BACON Fuses Chemistry, Biology Education with Pop Culture" Daily Bruin, 2015.

"Has Organic Chemistry Become UCLA Most Beloved Class?" UCLA Newsroom, 2014.

"The 8 Coolest Classes to Take at UCLA" Buzzfeed, 2014

<u>"A Magical Reaction: Mix Chemistry, YouTube, and a Special Teacher"</u> UCLA Magazine, 2014.

<u>"UCLA Professor Develops Class Lab From ACS GCI Pharmaceutical Roundtable Grant"</u> American Chemical Society Green Chemistry Institute's Nexus News, 2014.

<u>"Sweet Dreams (Are Made of Chemistry)</u>" UCLA Newsroom, 2013.

"Best Classes in L.A.: Organic Chemistry at UCLA" LA Weekly, 2012.

"Student Video Competitions Continue to Heat Up" Chemical & Engineering News, 2012.

"Chemistry You Can Dance To" UCLA Newsroom, 2012.

"Life on the Hill is New Territory for These Faculty" UCLA Newsroom, 2012.

"Chemistry Never Sounded This Good" UCLA Newsroom, 2011.

"Organic Chemistry Music Videos Building Momentum" Chemical & Engineering News, 2011.

"Video Thunderdome" Chemical & Engineering News, 2010.

"Students Rap to Chemistry" UCLA Newsroom, 2010.

"Organic Chemistry for the YouTube Generation" Nature Chemistry, 2010.

Chief Service Responsibilities at UCLA

Faculty-in-Residence: UCLA Office of Residential Life, July 2012 to present

Provide academic inspiration and support to UCLA undergraduate students by living 'on the hill'.

- Interact with >1000 undergraduate students per year and many parents through move-in weekend, weekly meetings, programs, dining hall meals, and casual interactions.
- \circ Attend weekly meetings with student staff and monthly meetings with other Faculty-In-Residence.

- Collaborate with student staff members to develop programs to improve the student experience at UCLA.
- Coordinated >20 programs since 2012 including casual study breaks, resumé-writing workshops, science activities, and bringing students off-campus to explore Los Angeles (California Science Center, LACMA, UCLA Aquatic Facility for kayaking, etc.).
- Organized "Get Intimate with 3 Deans and an FIR" in 2014, which gave a small group of students the chance to dine with Dean Rudnick, Associate Dean Van Valkenburgh, and Dean Duranti at a UCLA Dining Hall. The program received the 2014 Dr. Alan L. Hanson Academic Integration Award, which is the highest honor given for a program at UCLA "on the hill".
- Received two "Of the Month" Awards from the True Bruin Chapter of the National Residence Hall Honorary for excellence in programming and service as Faculty-in-Residence in 2014.
- Received the Dr. Robert Stevenson Faculty-in-Residence Award in 2014.
- Received "On the Spot" Award from UCLA Residential Life in 2015.

Vice Chair for Education: UCLA Dept of Chemistry & Biochemistry, July 2012 to September 2016

- Coordinate Departmental teaching schedule for the academic year and summer terms.
- Oversee all aspects of graduate education; key initiatives include the creation of: (a) an internal graduate fellowship program using donor funds, (b) mentoring workshops for graduate students preparing for candidacy exams, (c) a system for tracking and helping students in need, and (d) 'Fourth Year Meetings', where students meet with faculty and develop plans for graduation and their futures.
- Oversee all aspects of undergraduate education; primary responsibilities include handling grade disputes, communicating with concerned parents and students, solving enrollment problems, hiring temporary lecturers, mentoring temporary lecturers, and finding ways to expand course offerings, especially for undergraduate laboratory courses that have space limitations.

Committee Activities and Other UCLA Service Items

University Committees

- Program for Excellence in Education and Research in the Sciences (PEERS) Advisor Board, Member, 2017 to present
- Education Innovation Task Force, Member, 2017 to present
- Academic Committee for the Future Positioning of the Office of Instructional Development, Member, 2015 to 2017
- TEDxUCLA Advisory Board, Member, 2015 to present
- Faculty Committee on Educational Technology, Member, 2014 to 2017
- Life Sciences Curriculum Committee, Member, 2013 to 2016
- Representative to Legislative Assembly of the Academic Senate (2008–2012)

Departmental Committees

- Faculty Mentoring Committee, Chair, 2018 to present
- Staffing Committee, 2015 to 2018
- Undergraduate Laboratory Committee: Co- Chair, 2017 to present
- Graduate Advisor for Organic Chemistry, 2012 to present
- Administrative Committee, Member as Vice Chair, 2012 to 2016
- Teaching Committee: Oversee as Vice Chair, 2012 to 2016
- Curriculum Committee: Oversee as Vice Chair, 2012 to 2016
- Graduate Studies Committees: Oversee as Vice Chair, 2012 to 2016
- Undergraduate Studies Committees: Oversee as Vice Chair, 2012 to 2016
- Undergraduate Laboratory Committee: Oversee as Vice Chair, 2012 to 2016
- Organic Chemistry Faculty Search Committee, Chair, 2014
- Inorganic Faculty Search Committee, Member, 2013

Other Scholary Activities and Service Items at UCLA

- Marshall for UCLA College of Arts and Science Commencement Ceremony, June 2016
- UCLA/Cross-Disciplinary Scholars in Science and Technology Program (CSST), Faculty Mentor, 2009 to present
- UCLA Amgen Scholars Program, Faculty Mentor, 2008 to present
- UCLA Chemistry-Biology Interface (CBI), an NIH-sponsored training program for UCLA graduate students, Faculty Mentor, 2008 to present
- UCLA Regents Scholars Society, Faculty Mentor, 2013 to present
- UCLA National Society of Collegiate Scholars at UCLA, Faculty Advisor, 2012 to present
- UCLA Innoworks, Faculty Advisor, 2012 to present
- UCLA Graduate Division's Dissertation Year Fellowship Program, Reviewer, 2010 to present
- UCLA's Academic Senate COR Faculty Research Grant Program, Reviewer, 2012 to present
- UCLA Bruin Day, Faculty Representative and Presenter, April 2013, April 2014, and April 2015
- UCLA College of Letters and Sciences Commencement Representative for the Department of Chemistry and Biochemistry, June 2013, June 2014, June 2015, and June 2016
- UCLA Transfer Admit Day, Faculty Representative and Presenter, May 2014
- UC Regents Scholars Society Annual Meeting, Faculty Lecturer, May 2013
- UCLA Alumni Scholars Club State Finals Competition, Faculty Participant, April 2011, 2013, 2015
- UCLA Admissions Counselor Day, Faculty Representative, October 2012
- Organized tours of Amgen's Medicinal & Process Chemistry Facilities (Thousand Oaks) for UCLA graduate students, June 2009 and March 2011
- UC EDGE Graduate Recruitment Day for minority students, Roundtable Discussion Facilitator, February 2009
- Amgen Scholars Program National Symposium at UCLA, Roundtable Discussion Facilitator, July 2008 & 2015

Service Beyond the UCLA Community and Outreach Activities

Membership and Service to the Scientific Community Beyond UCLA

- Tetrahedron and Tetrahedron Letters, Editorial Advisory Board Member, 2017 to present
- International Society of Heterocyclic Chemistry, Member of Advisory Committee as Publicity Chairperson, 2018 to 2019
- Medicinal & Bioorganic Chemistry Foundation, Board of Directors, 2017 to present
- UC Cancer Research Coordinating Committee, Member and Grant Reviewer, 2014 to present
- American Association for the Advancement of Science, Member, 2013 to present
- National Science Foundation, Grant Reviewer, 2011 to present
- American Chemical Society Petroleum Research Fund, Grant Reviewer, 2012 to present
- Manuscript Reviewer for over >250 manuscripts and >20 scientific journals: 2007 to present
- ACS Catalysis, Editorial Advisory Board Member, 2014 to present
- Organic Letters, Editorial Advisory Board Member, 2014 to present
- Organic Syntheses, Board of Editors, 2015 to present
- National Science Foundation Graduate Fellowships Program, Fellowship Panelist: 2011, 2012, 2014, and 2015
- American Chemical Society, Member, 1998 to present

Scientific Outreach Activities at UCLA and in the Los Angeles Community

- Developed <u>QR Chem</u>, an visualization aid for the 3D structures of molecules, with five undergraduate students, 2018 – present
- Taught organic chemistry to middle and high school students at the UCLA Geffen Academy, April 2018.
- Created <u>Backside Attack</u>, a free smartphone application that teaches key concepts of organic chemistry, withsix undergraduate students, 2018.

- Published <u>The Organic Coloring Book</u>, a book designed to help children appreciate the impact of organic molecules in their everyday lives, 2017.
- Appeared on the *Discovery Science* Channel TV Show <u>The Quick and the Curious</u> (Season 1, Episode 2) to explain the chemistry of electrolytes, January, 2016.
- Presented at <u>TED[×]UCLA</u> and discussed educational initiatives to overcome the common negative perception of organic chemistry, May, 2015.
- Developed <u>BACON</u> (Biology And Chemistry Online Notes And Tutorials), a series of online tutorials that connect organic chemistry with topics in health, the real world, and pop culture, 2014 present
- Performed chemistry demonstrations for children at Warner Elementary School, October 2012, October 2013, November 2014, October 2015, April 2016, May 2017, December 2017, and May 2018.
- Performed chemistry demonstrations for children at UCLA Daycare (Krieger), October 2011, October 2014, October 2015, and May 2017
- Hosted Los Angeles middle-school children for UCLA Innoworks Workshop, July 2012, July 2013, and June 2014
- Performed chemistry demonstrations for children of faculty and staff who live on campus for the Halloween celebration held in the UCLA dormitories, October 2013
- Served as a judge for the Los Angeles County Science Fair, March 2012
- Lectured and performed chemistry demonstrations for UCLA March to College Day, May 2012
- Performed chemistry demonstrations for children at UCLA Alumni Day, May 2011 & 2012

Publications (Research Contributions)

Independent Career

- 89. <u>Diels-Alder Cycloadditions of Strained Azacyclic Allenes</u>. Joyann S. Barber, Michael M. Yamano, Melissa Ramirez, Evan R. Darzi, Rachel R. Knapp, Fang Liu, K. N. Houk, and Neil K. Garg. *Nature Chemistry* 2018 (doi: 10.1038/s41557-018-0080-1).
- **88.** <u>Synthesis of 8-Hydroxygeraniol</u>. Francesca M. Ippoliti, Joyann S. Barber, Yi Tang, and Neil K. Garg. *J. Org. Chem.* **2018**, *ASAP*.
- 87. <u>Arynes and Cyclic Alkynes as Synthetic Building Blocks for Stereodefined Quaternary Centers</u>. Elias Picazo, Sarah M. Anthony, Maude Giroud, Adam Simon, Margeaux A. Miller, K. N. Houk, and Neil K. Garg. *J. Am. Chem. Soc.* **2018**, *140*, 7605–7610.
- 86. <u>Enantioselective Total Syntheses of Methanoquinolizidine-Containing Akuammiline</u> <u>Alkaloids and Related Studies</u>. Elias Picazo, Lucas A. Morrill, Robert B. Susick, Jesus Moreno, Joel Smith, and Neil K. Garg. *J. Am. Chem. Soc.* **2018**, *140*, 6483–6492.
- 85. <u>Nickel-Catalyzed Suzuki–Miyaura Coupling of Aliphatic Amides</u>. Timothy B. Boit, Nicholas A. Weires, Junyong Kim, and Neil K. Garg. *ACS Catal.* **2018**, *8*, 1003–1008.
- 84. <u>Engineering the Biocatalytic Selectivity of Iridoid Production in Saccharomyces</u> <u>cerevisiae</u>. John M. Billingsley, Anthony B. DeNicola, Joyann S. Barber, Man-Cheng Tang, Joe Horecka, Angela Chu, Neil K. Garg, and Yi Tang. *Metab. Eng.* **2017**, *44*, 117–125.
- **83.** <u>Understanding and Interrupting the Fischer Azaindolization Reaction</u>. Bryan J. Simmons, Marie Hoffmann, Pier A. Champagne, Elias Picazo, Katsuya Yamakawa, Lucas A. Morrill, K. N. Houk, and Neil K. Garg. *J. Am. Chem. Soc.* **2017**, *139*, 14833–14836.
- Spectroscopy 101: A Practical Introduction to Spectroscopy and Analysis for Undergraduate Organic Chemistry Laboratories. Lucas A. Morrill, Jacquelin K. Kammeyer, and Neil K. Garg. J. Chem. Ed. 2017, 94, 1584–1586.
- Nickel-Catalyzed Transamidation of Aliphatic Amide Derivatives. Jacob E. Dander, Emma L. Baker, and Neil K. Garg. Chem. Sci. 2017, 8, 6433–6438.
- <u>Conjugated Trimeric Scaffolds Accessible From Indolyne Cyclotrimerizations: Synthesis,</u> <u>Structures, and Electronic Properties</u>. Janice B. Lin, Tejas K. Shah, Adam E. Goetz, Neil K. Garg, and K. N. Houk. *J. Am. Chem. Soc.* 2017, *139*, 10447–10455.

- **79.** Total Synthesis of (–)-Tubingensin B Enabled by the Strategic Use of an Aryne Cyclization. Michael A. Corsello, Junyong Kim, and Neil K. Garg. *Nature Chemistry* **2017**, *9*, 944–949.
- 78. Enantioselective Nickel-Catalyzed Mizoroki–Heck Cyclization to Generate Quaternary Stereocenters. Jean-Nicolas Desrosiers, Jialin Wen, Sergei Tcyrulnikov, Soumik Biswas, Bo Qu, Liana Hie, Dmitry Kurouski, Ling Wu, Nelu Grinberg, Nizar Haddad, Carl A. Busacca, Nathan K. Yee, Jinhua J. Song, Neil K. Garg, Xumu Zhang, Marisa C. Kozlowski, and Chris H. Senanayake. Org. Lett. 2017, 19, 3338–3341.
- 77. <u>Kinetic Modeling of the Nickel-Catalyzed Esterification of Amides</u>. Nicholas A. Weires, Daniel D. Caspi, and Neil K. Garg. *ACS Catal.* **2017**, *7*, 4381–4385.
- 76. <u>Heck Cyclizations of Amide Derivatives for the Introduction of Quaternary Centers</u>. Jose M. Medina, Jesus Moreno, Sophie Racine, and Neil K. Garg. *Angew. Chem. Int. Ed.* **2017**, *56*, 6567–6571.
- 75. <u>Collaborative Biosynthesis of Maleimide- and Succinimide-Containing Natural Products</u> <u>by Fungal Polyketide Megasynthases</u>. Michio Sato, Jacob E. Dander, Chizuru Sato, Yiu-sun Hung, Shu-Shan Gao, Man-Cheng Tang, Leibniz Hang, Jaclyn M. Winter, Neil K. Garg, Kenji Watanabe, and Yi Tang. *J. Am. Chem. Soc.* **2017**, *139*, 5317–5320.
- 74. <u>Nickel-Catalyzed Reduction of Secondary and Tertiary Amides</u>. Bryan J. Simmons, Marie Hoffmann, Jaeyeon Hwang, Moritz K. Jackl, and Neil K. Garg. *Org. Lett.* **2017**, *19*, 1910–1913.
- **73.** <u>Enzyme-Catalyzed Stereoselective Intramolecular Hydroalkoxylation.</u> Shu-Shan Gao, Marc Garcia-Borràs, Joyann S. Barber, Yang Hai, Abing Duan, Neil K. Garg, K. N. Houk, and Yi Tang. *J. Am. Chem. Soc.* **2017**, *139*, 3639–3642.
- 72. Expanding the ROMP Toolbox: Synthesis of Air-Stable Benzonorbornadiene Polymers by Aryne Chemistry. Jose M. Medina, Jeong Hoon Ko, Heather D. Maynard, and Neil K. Garg. Macromolecules 2017, 50, 580–586.
- 71. <u>Nickel-Catalyzed Esterification of Aliphatic Amides</u>. Liana Hie, Emma L. Baker, Sarah M. Anthony, Jean-Nicolas Desrosiers, Chris H. Senanayake, and Neil K. Garg. *Angew. Chem. Int. Ed.* 2016, 55, 15129–15132.
- 70. <u>Nickel-Catalyzed Suzuki–Miyaura Coupling in t-Amyl Alcohol for the Preparation of 5-</u> (Furan-3-yl)pyrimidine. Liana Hie and Neil K. Garg. *Org. Synth.* **2016**, *93*, 306–318.
- **69.** Quantification of the Electrophilicity of Benzyne and Related Intermediates. Noah F. Fine Nathel, Lucas A. Morrill, Herbert Mayr, and Neil K. Garg. *J. Am. Chem. Soc.* **2016**, *138*, 10402–10405.
- 68. <u>Construction of Quaternary Stereocenters via Nickel-Catalyzed Heck Cyclizations.</u> Jean-Nicolas Desrosiers, Liana Hie, Soumik Biswas, Olga V. Zatolochnaya, Sonia Rodriguez, Heewon Lee, Nelu Grinberg, Nizar Haddad, Nathan K. Yee, Neil K. Garg, and Chris H. Senanayake. *Angew. Chem. Int. Ed.* **2016**, *55*, 11921–11924.
- **67.** <u>Benchtop Delivery of Ni(cod)₂ using Paraffin Capsules</u>. Jacob E. Dander, Nicholas A. Weires, and Neil K. Garg. *Org. Lett.* **2016**, *18*, 3934–3936.
- 66. <u>A Two-Step Approach to Achieve Secondary Amide Transamidation Enabled by Nickel</u> <u>Catalysis</u>. Emma L. Baker, Michael M. Yamano, Yujing Zhou, Sarah M. Anthony, and Neil K. Garg. *Nat. Commun.* **2016**, *7*, (doi:10.1038/ncomms11554).
- **65.** <u>Nickel-Catalyzed Alkylation of Amide Derivatives</u>. Bryan J. Simmons, Nicholas A. Weires, Jacob E. Dander, and Neil K. Garg. *ACS Catal.* **2016**, *6*, 3176–3179.
- 64. Expanding the Strained Alkyne Toolbox: Generation and Utility of Oxygen-Containing Strained Alkynes. Tejas K. Shah, Jose M. Medina, and Neil K. Garg. J. Am. Chem. Soc. 2016, 138, 4948–4954.
- 63. P450-Mediated Coupling of Indole Fragments to Forge Communesin and Unnatural Isomers. Hsiao-Ching Lin, Travis C. McMahon, Ashay Patel, Michael Corsello, Adam Simon, Wei Xu, Muxun Zhao, K. N. Houk, Neil K. Garg, and Yi Tang. J. Am. Chem. Soc. 2016, 138, 4002–4005.

- 62. <u>Synthetic Studies Pertaining to the 2,3-Pyridyne and 4,5-Pyrimidyne</u>. Jose M. Medina, Mortiz K. Jackl, Robert B. Susick, and Neil K. Garg. *Tetrahedron* **2016**, *7*2, 3629–3634 (special issue for the Tetrahedron Young Investigator Award).
- 61. <u>Nitrone Cycloadditions of 1,2-Cyclohexadiene</u>. Joyann S. Barber, Evan D. Styduhar, Hung V. Pham, Travis C. McMahon, K. N. Houk, and Neil K. Garg. *J. Am. Chem. Soc.* **2016**, *138*, 2512–2515.
- 60. Enantioselective Total Syntheses of Akuammiline Alkaloids (+)-Strictamine, (-)-2(S)-Cathafoline, and (-)-Aspidophylline A. Jesus Moreno, Elias Picazo, Lucas A. Morrill, Joel M. Smith, and Neil K. Garg. J. Am. Chem. Soc. 2016, 138, 1162–1165.
- **59.** <u>Nickel-Catalysed Suzuki–Miyaura Coupling of Amides</u>. Nicholas A. Weires, Emma L. Baker, and Neil K. Garg. *Nature Chemistry* **2016**, *8*, 75–79.
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- 2. <u>A Unified Synthetic Approach to the Pyrazinone Dragmacidins</u>. Neil K. Garg and Brian M. Stoltz. *Chem. Commun. (Feature Article)* **2006**, 3769.
- 1. <u>The Total Synthesis of Dragmacidins D and F</u>. Neil K. Garg, Ph.D. Thesis, California Institute of Technology, March 2005.

Patents

Independent Career

- 5. Methods for the Synthesis of Heteroatom Containing Polycyclic Aromatic Hydrocarbons. Neil K. Garg, Evan R. Darzi, and Joyann S. Barber. US Provisional Patent Application No. 62/720,005.
- 4. Compositions and Methods for Inhibiting N-SMASE2. Varghese John, Tina Bilousova, Barbara Jagodzinska, Neil Garg, Bryan Simmons, and Kanagasabai Vadivel. US Provisional Patent Application No. 62/559,209.
- 3. Preparation of Arylamines by Nickel-Catalyzed Aminations of Aryl Alcohols with Amines. Neil K. Garg, Stephen D. Ramgren, Amanda L. Silberstein, and Kyle W. Quasdorf. WO 2012094622.
- 2. Process for Cross-Coupling of Aryl Alcohol Derivatives and Organoboron Compounds. Neil K. Garg, Kyle W. Quasdorf, and Xia Tian. US 20110077406.

Prior to Independent Career

1. Fluorescently Labeled Nucleoside Triphosphates and Analogs for Multiplex Sequencing of Nucleic Acids. Neil K. Garg, Christopher J. Lacenere, Brian M. Stoltz, Stephen R. Quake, and Philip R. Buzby. US 2005170367.

Presentations

- **231.** How Organic Chemistry Became One of UCLA's Most Popular Classes. ASBMB Award for Exemplary Contributions to Education Lecture, ASBMB Annual Meeting, Orlando, FL, April, 2019.
- **230.** Amides and Chemical Education as Vehicles for Innovation. *Texas A&M University*, College Station, TX, February 13, 2019.
- **229. TBA**. *University of Mary Hardin–Baylor*, Belton, TX, February 6, 2019.
- **228. TBA**. *L. Carroll King Memorial Lecture Northwestern University,* Evanston, IL, November 13, 2018.

- **227. TBA**. *L. Carroll King Memorial Lecture Northwestern University,* Evanston, IL, November 12, 2018.
- **226.** Amides and Chemical Education as Vehicles for Innovation. *Boston College,* Boston, MA, November 6, 2018.
- 225. How Organic Chemistry Became One of UCLA's Most Popular Classes. Burkett Lecture DePauw University, Greencastle, IN, October 24, 2018.
- **224.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Burkett Lecture DePauw University,* Greencastle, IN, October 24, 2018.
- **223.** Recent Forays in Methods Development and Complex Molecule Synthesis. R.C. Fuson Lecture University of Illinois, Urbana-Champaign, IL, October 23, 2018.
- 222. How Organic Chemistry Became One of UCLA's Most Popular Classes. R.C. Fuson Lecture University of Illinois, Urbana-Champaign, IL, October 22, 2018.
- **221.** Amides and Chemical Education as Vehicles for Innovation. RSC Higher Education Award Lecture Sir Derek Barton Centenary Symposium, Imperial College, London, UK, September 7, 2018.
- **220.** Amides and Chemical Education as Vehicles for Innovation. *RSC Higher Education Award Lecture, Queen Mary, University of London,* London, UK, September 6, 2018.
- **219.** Amides and Chemical Education as Vehicles for Innovation. *RSC Higher Education Award Lecture, University of Kent*, Canterbury, UK, September 4, 2018.
- **218.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Merck,* West Point, PA, August 17, 2018.
- **217.** Recent Forays in Methods Development and Complex Molecule Synthesis. *GlaxoSmithKline,* Upper Providence, PA, August 16, 2018.
- **216.** Amides and Chemical Education as Vehicles for Innovation. *University of California,* Santa Cruz, CA, May 14, 2018.
- **215.** Amides and Chemical Education as Vehicles for Innovation. *Emory University,* Atlanta, GA, May 10, 2018.
- 214. Recent Forays in Methods Development and Complex Molecule Synthesis. *Eli Lilly,* Indianapolis, IN, May 1, 2018.
- **213.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Dow AgroSciences,* Indianapolis, IN, April 30, 2018.
- **212.** Organic Chemistry 101. Faculty Lecturer Geffen Academy at UCLA, Los Angeles, CA, April 7, 2018.
- **211.** Breaking Amides and Recent Initiatives in Chemical Education. *Portland State University*, Portland, OR, April 20, 2018.
- **210.** Breaking Amides and Recent Initiatives in Chemical Education. *University of Utah*, Salt Lake City, UT, April 19, 2018.
- **209.** Breaking Amides Using Nickel Catalysis. Keynote Lecture Organic Reactions Catalysis Society Conference, San Diego, CA, April, 2018.
- **208.** Nickel-Catalyzed Reactions of Amide Derivatives. Homogeneous Catalysis for Applied Organic Synthesis Symposium ACS National Meeting, New Orleans, LA, March 20, 2017.
- **207.** Breaking Amides and Recent Initiatives in Chemical Education. Distinguished Organic Seminar Speaker – Modern Chemistry Series – University of British Columbia, Vancouver, Canada, March 13, 2018.
- **206.** How Organic Chemistry Became One of UCLA's Most Popular Classes. Emerson Lecture– Georgia Institute of Technology, Atlanta, GA, March 9, 2018.
- **205.** Recent Forays in Methods Development and Complex Molecule Synthesis. Emerson Lecture– Georgia Institute of Technology, Atlanta, GA, March 8, 2018.
- **204.** How Organic Chemistry Became One of UCLA's Most Popular Classes. Dow Foundation Distinguished Lecture University of California, Santa Barbara, CA, November 3, 2017.
- **203.** Recent Forays in Methods Development and Complex Molecule Synthesis. Dow Foundation Distinguished Lecture University of California, Santa Barbara, CA, November 2, 2017.
- **202.** How Organic Chemistry Became One of UCLA's Most Popular Classes. Robert Foster Cherry Finalist Lecture Baylor University, Waco, TX, October 17, 2017.
- **201.** How Organic Chemistry Became One of UCLA's Most Popular Classes. *Robert Foster Cherry Finalist Lecture UCLA,* Los Angeles, CA, October 6, 2017.

- **200.** A Faculty Perspective. The UCLA Experience Admission Counselor Day, University of California, Los Angeles, CA, September 29, 2017.
- **199.** How Organic Chemistry Became One of UCLA's Most Popular Classes. *Tomlinson Teaching Lecturership McGill University,* Montreal, Canada, September 20, 2017.
- **198.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Tomlinson Teaching Lecturership McGill University,* Montreal, Canada, September 19, 2017.
- **197.** Breaking Amides Using Nickel Catalysis. Modern Chemistry of the Amide Bond Symposium ACS National Meeting, Washington, DC, August 21, 2017.
- **196.** Organic Chemistry Music Videos. Faculty Lecturer Bruin Woods, UCLA Lake Arrowhead Conference Center, Lake Arrowhead, CA, June 27, 2017.
- **195.** The Forefront of Education and Discovery. Faculty Lecturer Bruin Woods, UCLA Lake Arrowhead Conference Center, Lake Arrowhead, CA, June 26, 2017.
- **194.** Organic Chemistry 101. Faculty Lecturer Bruin Woods, UCLA Lake Arrowhead Conference Center, Lake Arrowhead, CA, June 25, 2017.
- **193.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Katritzky Lecturer University of Florida*, Gainesville, FL, May 30, 2017.
- **192.** Can Learning Organic Chemistry Actually Be Fun? Faculty Lecturer Women & Philanthropy, University of California, Los Angeles, CA, May 24, 2017.
- **191.** Recent Forays in Methods Development and Complex Molecule Synthesis. *GlaxoSmithKline,* Stevenage, England, UK, May 12, 2017.
- **190.** Recent Forays in Methods Development and Complex Molecule Synthesis. *RSC Merck Award Lecture University of Cambridge,* Cambridge, England, UK, May 11, 2017.
- **189.** Recent Forays in Methods Development and Complex Molecule Synthesis. *RSC Merck Award Lecture University of Glasgow,* Glasgow, Scotland, UK, May 9, 2017.
- **188.** Recent Forays in Methods Development and Complex Molecule Synthesis. *RSC Merck Award Lecture 23rd Lakeland Symposium on Heterocyclic Chemistry,* Grasmere, Ambleside, UK, May 7, 2017.
- **187.** Breaking Amides and Recent Initiatives in Chemical Education. *Student Invited Seminar Series University of California*, San Diego, CA, May 3, 2017.
- **186.** Inspire Me. UC Regents Scholars Society Lecture, University of California, Los Angeles, CA, April 29, 2017.
- **185.** Breaking Bad at UCLA. UCLA Bruin Day, University of California, Los Angeles, CA, April 15, 2017.
- **184.** A Faculty Perspective. UCLA Bruin Day Overnight Experience, University of California, Los Angeles, CA, April 14, 2017.
- **183.** Recent Forays in Methods Development and Complex Molecule Synthesis. University of Southern California, Los Angeles, CA, April 12, 2017.
- **182.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Revolution Medicines*, Foster City, CA, April 5, 2017.
- **181.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Elias J. Corey Award Symposium ACS National Meeting*, San Francisco, CA, April 3, 2017.
- **180.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Thieme– IUPAC Prize Award Lecture – 13th Winter Conference on Medicinal & Bioorganic Chemistry,* Steamboat Springs, CO, January 24, 2017.
- **179.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Amgen,* Thousand Oaks, CA, August 3, 2016.
- **178. Recent Forays in Methods Development and Complex Molecule Synthesis**. *Merck,* Rahway, NJ, July 27, 2016.
- **177.** Harnessing Strained Alkynes and Allenes as Synthetic Building Blocks. *Heron7*, Heron Island, Queensland, Australia, July 2016.
- **176.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Tetrahedron Young Investigator Award Lecture – Tetrahedron Symposium*, Sitges, Spain, June 30, 2016.
- **175.** Recent Forays in Methods Development and Complex Molecule Synthesis. Cope Scholar Award Symposium Northwestern Regional ACS Meeting, Anchorage, Alaska, June 27, 2016.
- **174.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Heterocyclic Compounds Gordon Research Conference*, Newport, RI, June 20, 2016.

- **173.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Aldrich Lecture University of Illinois,* Chicago, IL, May 17, 2017.
- **172.** Recent Studies in Methods Development and Complex Molecule Synthesis. Genentech Lecture University of Montreal, Montreal, Canada, May 11, 2016.
- **171.** Breaking Bad at UCLA. UCLA Bruin Day, University of California, Los Angeles, CA, April 16, 2016.
- **170.** A Faculty Perspective. UCLA Bruin Day Overnight Experience, University of California, Los Angeles, CA, April 15, 2016.
- **169.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Genentech, South San Francisco*, CA, April 12, 2016.
- **168.** Breaking Amides and Recent Initiatives in Chemical Education. *Michael Geis Distinguished Lecture Loyola Marymount University,* Los Angeles, CA, April 8, 2016.
- **167.** Recent Forays in Methods Development and Complex Molecule Synthesis. Organic Syntheses Lecture Wayne State University, Ann Arbor, MI, April 6, 2016.
- **166.** Recent Forays in Methods Development and Complex Molecule Synthesis. University of *Michigan,* Ann Arbor, MI, April 5, 2016.
- **165.** Complex Molecule Synthesis as a Fuel for Discovery. *Keynote Lecture UC Symposium for the Chemical Sciences*, Lake Arrowhead, CA, March 24, 2016.
- **164.** Launching Chemical Education Initiatives in a Research Intensive Environment. *Keynote Lecture UC Symposium for the Chemical Sciences*, Lake Arrowhead, CA, March 21, 2016.
- **163. Recent Advances in Non-Precious Metal Catalysis**. *Green Chemistry: Enhancing Organic Chemistry in Pharma Symposium ACS National Meeting*, San Diego, CA, March 14, 2016.
- **162.** Recent Forays in Methods Development and Complex Molecule Synthesis. New Jersey Biotechnology Chemistry Consortium, Hamilton, NJ, February 26, 2016.
- **161.** Complex Molecule Synthesis as a Fuel for Discovery. *Paul Dowd Lecture University of Pittsburgh*, Pittsburgh, PA, February 25, 2016.
- **160.** Launching Chemical Education Initiatives in a Research Intensive Environment. *Paul Dowd Lecture University of Pittsburgh,* Pittsburgh, PA, February 24, 2016.
- **159.** From Breaking Bad to Building Bonds. *Gold Shield Faculty Prize Award Lecture*, Tarzana, CA, February 6, 2016.
- **158.** Cycloadditions of Strained Alkynes and Allenes. *Pacifichem*, Honolulu, HI, December 16, 2015.
- **157.** From Graduate School at Caltech to Juggling Research and Teaching at UCLA. Caltech Project for Effective Teaching Lecture, California Institute of Technology, Pasadena, CA, November 30, 2015.
- **156.** Complex Molecule Synthesis as a Fuel for Discovery. *Keynote Lecture Tetrahedron Symposium Asia Edition*, Shanghai, China, November 13, 2015.
- **155.** Complex Molecule Synthesis as a Fuel for Discovery. *Tsinghua University*, Beijing, China, November 10, 2015.
- **154.** Complex Molecule Synthesis as a Fuel for Discovery. *Peking University*, Beijing, China, November 9, 2015.
- **153.** Recent Forays in Methods Development and Complex Molecule Synthesis. *Baylor University*, Waco, TX, October 9, 2015.
- **152.** From Breaking Bad to Building Bonds. Faculty Lecturer UCLA South Bay Chancellor's Society Reception, Redondo Beach, CA, October 1, 2015.
- **151. Recent Forays in Methods Development and Natural Product Synthesis**. *EPFL*, Lausanne, Switzerland, September 18, 2015.
- **150.** Recent Forays in Methods Development and Natural Product Synthesis. Novartis Chemistry Lectureship Novartis, Basel, Switzerland, September 16, 2015.
- **149.** From Breaking Bad to Building Bonds. Faculty Lecturer Orange County Bruins Alumni Scholarship Brunch, Tustin, CA, September 13, 2015.
- **148.** Total Synthesis of Indole Alkaloids. Keynote Lecture Agrochemicals: Innovations in Discovery and Process Chemistry Symposium ACS National Meeting, Boston, MA, August 19, 2015.
- **147.** Recent Forays in Methods Development and Complex Molecule Synthesis. Arthur C. Cope Scholar Award Symposium ACS National Meeting, Boston, MA, August 18, 2015

- **146.** Recent Forays in Methods Development and Natural Product Synthesis. Novartis Chemistry Lectureship Novartis GNF, San Diego, CA, August 6, 2015.
- **145.** Recent Forays in Methods Development and Natural Product Synthesis. Novartis Chemistry Lectureship Novartis, Emeryville, CA, August 4, 2015.
- **144. Recent Advances in Non-Precious Metal Catalysis**. Organic Reactions & Processes Gordon Research Conference, Lewiston, ME, July 20, 2015.
- **143.** Recent Advances in Nickel-Catalyzed Cross-Couplings. Green Chemistry and Engineering Conference, North Bethesda, MD, July 13, 2015.
- **142.** Complex Molecule Synthesis as a Fuel for Discovery. *Keynote Lecture Tetrahedron Symposium*, Berlin, Germany, June 19, 2015.
- **141.** Challenge Your Perceptions. *TED[×]UCLA*, *University of California*, Los Angeles, CA, May 30, 2015.
- **140.** Breaking Bad at UCLA. UCLA Bruin Day, University of California, Los Angeles, CA, April 11, 2015.
- **139.** A Faculty Perspective. UCLA Bruin Day Overnight Experience, University of California, Los Angeles, CA, April 10, 2015.
- **138.** Nickel-Catalyzed Suzuki–Miyaura Cross-Coupling in a Green Alcohol Solvent for an Undergraduate Organic Chemistry Laboratory. ACS National Meeting–Green Chemistry: Theory and Practice Symposium, Denver, CO, March, 25 2015.
- **137.** Complex Molecule Synthesis as a Fuel for Discovery. *Plenary Lecture Meeting of the Organic Chemistry Division of the French Chemical Society*, Paris, France, March 17, 2015.
- **136.** Total Synthesis of Indole Alkaloids. *Philadelphia Organic Chemistry Club*, Philadelphia, PA, February 26, 2015.
- **135.** Complex Molecule Synthesis as a Fuel for Discovery. *University of Delaware*, Newark, DE, February 25, 2015.
- **134.** Complex Molecule Synthesis as a Fuel for Discovery. *DuPont*, Newark, DE, February 24, 2015.
- **133.** Recent Forays in Methods Development and Natural Product Synthesis. University of California, Merced, CA, February 13, 2015.
- **132.** From Breaking Bad to Building Bonds. UCLA PEERS Research Lecture, University of California, Los Angeles, CA, February 10, 2015.
- **131.** Recent Forays in Methods Development and Natural Product Synthesis. Fagnou Lecture University of Ottawa, Ottawa, Canada, February 4, 2015.
- **130.** From Undergraduate Studies to Academia and Other Careers in Chemistry. Student Affiliates of the American Chemical Society Lecture, University of California, Los Angeles, CA, January 2015.
- **129.** Complex Molecule Synthesis as a Fuel for Discovery. Novartis Chemistry Lectureship Novartis, Cambridge, MA, January 2015.
- **128.** Complex Molecule Synthesis as a Fuel for Discovery. *University of Kansas*, Lawrence, KS, December 2014.
- **127.** Complex Molecule Synthesis as a Fuel for Discovery. *The Claremont Colleges*, Claremont, CA, December 2014.
- **126.** Total Synthesis of Indole Alkaloids. *Aldrich Lecture The Ohio State University,* Columbus, OH, October 2014.
- **125.** Recent Forays in Methods Development and Total Synthesis. Dreyfus Teacher–Scholars Symposium, New York, NY, October 2014 (poster).
- **124.** Total Synthesis of Indole Alkaloids. *Padwa Lecture Emory University*, Atlanta, GA, September 2014.
- **123.** Recent Forays in Methods Development and Natural Product Synthesis. *GlaxoSmithKline,* Research Triangle Park, NC, August 2014.
- **122.** Total Synthesis of Indole Alkaloids. ACS National Meeting–Total Synthesis as a Driver of Synthetic Innovation Symposium, San Francisco, CA, August 2014.
- **121.** From Breaking Bad to Building Bonds. Chemistry and Biochemistry Staff Research Lecture, University of California, Los Angeles, CA, June 2014.
- **120.** Recent Forays in Methods Development and Natural Product Synthesis. Boehringer Ingelheim Pharmaceuticals, Ridgefield, CT, June 2014.

- **119.** Organic Chemistry Can Save the Day. UC Regents Scholars Society Lecture, University of California, Los Angeles, CA, May 2014.
- **118.** Breaking Bad at UCLA. UCLA Bruin Day for Transfer Admits, University of California, Los Angeles, CA, May 2014.
- **117.** Complex Molecule Synthesis as a Fuel for Discovery. *Bristol-Myers Squibb Unrestricted Grant in Synthetic Organic Chemistry Award Symposium,* Lawrenceville, NJ, May 2014.
- **116.** Breaking Bad at UCLA. UCLA Bruin Day, University of California, Los Angeles, CA, April 2014.
- **115.** Complex Molecule Synthesis as a Fuel for Discovery. *Aldrich Lecture University of Texas*, Austin, TX, March 2014.
- **114.** Development of Greener Nickel-Catalyzed Cross-Couplings. ACS National Meeting MEDI Lunch & Learn, Dallas, TX, March 2014.
- **113.** Greener Nickel-Catalyzed Cross-Couplings to Forge C–C and C–N Bonds. ACS National Meeting Transition Metal Catalysis in Green Chemistry Symposium, Dallas, TX, March 2014.
- **112.** Complex Molecule Synthesis as a Fuel for Discovery. *Eli Lilly Grantee Award Symposium*, Indianapolis, IN, March 2014.
- **111.** Complex Molecule Synthesis as a Fuel for Discovery. *Carleton College*, Northfield, MN, March 2014.
- **110.** Heterocyclic Arynes and Total Synthesis of Welwitindolinones. *Eighth International Symposium on Integrated Synthesis (ISIS-8),* Nara, Japan, November 2013.
- **109.** Complex Molecule Synthesis as a Fuel for Discovery. *Kyoto University,* Kyoto, Japan, November 2013.
- **108.** Complex Molecule Synthesis as a Fuel for Discovery. Banff Symposium on Organic Chemistry, Alberta, Canada, November 2013.
- **107.** Complex Molecule Synthesis as a Fuel for Discovery. *Sanofi-Aventis*, Frankfurt, Germany, October 2013.
- **106.** Complex Molecule Synthesis as a Fuel for Discovery. *University of Munich*, Munich, Germany, October 2013.
- **105.** Complex Molecule Synthesis as a Fuel for Discovery. University of Louis Pasteur, Strasbourg, France, October 2013.
- **104.** Complex Molecule Synthesis as a Fuel for Discovery. *Texas A&M University*, College Station, TX, September 2013.
- **103.** Complex Molecule Synthesis as a Fuel for Discovery. *CSU Fullerton*, Fullerton, CA, September 2013.
- **102.** Nickel-Catalyzed Cross-Couplings in Green Solvents. ACS National Meeting–Green Chemistry and Sustainability in the Pharmaceutical Industry Symposium, Indianapolis, IN, September 2013.
- **101.** Development of Nickel-Catalyzed Cross-Couplings. ACS National Meeting–Non-Precious Metal Catalysis Symposium, Indianapolis, IN, September 2013.
- **100.** Complex Molecule Synthesis as a Fuel for Discovery. North Carolina State University, Raleigh, NC, August 2013.
- **99.** Complex Molecule Synthesis as a Fuel for Discovery. University of North Carolina, Chapel Hill, NC, August 2013.
- **98.** Nickel- and Iron-Catalyzed Cross-Couplings of Phenolic Derivatives. Sixteenth International Symposium on Relations between Homogeneous and Heterogeneous Catalysis, Hokkaido University, Sapporo, Japan, August 2013.
- **97.** Complex Molecule Synthesis as a Fuel for Discovery. *Theravance Inc.*, South San Francisco, CA, July 2013.
- **96.** Recent Studies in Alkaloid Total Synthesis. Overman's 70th Birthday Symposium, University of California, Irvine, CA, July 2013.
- **95. Understanding and Exploiting Heterocyclic Arynes**. *Heron6*, Heron Island, Queensland, Australia, July 2013.
- **94. Retrosynthetic Analysis**. *UC Regents Scholars Society Lecture, University of California*, Los Angeles, CA, May 2013.
- **93.** Are Chemicals Friends or Foes? UCLA Bruin Day, University of California, Los Angeles, CA, April 2013.
- **92.** Complex Molecule Synthesis as a Fuel for Discovery. University of North Carolina, Wilmington, NC, March 2013.

- **91.** Complex Molecule Synthesis as a Fuel for Discovery. *University of California*, Riverside, CA, March 2013.
- **90.** Complex Molecule Synthesis as a Fuel for Discovery. *Indiana University*, Bloomington, IN, February 2013.
- **89.** Complex Molecule Synthesis as a Fuel for Discovery. *University of Colorado,* Boulder, CO, February 2013.
- **88.** Complex Molecule Synthesis as a Fuel for Discovery. *Gilead Sciences,* Seattle, WA, December 2012.
- 87. Complex Molecule Synthesis as a Fuel for Discovery. *Rutgers University,* Piscataway, NJ, November 2012.
- **86. Complex Molecule Synthesis as a Fuel for Discovery**. *Merck,* Rahway, NJ, November 2012.
- 85. Complex Molecule Synthesis as a Fuel for Discovery. *Trinity College*, Dublin, Ireland, October 2012.
- **84.** Complex Molecule Synthesis as a Fuel for Discovery. *Natural Product Chemistry Institute (ICSN) CNRS*, Paris, France, October 2012.
- **83.** Complex Molecule Synthesis as a Fuel for Discovery. *CalState Long Beach*, Long Beach, CA, September 2012.
- 82. Complex Molecule Synthesis as a Fuel for Discovery. *University of Minnesota*, Duluth, MN, September 2012.
- 81. Complex Molecule Synthesis as a Fuel for Discovery. *University of Minnesota*, Minneapolis, MN, September 2012.
- **80.** Complex Molecule Synthesis as a Fuel for Discovery. *Cornell University*, Ithaca, NY, September 2012.
- **79.** Complex Molecule Synthesis as a Fuel for Discovery. *Pfizer,* Groton, CT, August 2012.
- **78.** Total Synthesis of Heterocyclic Natural Products. Natural Products Gordon Research Conference, Andover, NH, July 2012.
- 77. Complex Molecule Synthesis as a Fuel for Discovery. *Sunovian,* Marlborough, MA, July 2012.
- 76. Complex Molecule Synthesis as a Fuel for Discovery. *Merck,* Boston, MA, July 2012.
- 75. Modern Twists on Classical Chemistry: Enabling the Synthesis of Complex Molecules. *New York University*, New York, NY, June 2012.
- 74. Complex Molecule Synthesis as a Fuel for Discovery. Roche Excellence in Chemistry Symposium, Nutley, NJ, May 2012.
- **73.** Complex Molecule Synthesis as a Fuel for Discovery. *New York University*, New York, NY, March 2012.
- 72. Complex Molecule Synthesis as a Fuel for Discovery. *Johnson & Johnson*, La Jolla, CA, March 2012.
- **71.** Complex Molecule Synthesis as a Fuel for Discovery. *University of California*, San Diego, CA, March 2012.
- **70.** Complex Molecule Synthesis as a Fuel for Discovery. UT Southwestern Medical Center, Dallas, TX, December 2011.
- **69.** Complex Molecule Synthesis as a Fuel for Discovery. *University of California,* Santa Barbara, CA, December 2011.
- **68. Complex Molecule Synthesis as a Fuel for Discovery**. *AstraZeneca Excellence in Chemistry Award Symposium*, Waltham, MA, December 2011.
- 67. Complex Molecule Synthesis as a Fuel for Discovery. *Abbott Laboratories,* North Chicago, IL, November 2011.
- 66. Complex Molecule Synthesis as a Fuel for Discovery. *Memorial Sloan-Kettering,* New York, NY, November 2011.
- **65.** Complex Molecule Synthesis as a Fuel for Discovery. *Columbia University,* New York, NY, November 2011.
- 64. Total Synthesis of Welwitindolinones. Western Regional ACS Meeting, Pasadena, CA, November 2011.
- **63.** Complex Molecule Synthesis as a Fuel for Discovery. *GlaxoSmithKline*, Upper Merion, PA, November 2011.
- **62. Complex Molecule Synthesis as a Fuel for Discovery**. *GlaxoSmithKline,* Upper Providence, PA, November 2011.

- 61. Cross-Coupling Reactions of Unconventional Electrophiles. Seaborg Symposium UCLA, Los Angeles, CA, November 2011.
- **60.** Complex Molecule Synthesis as a Fuel for Discovery. *Genentech, South San Francisco,* CA, October 2011.
- **59.** Complex Molecule Synthesis as a Fuel for Discovery. University of Wisconsin, School of *Pharmacy*, Madison, WI, October 2011.
- **58.** Complex Molecule Synthesis as a Fuel for Discovery. University of Wisconsin, Department of Chemistry, Madison, WI, October 2011.
- **57.** Complex Molecule Synthesis as a Fuel for Discovery. *University of California,* Davis, CA, October 2011.
- 56. Studies in Complex Molecule Synthesis: Indoles, Indolines, and Indolynes. University of *California*, Los Angeles, CA, October 2011.
- **55.** Complex Molecule Synthesis as a Fuel for Discovery. *University of California,* Irvine, CA, October 2011.
- **54.** Complex Molecule Synthesis as a Fuel for Discovery. *Amgen Young Investigator Award Symposium*, Amgen, Thousand Oaks, CA, October 2011.
- **53.** Complex Molecule Synthesis as a Fuel for Discovery. *Stanford University,* Stanford, CA, September 2011.
- **52.** Complex Molecule Synthesis as a Fuel for Discovery. *University of California,* Berkeley, CA, September 2011.
- **51.** Complex Molecule Synthesis as a Fuel for Discovery. *Brigham Young University,* Provo, UT, September 2011.
- **50.** Complex Molecule Synthesis as a Fuel for Discovery. *Boston University,* Boston, MA, September 2011.
- **49.** Complex Molecule Synthesis as a Fuel for Discovery. *Massachusetts Institute of Technology*, Cambridge, MA, September 2011.
- **48.** Complex Molecule Synthesis as a Fuel for Discovery. *Princeton University,* Princeton, NJ, September 2011.
- **47.** Complex Molecule Synthesis as a Fuel for Discovery. ACS National Meeting–Young Academic Investigators Symposium, Denver, CO, August 2011.
- **46.** Complex Molecule Synthesis as a Fuel for Discovery. University of Illinois, Urbana-Champaign, IL, August 2011.
- **45.** Complex Molecule Synthesis as a Fuel for Discovery. *Colorado State University,* Fort Collins, CO, August 2011.
- 44. Studies Toward the Synthesis of Heterocyclic Natural Products. *Heterocyclic Compounds Gordon Research Conference*, Newport, RI, June 2011.
- **43.** Complex Molecule Synthesis as a Fuel for Discovery. *The Scripps Research Institute,* La Jolla, CA, June 2011.
- **42.** Total Synthesis of *N*-Methylwelwitindolinone C Isothiocyanate. *SynCon*, Irvine, CA, May 2011.
- **41.** Complex Molecule Synthesis as a Fuel for Discovery. *Bristol–Myers Squibb,* Wallingford, CT, June 2011.
- **40.** Complex Molecule Synthesis as a Fuel for Discovery. Vertex Pharmaceuticals, San Diego, CA, April 2011.
- **39.** Complex Molecule Synthesis as a Fuel for Discovery. *Gilead Sciences,* Foster City, CA, March 2011.
- **38.** Complex Molecule Synthesis as a Fuel for Discovery. *Pfizer,* La Jolla, CA, March 2011.
- **37.** Complex Molecule Synthesis as a Fuel for Discovery. *California Institute of Technology,* Pasadena, CA, March 2011.
- **36.** Complex Molecule Synthesis as a Fuel for Discovery. *Bristol–Myers Squibb,* New Brunswick, NJ, February 2011.
- **35.** Complex Molecule Synthesis as a Fuel for Discovery. *Bristol–Myers Squibb,* Hopewell and Lawrenceville, NJ, January 2011.
- **34.** Complex Molecule Synthesis as a Fuel for Discovery. University of Pennsylvania, Philadelphia, PA, January 2011.
- **33.** Studies in Complex Molecule Synthesis: Indoles, Indolines, and Indolynes. *Pacifichem*, Honolulu, HI, December 2010.

- **32.** Complex Molecule Synthesis as a Fuel for Discovery. *Dartmouth College,* Hanover, NH, November 2010.
- **31.** Complex Molecule Synthesis as a Fuel for Discovery. *University of Vermont,* Burlington, VT, November 2010.
- **30.** Complex Molecule Synthesis as a Fuel for Discovery. *University of California,* Los Angeles, CA, October 2010.
- **29.** Complex Molecule Synthesis as a Fuel for Discovery. *University of Rochester,* Rochester, NY, October 2010.
- **28.** Complex Molecule Synthesis as a Fuel for Discovery. *Amgen,* Cambridge, MA, September 2010.
- 27. Complex Molecule Synthesis as a Fuel for Discovery. Boehringer Ingelheim *Pharmaceuticals,* Ridgefield, CT, September 2010.
- **26.** Complex Molecule Synthesis as a Fuel for Discovery. *DuPont*, Newark, DE, September 2010.
- **25.** Complex Molecule Synthesis as a Fuel for Discovery. *Eli Lilly*, Indianapolis, IN, August 2010.
- 24. Studies Toward the Total Synthesis of Heterocyclic Natural Products. *Natural Products*. *Gordon Research Conference*, Tilton, NH, July 2010 (poster and short talk).
- **23. Progress Toward the Total Synthesis of N-Methylwelwitindolinone C Isothiocyanate**. *NSF Synthesis Workshop*, Holderness, NH, July 2010.
- 22. Studies Toward the Total Synthesis of Heterocyclic Natural Products. Organic Reactions & Processes Gordon Research Conference, Smithfield, RI, July 2010 (poster and short talk).
- 21. Progress Toward the Total Synthesis of *N*-Methylwelwitindolinone C Isothiocyanate. *SynCon*, Pasadena, CA, May 2010.
- 20. Cross-Coupling Reactions of Unconventional Electrophiles & Studies Toward the Total Synthesis of Heterocyclic Natural Products. *Biogen Idec,* Cambridge, MA, March 2010.
- **19.** Cross-Coupling Reactions of Unconventional Electrophiles & Studies Toward the Total Synthesis of Heterocyclic Natural Products. *Pfizer,* La Jolla, CA, March 2010.
- **18.** Cross-Coupling Reactions of Unconventional Electrophiles & Studies Toward the Total Synthesis of Heterocyclic Natural Products. *Abbott Laboratories,* Abbott Park, IL, March 2010.
- **17.** Studies in Complex Molecule Synthesis: Indoles, Indolines, and Indolynes. *Florida International University,* Miami, FL, January 2010.
- **16.** Studies in Complex Molecule Synthesis: Indoles, Indolines, and Indolynes. University of Southern California, Los Angeles, CA, November 2009.
- **15.** Studies in Heterocycle Synthesis: Indoles, Indolines, and Indolynes. *Heterocyclic Compounds Gordon Research Conference*, Newport, RI, July 2009.
- 14. New Directions in C–O Bond Activation / Indolynes: Fundamental Reactivity & Synthetic Applications. Heterocyclic Compounds Gordon Research Conference, Newport, RI, July 2009 (poster).
- **13.** An Interrupted Fischer Approach to Indoline-Containing Natural Products. *SynCon*, Los Angeles, CA, May 2009.
- **12.** Indolynes: Fundamental Reactivity and Synthetic Applications. ACS ProSpectives: Organic Reactions and Syntheses, Philadelphia, PA, October 2008 (poster).
- **11.** Indolynes: Fundamental Reactivity and Synthetic Applications. Stereochemistry Gordon Research Conference, Newport, RI, July 2008 (poster).
- **10.** Indolynes: Reactivity and Synthetic Applications. *SynCon*, Los Angeles, CA, May 2008.
- **9. Reflections on the REU Experience**. *The National Science Foundation*, Arlington, VA, April 2008.
- 8. Studies in Natural Product Synthesis: Total Synthesis of Sarain A. The Claremont Colleges, Claremont, CA, December 2007.
- 7. Total Synthesis of Dragmacidin F and Sarain A. *Bristol-Myers Squibb*, Lawrenceville, NJ, July 2007.
- 6. The Total Synthesis of (-)-Sarain A. 232nd ACS National Meeting, San Francisco, CA, September 2006.
- 5. The Total Synthesis of (–)-Sarain A. Natural Products Gordon Research Conference, Tilton, NH, July 2006 (poster).

- 4. The Total Synthesis of Dragmacidins D and F. *McCoy Thesis Award Symposium,* California Institute of Technology, Pasadena, CA, June 2005.
- 3. The First Total Synthesis of Dragmacidin D and Prospects for the Preparation of Other Dragmacidin Alkaloids. *38th National Organic Symposium*, Bloomington, IN, June 2003 (poster).
- 2. Progress Toward the Total Synthesis of Dragmacidin D. Lexicon Pharmaceuticals, Princeton, NJ, April 2002.
- **1. Progress Toward the Total Synthesis of Dragmacidin D**. *RW Johnson Pharmaceutical Research Institute*, Raritan, NJ, April 2002.