

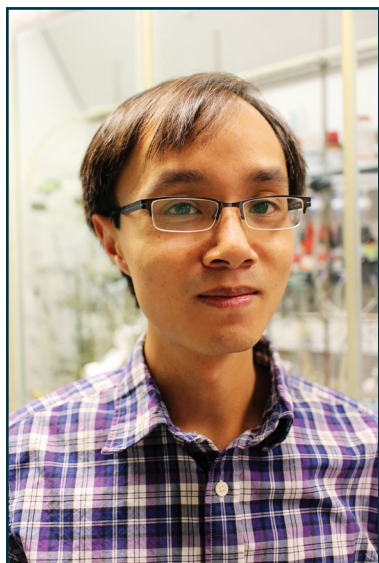


UNIVERSITY OF MINNESOTA
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Department of Chemistry

Seminar

9:45 a.m. Tuesday, December 9, 2014 • 331 Smith Hall



Post-Doctoral Fellow

Charles S. Yeung, Ph.D.

Department of Chemistry and Chemical Biology
Harvard University

Catalysis with Transition Metals and Chiral Hydrogen Bond Donors: C–H Activation, Olefin Halogenation, Indoline Synthesis, and In Silico Protease Design

Research mission: Innovations in catalysis and methods development applied to organic synthesis, biology, materials science, and energy: inspiration from Nature, prediction from theory, utilization of modern techniques, education of young scientists.

Abstract

Catalysis is a powerful tool for the synthesis of bioactive compounds. Catalysts operate through complex mechanisms and provide opportunities for stereocontrol and nontraditional bond construction. This seminar will describe recent efforts toward transition metal-catalyzed cross-couplings through C-H activation and the use of small molecule hydrogen-bond donors in chiral amino alcohol and indoline synthesis. Rational design of catalyst structure, mechanism-based optimization, and systematic prediction through DFT and MM calculations will be discussed in the context of *de novo* catalyst discovery and design.

Hosts: Professors Marc Hillmyer & Ian Tonks
Refreshments will be served prior to the seminar.