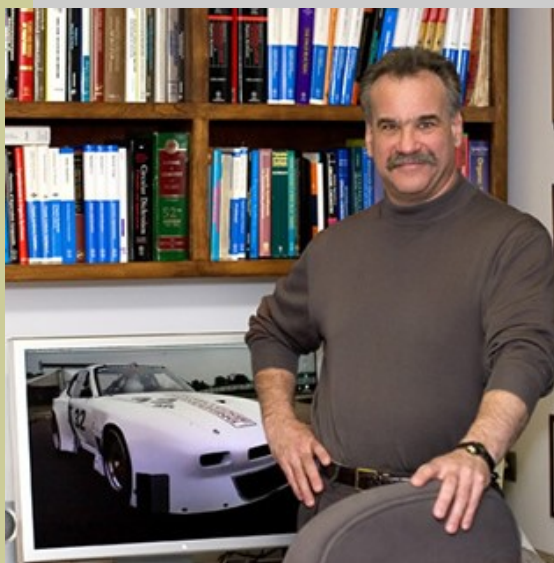


Organic Seminar

Professor Scott Denmark
University of Illinois-Urbana

Tuesday, March 2, 2010
3:30 p.m.
1315 Chemistry



**Asymmetric Catalysis with Chiral Lewis Bases:
A New Frontier in Main Group Chemistry**

Catalysis is a chemical evergreen. Ever since Michael Faraday first recognized that platinum wire could bring about the combination of hydrogen and oxygen with spectacular speed, chemists have been fascinated with the origins, principles, scope and applications of catalysis. Despite Berzelius's unfortunate choice of the word for this phenomenon (from the ancient Greek for destruction), the field of chemical (abiological) catalysis has grown immensely in the past century. Surprisingly, however, catalysis of reactions of the p-block (main group) elements is almost non-existent. Over the past decade, our laboratories have investigated reactions based on elements in Groups 14, 16 and 17, under the newly developed paradigm of "Lewis-base activation of Lewis acids". This lecture will describe the most recent efforts in our laboratories to design, understand and apply synthetically useful reactions under catalysis by chiral Lewis bases.