

TITLE:

Fate of Plastics in the Environment: from legacy pollutants to emergent materials

ABSTRACT:

Plastics are a ubiquitous part of everyday life and a central challenge in the environment. Environmental stresses such as sunlight, temperature fluctuations, wet/dry cycling or microbial forces affect the longevity or degradation of plastics. Assessing the fate of plastics under these stresses allows us to accurately predict the service lifetime of plastics used in infrastructure (or evaluate the extent of the plastic pollution problem). This talk will center around some of the fundamental chemistry questions the Maurer-Jones group asks around how plastics degrade and what are the implications for them in the environment. Insights my group has made we will be a jumping off point to explore some questions or concepts around the future of plastic materials.

BIOSKETCH:

Melissa Maurer-Jones is an Associate Professor in the Department of Chemistry & Biochemistry at University of Minnesota Duluth. Earning her Ph.D. from UMN-Twin Cities, Dr. Maurer-Jones completed a postdoctoral research position at ETH Zurich before beginning her career at UMD in 2016. The Maurer-Jones research group tackles a variety of questions around the environmental degradation of plastics, bringing together expertise from analytical, materials, and environmental science. She currently serves as the Director of Graduate Studies for the Chemistry MS program and is an Associate Editor for *Environmental Science & Technology*.