

DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE
SEMINAR SERIES
FALL 2019

DATE: WEDNESDAY, OCTOBER 2, 2019

LOCATION: TIERNAN HALL LECTURE 1

TIME: 1:00-2:20PM

GUEST SPEAKER

Prof. David B. Collum
Department of Chemistry and Chemical Biology
Cornell University
Ithaca, NY

TOPIC

“Structure-Reactivity-Selectivity Relationships in Alkali Metal Chemistry”

ABSTRACT

After decades of studying N-lithiated and C-lithiated species aided by detailed structural assignments based on X-Li scalar coupling, we have begun making progress in two new directions: the chemistry of lithium enolates and in organosodium chemistry. We will describe an overview of how solution structures influence reactivities and selectivities. In all studies the role of solvation is of paramount importance. Although we continue to emphasize structure and mechanism, connecting these with synthetic methodologies is of increasing focus.

BIO

David Collum is the Betty R. Miller Professor of Chemistry in the Department of Chemistry and Chemical Biology at Cornell University in Ithaca, NY. He has obtained his Ph.D. from Columbia University in 1980 and his B.Sc. from Cornell University in 1977. His current research involves studying how aggregation and solvation dictate the reactivity and selectivity of organolithium compounds commonly used by synthetic chemists in both academia and the pharmaceutical industry by using a combination of spectroscopic, kinetic, and computational methods that bridge organic, organometallic, and analytical chemistry.

Committee members:

Dr. Pier Champagne – pier.a.champagne@njit.edu

Dr. Hao Chen – hao.chen.2@njit.edu