

The 2014 Abbott
Chemistry Lectures
May 1st & 2nd, 2014

Given by
Dr. Bruce Lipshutz
Professor
University of California, Santa Barbara



Bruce Lipshutz, a native New Yorker, has been a professor at UC Santa Barbara for the past 34+ years. His interests are in organic synthesis and, in particular, organometallics, developed during his graduate school days in the research group of Harry Wasserman at Yale, and then as an American Cancer Society Postdoctoral Fellow in the E.J. Corey group at Harvard. Although the focus of his research efforts continue to be in both the development of new reagents and methodologies, as well as in total synthesis, the emphasis has shifted from organic synthesis done in a traditional fashion to chemistry inspired by Nature. That is, his goal is to transform the non-sustainable, environmentally polluting medium in which organic chemistry is traditionally done; *i.e.*, in organic solvents, to the medium in which Nature has been doing chemistry on this planet

since the beginning of time: water. For this purpose, he has developed “designer” surfactants that enable many of the most commonly used transformations in organic synthesis involving typically water-insoluble substrates and catalysts, to be done in a strictly aqueous environment, and in most cases, with no investment of external energy beyond that provided at room temperature (*i.e.*, no heating, no cooling). This unique approach to green chemistry and sustainability has been recognized by the U.S. Environmental Protection Agency (EPA), which acknowledged the potential of this chemistry in 2011 with a Presidential Green Chemistry Challenge Award, given to a single academician in the country that year. In 2012, another reagent for use in catalysis developed in the Lipshutz labs was selected to receive the *Encyclopedia of Reagents for Organic Synthesis* (EROS) Award, given for a single reagent in the field worldwide. He has been the organizer of ACS Symposia on green chemistry at national meetings (New Orleans in 2012, Dallas in 2014), and is the author of over 300 publications.

Thursday, May 1st, 7:00 PM
Abbott Hall Room 101

*“The Miracle Nutrient Coenzyme Q₁₀:
We Make it...and We Take It!”*

Friday, May 2nd, 12:00 PM
Abbott Hall Room 138

*“Transitioning Organic Synthesis from
Organic Solvents to Water:
What’s Your E Factor?”*

George A. Abbott, 1874-1973



Dr. George Alonzo Abbott, Professor Emeritus at the University of North Dakota, had a long and fruitful career of service to the State of North Dakota and the science of Chemistry. He was born July 7, 1874, in Alma, Illinois. Dr. Abbott received both the B.S. and M.A. pro merito from DePauw University. From 1896 until 1904 he taught chemistry in high schools in Evansville, Indiana; Duluth, Minnesota; and Indianapolis, Indiana. In 1903, through a contact with Professor Talbot, he received the Austen Research Fellowship at Massachusetts Institute of Technology. Under the guidance of A. A. Noyes, Professor of Physical Chemistry at M.I.T., he received the Ph.D. in 1908. In this first class of doctorates in chemistry were such notables as Edward Washburn, Charles Kraus and Richard Tolman. Dr. Abbott joined the chemistry staff of the North Dakota Agricultural College (North Dakota State University) in 1909. In 1910 he was appointed Professor and Chairman of the Department of Chemistry at the University of North Dakota. His devotion to teaching and the application of chemistry for the betterment of North Dakota was one of his outstanding contributions. His interests in quality water and in natural products such as lignite, for which North Dakota is recognized, gave him national recognition. For half a century he was the only toxicologist in a wide area of the upper midwest. He found time to do a weekly radio program "Science from the Sidelines" which was broadcast for over twenty years. Professor Abbott was a founder and charter member of the North Dakota Academy of Science. He was a member of the Red River Valley Section of the American Chemical Society, a Fellow of the American Institute of Chemists, member of Sigma Xi, and a charter member of the University of North Dakota Phi Beta Kappa chapter. Dr. Abbott retired from administration in 1948 and from teaching in 1952. He continued toxicological work until 1970.

The George A. Abbott Lectureship was established by gifts from the University of North Dakota Alumni.

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