



SEMINARS IN CHEMICAL AND BIOMOLECULAR ENGINEERING



Friday, Dec. 07, 2018

10:00am-11:00am

Boelter Hall 3400

Dr. Cathy Tway, Ph.D.

Director, Core Research & Development
Materials Science and Engineering
The Dow Chemical Company

“Innovation for a Mature Technology Space”

The need for innovation is a very popular topic, both in the popular press and in business circles. Simultaneously, the effectiveness of R&D in delivering innovation is highly scrutinized. Typically, the time from project initiation to the breakeven point after commercialization for new materials and chemical processes can be on the order of 10 to 20 years, with the timeline becoming lengthier as technologies become more disruptive. In mature areas, challenges in introducing new technologies become even greater because of incumbency, and yet, innovation is particularly important to enable decarbonization of the industrial sectors. This talk will present an overview of a few of the challenges for industrial innovation and highlight some of the future industrial innovation opportunities.

Dr. Cathy Tway is the Director for the Materials Science and Engineering Capability of Core Research & Development. In this role, Dr. Tway is responsible for a global team of scientists and engineers specializing in materials science, processing technologies, engineering design, and numerical modeling for predictive engineering.

Dr. Tway joined Dow in 2007 as a Research Leader in the Inorganic Chemistry and Catalysis organization. She developed and led the Core R&D efforts for ethylene oxide catalyst discovery and also introduced several new inorganic materials research programs. Most recently, Dr. Tway was the Director of the Inorganic Materials and Heterogeneous Catalysis Capability within Core R&D, where she was responsible for expanding research capabilities in heterogeneous catalysis, inorganic materials, and characterization. Prior to joining Dow, Dr. Tway held positions at Celanese, Solutia and AkzoNobel, holding both individual contributor and R&D leadership roles. Her industrial experience covers the entire project life cycle including front end identification and creation of new technologies, process scale-up, commercialization and plant support. Over her career, Dr. Tway has commercialized two inorganic materials and four catalyst technologies, with two of these processes still in use today.

Dr. Tway earned her B.S. degree in Chemistry from Wichita State University and her PhD in Physical Inorganic Chemistry from the University of Nebraska.