Catalytic Conversion of Mixed Plastics and Packaging Films

• Time: 2026.05.14. (Thu) 16:00-17:15

• Place: 114-102 Classroom

Speaker

Prof. Dionisios G. Vlachos

Department of Chemical and Biomolecular Engineering,

Delaware Energy Institute, University of Delaware

Abstract

This talk will provide an overview of the different approaches for converting plastics to various products, including fuels, lubricants, and small olefins. It will also provide mechanistic insights into methane formation pathways and ways to minimize its formation. The talk will also discuss the need for earth-abundant catalysis, additives, mixed plastics, and the role of heat transfer in product distribution. It will introduce novel reactors and electrification to advance the catalytic conversion. Finally, we will discuss the role of multiscale modeling and AI in harnessing knowledge, designing new polymers, and optimizing catalysts and reactors.