

CHEMISTRY COLLOQUIUM

WED., FEBRUARY 24, 2016, 12:00 PM

HUTCHISON HALL, ROOM 140

LANDER AUDITORIUM

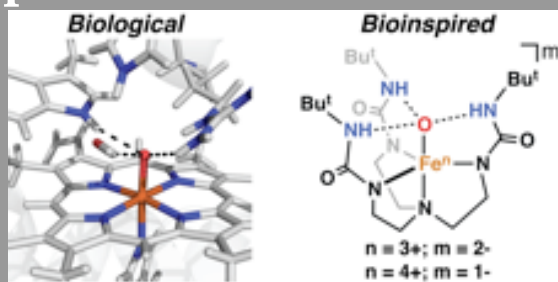
UNIVERSITY OF ROCHESTER

Guest Speaker:

PROFESSOR ANDY BOROVIK

University of California, Irvine

Department of Chemistry



Title: Synthetic Chemistry as a Window into Biology: Architectural Complexity at the Molecular Level

Abstract:

The function of metal complexes is linked directly to the local environment (that is, their 2nd coordination sphere) in which they are housed. It is now apparent that the placement of compounds within different local environments produces changes in key properties that affect reactivity. It is thus possible to understand function, and dysfunction, of a metal complex within the context of properties associated with their secondary coordination sphere, regardless of system type or length-scale. This presentation will describe architectural features within the secondary coordination sphere that are instrumental in regulating function at a metal center. Protein systems will be briefly described to illustrate the complexity of molecular structures necessary to promote function, specifically the importance of non-covalent interactions. Synthetic compounds will be discussed to demonstrate attempts to emulate some of these architectural features, with emphasis on the challenges involved in designing molecular systems that incorporate non-covalent interactions within their secondary coordination spheres.

Host: Professor Kara Bren, email: kara.bren@rochester.edu