

The Department of Chemical Engineering Presents:



SUSANNAH SCOTT

**Distinguished Professor
Mellichamp Chair Sustainable Catalytic Processing**

Catalytic Upcycling of Polyolefins

Zoom meeting link: <https://rochester.zoom.us/j/98875611576> 87849

ABSTRACT: A successful circular plastics economy will depend on the ability to create value from commodity plastics in ways that mechanical recycling has simply not delivered. Chemical strategies to disassemble polymers must take into account thermodynamic and kinetic barriers, and target products of higher value. I will describe strategies to obtain valuable chemicals from polyolefins without the need for large inputs of energy or chemical resources, by coupling reactions that create and consume hydrogen.

Bio: Scott received her Ph.D. in Inorganic Chemistry from Iowa State University, under the direction of Jim Espenson and Andreja Bakac, on the activation of O₂ and transition metal-catalyzed oxidation mechanisms. She was a NATO Postdoctoral Fellow with Jean-Marie Basset at the Institut de recherches sur la catalyse (CNRS) in Lyon, France, before joining the faculty of the University of Ottawa (Canada) where she was named a Canada Research Chair in 2001. In 2003, she moved to the University of California, Santa Barbara, where she currently holds the Duncan and Suzanne Mellichamp Chair in Sustainable Catalysis.

She has joint faculty appointments as a Distinguished Professor in both Chemical Engineering and in Chemistry & Biochemistry. She is an Associate Editor for ACS Catalysis, a member of the Board of Reviewing Editors for Science, and a member of Scientific Advisory Boards at the Fritz Haber Institute, SUNCAT, SSRL, NREL, JBEI, Ames Lab, and PNNL. Her research interests include the design of heterogeneous catalysts with well-defined active sites for the efficient conversion of conventional and new feedstocks, as well as environmental catalysts to promote air and water quality. She develops new kinetic and spectroscopic methods to probe reaction mechanisms. In 2014, she founded the Mellichamp Academic Initiative in Sustainable Manufacturing and Product Design at UC Santa Barbara, where she now leads an interdisciplinary program in research and education involving faculty from chemistry, chemical engineering, materials, environmental science, industrial ecology, technology management, political science, economics, and science communication.

Wednesday, February 17, 2021 3:25PM

Via Zoom:

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