CEE

Graduate Seminar

Yuemei Ye, PhD

Assistant Professor
Department of Chemistry,
Lehman College, CUNY

October 21, 2024 (4:00 pm - 5:30 pm), Kupfrian Hall - Room 205

Zoom Link: Click Here ***Meeting ID: 994 3917 6432 Passcode: 058807***

Volatile PFAS Released from Paper-based Food Packaging under Simulated Landfill Conditions and Novel Approach Development to Degrade PFAS in Water

Abstract

Per- and polyfluoroalkyl substances (PFAS) have become a major health concern due to their persistent and widespread presence in the environment and their resistance to both biodegradation and chemical degradation methods. PFAS are commonly found in solid waste, and since approximately 50% of municipal solid waste (MSW) in the U.S. is disposed of in landfills, the decomposition of MSW in these sites likely contribute to PFAS contamination. While PFAS release into landfill leachate has been studied, little research has focused on their release into landfill gas (LFG). Measuring PFAS release during the anaerobic breakdown of various single-use food packaging materials is essential for understanding this contamination source. Additionally, the robust carbon-fluorine bonds in PFAS compounds make degradation challenging, and effective remediation strategies are still limited. Therefore, innovative methods are needed to degrade PFAS in the environment effectively.

About the Speaker

Yuemei Ye *is an assistant professor of Chemistry at Lehman College, CUNY. Her work focuses on advanced nanozyme and hydrogel technologies for the effective remediation of persistent pollutants, particularly per- and polyfluoroalkyl substances (PFAS). With a Ph.D. in Chemistry from Tongji University, Dr. Ye continued her postdoctoral research at the University of Wisconsin-Milwaukee, the University of Washington, and North Carolina State University. In her previous roles, Dr. Ye led projects on PFAS transformation in landfill conditions and designed novel catalytic materials-based system for PFAS defluorination in water. She has also developed various nanozyme- and enzyme-based antibacterial technologies with potential applications in water treatment. Dr. Ye's current group aims to expand sustainable methods and green materials for detecting, predicting, and remediating persistent organic contaminants in the environment, with a dedication to providing safe and low-cost drinking water.*

NJIT
CIVIL AND ENVIRONMENTAL ENGINEERING

To Join to the ZOOM, scan the QR code!
Meeting ID: 994 3917 6432
Passcode: 058807