KANSAS STATE UNIVERSITY

College of Arts and Sciences
Department of Chemistry

DEPARTMENTAL SEMINAR

Thursday, 17 April | 1:05 pm | KG 004

King Lecture: "Framing Circularity in the Plastics Landscape"

Distinguished Professor LaShanda Korley

University of Delaware

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Abstract: Polymers are ubiquitous in the modern world, and the demand for and production of plastics products continues to climb. Historically, the chemical manufacturing of plastics has focused on key features, such as durability, low-cost, and multifunctionality; however, these aspects also challenge current interventions to combat the plastics waste dilemma. I will overview plastics sustainability from the perspective of transitioning from a linear to a circular economy, addressing macromolecular diversity and plastic waste complexity, reducing dependence on petroleum feedstocks, and maintaining (or improving) material performance.

Bio: Prof. LaShanda T. J. Korley is a Distinguished Professor of Engineering in the Departments of Materials Science & Engineering and Chemical & Biomolecular Engineering at the University of Delaware (UD). Korley is the Director of the Energy Frontier Research Center – Center for Plastics Innovation funded by the Department of Energy and also the Co-Director of the Materials Research Science and Center – UD Center for Hybrid, Active, and Responsive Materials funded by the National Science Foundation. She also is an Associate Editor for ACS Macro Letters. Her innovative research program utilizes a bioeconomy framework or the nexus of biologically-inspired and sustainable principles for the molecular design, manufacture, and valorization of functional polymeric systems, including thermoplastics, networks, composites, and gels. Korley has received several distinguished honors, including 2023 (ACS Fellow, AIChE Fellow, Fellow of RSC, ACS POLY Fellow); 2022 (APS Fellow, ACS PMSE Fellow); 2021 Chemical and Engineering News Black Trailblazer); 2020 AIMBE Fellow, 2012 Kavli Fellow. LaShanda was selected for the 2023 U.S. Science Envoy Cohort by the U.S. State Department. She received a B.S. in both Chemistry & Engineering from Clark Atlanta University as well as a B.S. in Chemical Engineering from the Georgia Institute of Technology. Korley completed her doctoral studies at MIT in Chemical Engineering and the Program in Polymer Science and Technology, and she was the recipient of the Provost's Academic Diversity Postdoctoral Fellowship at Cornell University. .