



THE OHIO STATE UNIVERSITY

The William G. Lowrie Department of Chemical and Biomolecular Engineering Graduate Program Cordially invites you to attend a seminar on

## Renewable, Recyclable Plastics in Packaging: Challenges and

### Opportunities

**Maria R. Coleman**

*Professor & Chair  
Chemical Engineering  
Associate Director, Polymer Institute  
University of Toledo*

**Thursday, November 16<sup>th</sup>, 11:30 AM  
130 Koffolt Lab, CBEC 151 W Woodruff Ave  
Reception at 11:00 AM - CBEC Lobby**

### Bio

Maria Coleman is a Professor of Chemical Engineering at the University of Toledo. She received her Ph.D. at the University of Texas at Austin. Her work focuses on synthesis, structure-property relationships for glassy polymers and nanocomposites with applications in barrier polymers and membranes. As the Associate Director of the Polymer Institute, she coordinates an industrial based research consortium working on challenges to sustainable barrier packaging.

### Abstract

The growing use of plastic packaging combined with the current low rate of recycling of plastic packaging has resulted in growing volume of plastic waste in the environment. This talk will focus on work in our group to develop a circular economy for packaging polymers through integration of bio-renewable copolymers of poly(ethylene terephthalate) (PET) with chemical recycling processes to recover monomers and reduce the need for virgin polymer. The synthesis, processing and characterization of copolyesters of renewable monomers with PET will be discussed. Recoverable, reusable catalysts were developed for hydrolysis and glycolysis of copolyesters to allow recovery and recycling of high value monomers.

