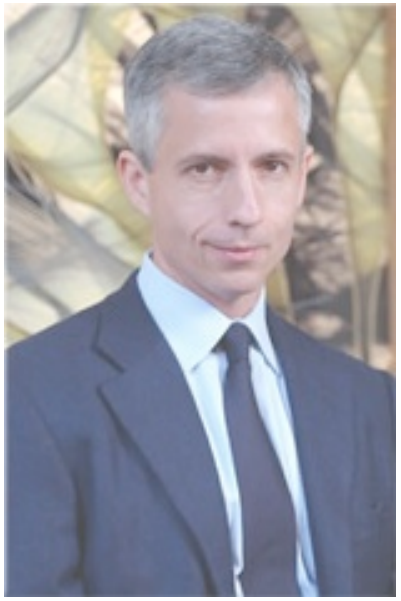
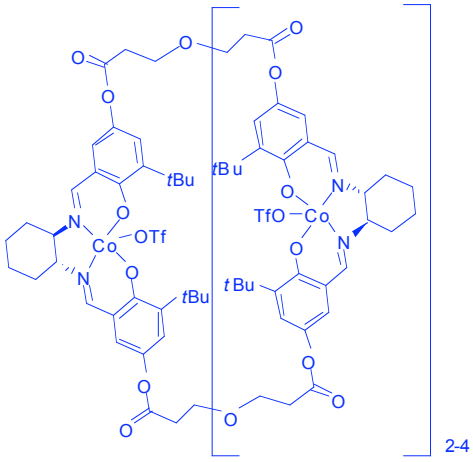


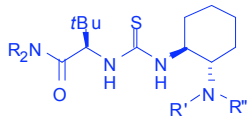
POCC Seminar –
Allan R. Day Award
Thursday, September 20, 2007
Professor Eric N. Jacobsen
Harvard University
Title: A Search for Selective yet General Catalysts
8:00 p.m.
Carolyn Hoff Lynch Lecture Hall
University of Pennsylvania

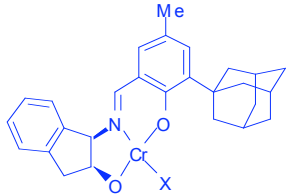
Eric N. Jacobsen was born in New York, N.Y. on February 22, 1960 and graduated from New York University in 1982. After obtaining his with Robert Bergman at the University of California at Berkeley in 1986 and a postdoctoral position with K. Barry Sharpless at MIT, he joined the faculty of the University of Illinois at Champaign-Urbana in 1988, moving to Harvard University in 1993 where he is Sheldon Emery Professor of Chemistry. His research interests include mechanistic and synthetic chemistry, development of new methods for organic synthesis, with particular emphasis on asymmetric catalysis, physical-organic studies of reactivity and recognition phenomena in homogeneous catalysis and stereoselective synthesis of natural products

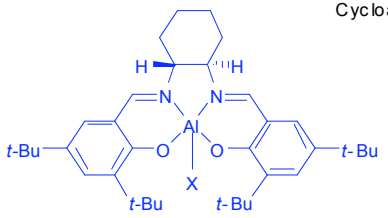
Abstract: Small molecule catalysts can be general (by accepting a broad range of substrates), and yet selective (by inducing high kinetic control in reactions on those substrates). This apparent paradox is manifested in many ways in asymmetric catalysis. For example, certain chiral ligand frameworks are useful for an extraordinarily wide range of mechanistically unrelated reactions. These "privileged ligands" have broad utility, and also serve as useful starting points for discovery of new enantioselective reactions. There are also several examples of what can be called "privileged catalyst-substrate combinations", where a catalyst accepts a wide range of structurally diverse but functionally related substrates in highly enantioselective reactions. This lecture will outline my own group's contributions to the discovery and mechanistic elucidation of such privileged systems.



Epoxide Kinetic Resolution Catalyst


Imine Addition Catalysts


Cycloaddition Catalysts


Conjugate Addition Catalysts