

Advanced Materials for Sustainability

Pei Dong

Department of Mechanical Engineering, George Mason University

October 27, 2023

To foster a sustainable society, there is an immediate and pressing need for the widespread adoption of energy-efficient devices that operate through environmentally friendly processes. Materials design assumes a pivotal role in this endeavor, enabling the development and optimization of these innovative solutions. This talk will summarize the latest endeavors in designing, synthesizing, and characterizing advanced materials with high specific surface areas, tunable porosity, and excellent conductivity to significantly enhance device performance in various domains, including water treatment, public health, and energy. Embracing these advancements will dramatically help us build a more sustainable and resilient world for generations to come.