

## The Mathias P. Mertes Memorial Lecture Series

### Mertes Memorial Lecturer for 2005



#### Justin Du Bois

Associate Professor of Chemistry  
Stanford University

Justin Du Bois received his undergraduate training at University of California, Berkeley, graduating *Cum Laude* in 1991. He then carried out graduate studies as a National Science Foundation Predoctoral Fellow at the California Institute of Technology under the direction of Erick Carreira. During this time, he completed a synthesis of (+)-zaragozic acid C and developed nitridomanganese(V) complexes as nitrogen atom transfer agents. He then served as a National Institutes of Health Postdoctoral Fellow at Massachusetts Institute of Technology with Stephen J. Lippard. In 1999, he started his academic career at Stanford University, where he is currently Associate Professor of Chemistry.

Professor Du Bois' research interests are based broadly in synthetic methods development and chemical synthesis. There are four principal areas of concentration that include: (1) the elucidation of new reaction processes for carbon-heteroatom (C–N and C–O) bond formation through selective, metal-catalyzed C–H functionalization. (2) Mechanistic analysis of Rh-promoted C–H amination; coordination chemistry and catalyst design. (3) Multi-step, asymmetric syntheses of complex, heterocyclic amine-derived natural products which include the manzacidins, tetrodotoxin, saxitoxin, aconitine, welwitindolinone, and agelastatin. (4) The development of guanidine toxin mimetics that function as tools for mapping the tertiary structure of the ion permeation pathway in voltage-gated Na<sup>+</sup> and Ca<sup>2+</sup> ion channel proteins.

Already, Professor Du Bois' work has been recognized through numerous awards. These include: the American Chemical Society Nobel Laureate Signature Award for Graduate Education in Chemistry, a Pfizer Young Faculty Award, a Boehringer Ingelheim Young Investigator Award, an Eli Lilly Grantee Award, a GlaxoSmithKline Chemistry Scholar Award, a Bristol-Myers Squibb Young Investigator Award, an Abbott Laboratories New Investigator Award, an Arthur C. Cope Young Scholar Award, an Amgen New Faculty Award, an Alfred P. Sloan Fellow, a Pfizer Award for Creativity in Organic Chemistry, and a Roche, Excellence in Chemistry Award. He has served as a consultant with Pfizer, Inc.