



Michelle Kidder is the 2023 recipient of the ENFL Mid-Career Award

Dr. Michelle K. Kidder is a Senior Research and Development Staff Scientist, at Oak Ridge National Laboratory (ORNL).

In addition, she currently serves as an ORNL Program Manager for the Department of Energy-Fossil Energy Carbon Management for both Carbon Capture and Utilization areas, and as Scientific Lead for Net Zero Carbon strategies at ORNL. As a physical organic chemist, her research focuses on novel material development (including porous polymers, metal oxides, hybrid catalysts and sorbents) and process intensification for separations and alternative fuel and chemical production from renewable energy resources. She has established new approaches which integrate modeling, reactor processes and characterization methodologies to elucidate underlying reaction mechanisms that enable further design and control of material properties for predictive, optimal performance and scale-up. Her leading efforts have helped to describe the impacts of complex interfacial chemistries that occur in biomass conversion, carbon capture and release, and carbon conversion from thermal and catalytic reactions to help improve technologies and accelerate the deployment of energy efficient and sustainable production of chemicals and fuels. Dr. Kidder has over 140 peer-reviewed journal publications and preprints, a book and 5 patents. She has served in several Executive Committee roles for the National American Chemical Society Division of Energy and Fuels including Chair (2016), secretary, newsletter editor, student awards symposia developer/organizer, alternate councilor and director at large. In 2018 she was named an American Chemical Society Fellow and also received the ACS ENFL Distinguished Service award. In 2019 she was awarded the U.S. Clean Energy Education & Empowerment (C3E) in Research, and in 2022 received both the UT-Battelle Award for Excellence in Science and Technology for Research Mentorship, and the 2022 top award, UT-Battelle Director's Award for Outstanding Individual Accomplishment in Science and Technology. She received her BS in Chemistry from the State University of New York at Brockport and her PhD in Physical Organic Chemistry from South Dakota State University.