

Stanford



Megan Brennan

Lecturer
Chemistry

Bio

BIO

Dr. Megan Brennan's interests include the development of organic chemistry lab courses that give students hands-on opportunities to explore chemistry while reinforcing and building upon concepts learned in lecture classes. She aims for her labs to bring chemistry to life, and to afford students a chance to have fun and experience a taste of scientific discovery.

While studying chemistry at Lafayette College (B.S. 2002), Dr. Brennan worked on the preparation of triazaphenanthrenes and the Oxa-Pictet-Spengler reaction of 1-(3-furyl)alkan-2-ols. She completed her doctoral work at Stanford (Ph.D. 2008), conducting her thesis research in palladium asymmetric allylic alkylation under the advisement of Professor Barry Trost. During her postdoctoral research with Professor Scott Miller at Yale University, she investigated the use of peptides containing a thiazole side chain for use in acyl anion chemistry. She joined the teaching staff at University of California, Berkeley in 2010 before coming returning to Stanford in 2011 to spearhead the development of a new summer organic chemistry sequence, a comprehensive course designed for pre-meds, offering an entire year of organic chemistry in nine weeks.

Dr. Brennan also acts as the liaison to the chemistry majors, to promote events with faculty in both the academic and social aspect: providing an environment that allows students to be comfortable and able to learn, while helping them take advantage of every opportunity that Stanford offers.

Dr. Brennan's current research is in the development classroom experiments that bring cutting edge industrial and academic research into the undergraduate laboratory experience.

ACADEMIC APPOINTMENTS

- Lecturer, Chemistry

ADMINISTRATIVE APPOINTMENTS

- Lecturer, University of California, Berkeley, (2010-2011)

HONORS AND AWARDS

- Linus Pauling Teaching Award, Stanford University (2007)
- Novartis Graduate Fellowship in Organic Chemistry, Stanford University (2005)
- Charles A. Dana Scholar Recipient, Lafayette College (2002)
- Pi Mu Epsilon, Lafayette College (2002)
- William Forris Hart '27 Chemistry Prize, Lafayette College (2002)

- American Chemical Society Division of Polymer Chemistry Award, American Chemical Society (2001)
- American Chemical Society Prize -Lehigh Valley Chapter Phi Lamda Upsilon, American Chemical Society, Lehigh Valley Chapter (2001)
- Chemical Rubber Company Freshman Achievement Award, Lafayette College (2000)
- Cornell Family Scholarship Fund Recipient, Lafayette College (2000)
- Eugene P. Chase Phi Beta Kappa Prize, Lafayette College (2000)
- Excel Scholar, Lafayette College (1999-2002)
- Marquis Scholar, Lafayette College (1999-2002)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Director, Chemistry Summer Program Stanford (2011 - present)
- Member, Undergraduate Studies & Curriculum Committee (2011 - present)
- Advisory Board Member, Women in STEM (2015 - 2015)
- Faculty College Team Member, Stanford University (2013 - 2014)

PROFESSIONAL EDUCATION

- BS, Lafayette College , Heterocyclic chemistry (2002)
- PhD, Stanford University , Palladium asymmetric catalysis (2008)
- Postdoc, Yale University , Organocatalysis (2010)

Teaching

COURSES

2019-20

- Organic Chemistry of Bioactive Molecules: CHEM 121 (Aut)
- Structure and Reactivity of Organic Molecules: CHEM 33 (Sum)
- Teaching of Chemistry: CHEM 299 (Spr, Sum)
- The Chemical Principles of Life I: CHEM 141 (Win)

2018-19

- Organic Chemistry of Bioactive Molecules: CHEM 35 (Aut, Sum)
- Structure and Reactivity of Organic Molecules: CHEM 33 (Win, Spr)
- Teaching of Chemistry: CHEM 299 (Spr)

2017-18

- Organic Chemistry Lab II: CHEM 2L (Sum)
- Organic Chemistry of Bioactive Molecules: CHEM 35 (Aut)
- Organic Chemistry of Carbonyl Containing Molecules: CHEM 2 (Sum)
- Structure and Reactivity of Organic Molecules: CHEM 33 (Spr)
- Synthesis Laboratory: CHEM 132 (Win)
- Teaching of Chemistry: CHEM 299 (Spr)

2016-17

- Organic Chemistry Lab III: CHEM 3L (Sum)
- Organic Chemistry of Biomolecules: CHEM 3 (Sum)

- Problem Solving in Science: CHEM 33C (Spr)
- Structure and Reactivity: CHEM 33 (Win, Spr)
- Synthetic and Physical Organic Chemistry: CHEM 35 (Aut)
- Teaching of Chemistry: CHEM 299 (Aut, Win, Spr)

Publications

PUBLICATIONS

- **Organocatalytic Ring-Opening Polymerization of Trimethylene Carbonate To Yield a Biodegradable Polycarbonate** *JOURNAL OF CHEMICAL EDUCATION*
Chan, J. M., Zhang, X., Brennan, M. K., Sardon, H., Engler, A. C., Fox, C. H., Frank, C. W., Waymouth, R. M., Hedrick, J. L.
2015; 92 (4): 708-713
- **Asymmetric Syntheses of Oxindole and Indole Spirocyclic Alkaloid Natural Products** *SYNTHESIS-STUTTGART*
Trost, B. M., Brennan, M. K.
2009: 3003-3025
- **Palladium-catalyzed regio- and enantioselective allylic alkylation of Bis allylic carbonates derived from Morita-Baylis-Hillman adducts** *ORGANIC LETTERS*
Trost, B. M., Brennan, M. K.
2007; 9 (20): 3961-3964
- **Palladium asymmetric allylic alkylation of prochiral nucleophiles: Horsfiline** *ORGANIC LETTERS*
Trost, B. M., Brennan, M. K.
2006; 8 (10): 2027-2030
- **Preparation of triazaphenanthrenes** *ORGANIC PREPARATIONS AND PROCEDURES INTERNATIONAL*
Nutaitis, C. F., Brennan, M.
2004; 36 (4): 367-370
- **The oxa-Pictet-Spengler reaction of 1-(3-furyl)alkan-2-ols** *SYNTHESIS-STUTTGART*
Miles, W. H., Heinsohn, S. K., Brennan, M. K., Swarr, D. T., Eidam, P. M., Gelato, K. A.
2002: 1541-1545

PRESENTATIONS

- Stanford Summer Intensives: General and Organic Chemistry - Stanford University (March 2015)
- Education Resources Designed to Share Sustainable Solutions to Plastics & Materials - 20th Annual Green Chemistry & Engineering Conference (June 14, 2016 - June 16, 2016)
- Hydrogen Bonding: From DNA to Nylon - Stanford Admit Weekend 2015 and 2016 (April 29, 2016)
- Pathways to Teaching - Stanford ignited 2016 Conference (February 6, 2016)