ORGANIC SYNTHESES – Distinguished Speaker Series

ACTIVITY-BASED SENSING: LEVERAGING CHEMICAL REACTIVITY FOR SELECTIVE BIOIMAGING

Traditional strategies for developing selective imaging reagents rely on molecular recognition and static lock-and-key binding to achieve high specificity. In this seminar, we will explore an innovative alternative to chemical probe design called activity-based sensing. This approach leverages inherent differences in chemical reactivity to distinguish between analytes that are similar in shape and size within complex biological systems.

This presentation will delve into the use of activity-based sensing to visualize dynamic fluxes of metal ions, reactive oxygen species, and reactive carbon species. Additionally, it will cover the application of activity-based proteomics probes to characterize targets involved in single-atom signaling.

Dr. Chang completed his B.S. and M.S. degrees at Caltech in 1997 under the guidance of Harry Gray. He then spent a year as a Fulbright Scholar in Strasbourg before earning his Ph.D. from MIT in 2002 under Dan Nocera. Following a postdoc at MIT with Steve Lippard, Dr. Chang began his independent career at UC Berkeley in 2004 and joined Princeton University in 2024.

Dr. Christopher J. Chang
Princeton University

WEDNESDAY, DEC. 4
1:00 PM - 2:20 PM
Tiernan Lecture Hall I

Organic Syntheses

NJIT New Jersey Institute of Technology