



香港中文大學化學系
Department of Chemistry
THE CHINESE UNIVERSITY OF HONG KONG

The Chinese University of Hong Kong

Department of Chemistry Research Seminar Series



Professor Andrei YUDIN

Department of Chemistry
University of Toronto
Canada

Between the Rules: When Chemical Reactivity Defies Conventional Reasoning

**9 January 2026 (Friday)
4:30 PM
LSB LT3**

Contact Person:
Professor Gavin Chit TSUI



Between the Rules: When Chemical Reactivity Defies Conventional Reasoning

Andrei K. Yudin (andrei.yudin@utoronto.ca)

Department of Chemistry, University of Toronto

Abstract

In organic chemistry, conventional reasoning—often grounded in powerful tools of electronic structure analysis—has long shaped how we design molecules and predict reactivity. These approaches remain valuable, but they are not always sufficient. In this talk, I will introduce the concept of isoreactivity as a way of relating molecular fragments based on their patterns of reactivity. Isoreactive fragments may be structurally distinct yet engage in productive elementary steps under comparable conditions. By emphasizing a fragment's propensity to react as a foundation for chemical logic, this method offers a complementary perspective to traditional thinking. Through examples drawn from ongoing work, I will explore how isoreactivity can expand the toolkit for structural module substitution during reaction design—particularly in cases where conventional reasoning no longer provides clear guidance.