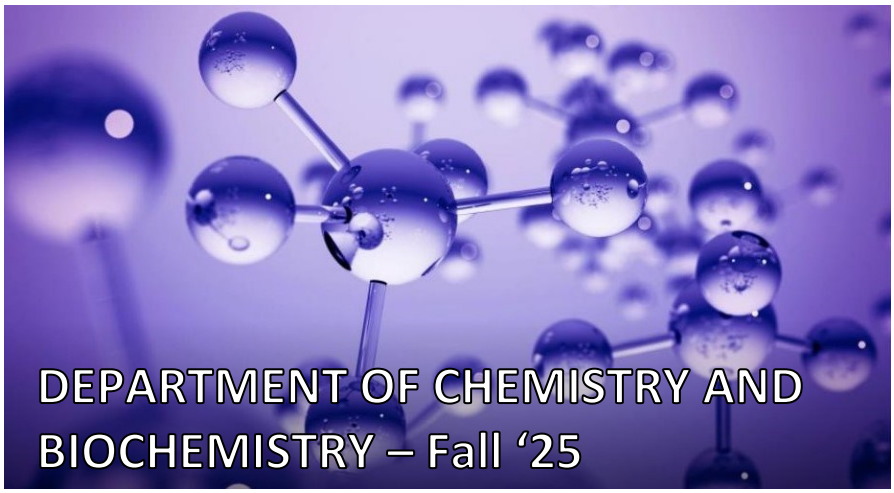

THE SALZBERG CHEMISTRY SEMINAR SERIES

The City College of New York

CREST IDEALS PHASE II

Monday, November 17 2025 @ 12:00 noon – MR1027

PFAS Transformation and Remediation: From Environmental Release to Innovative Cleanup Strategies (in person)

Yuemei Ye
Department of Chemistry
Lehman College, CUNY

Abstract: Within the realm of precise chemoselective manipulations, site-selective functional group translocation via C–H functionalization chemistry presents an exciting opportunity to unlock noncanonical synthetic disconnections. I will highlight the development of a novel radical-triggered annulative alkene transposition cascade that enables the modular preparation of valuable spirocycles from simple alkenol starting materials. In the second part, I will discuss our synthetic strategy toward the highly oxidized and bioactive meroterpenoid natural product, talaromyolide D. Our approach leverages efficient C–H disconnection logic to elaborate the polycyclic core of the target, along with several highly diastereoselective transformations, including an electrocatalytic sp2–sp3 radical cross-coupling.

Biography: Dr. Yuemei Ye is an Assistant Professor of Chemistry at Lehman College, CUNY. Her research focuses on measuring and predicting the release of per- and polyfluoroalkyl substances (PFAS) from solid waste, and developing advanced nanomaterials and hydrogels for remediating persistent pollutants. She earned her bachelor's degree in Materials Science and Engineering from Wenzhou University and her Ph.D. in Chemistry from Tongji University, where she specialized in functional hydrogels and environmental applications. Dr. Ye completed postdoctoral research at the University of Wisconsin–Milwaukee, the University of Washington, and North Carolina State University. Her past work includes investigating PFAS transformation in landfills and designing catalytic materials for PFAS defluorination in water. Her research has been published in journals such as *Environmental Science & Technology* and *Journal of Materials Chemistry A*, with a recent paper accepted in *Advanced Materials*. Currently, Dr. Ye's research addresses the environmental and health impacts of PFAS, including their release from biosolids, uptake in crops, and toxicity related to breast cancer. She also develops sustainable materials for detecting and remediating persistent contaminants, dedicated to providing safe and affordable drinking water.

Join Meeting in-person at MR-1027