UC Irvine
Department of Civil and Environmental Engineering

FALL 2025 SEMINAR Series

How Far Are We from Sustainable Treatment of PFAS?

Presented by:

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Friday, October 24, 3:00 PM - 4:20 PM PT
McDonnell Douglas Auditorium (MDEA)

Abstract: Per- and polyfluoroalkyl substances (PFAS) are persistent and toxic environmental contaminants. At the University of Arizona, our team is tackling PFAS challenges through four key efforts: (1) assessing contamination in Arizona, (2) developing real-time PFAS sensors, (3) designing cost-effective sorbent-based treatment technologies, and (4) building QSPR-based modeling tools to guide future design. This talk will focus on sustainable PFAS treatment. While granular activated carbon (GAC) is widely used, its regeneration is energy-intensive and often unsustainable. In the KORES lab, we explore novel sorbents and surface modifications to improve PFAS adsorption and enable efficient regeneration. Our work also includes mechanistic studies to better understand PFAS-sorbent interactions and inform next-generation treatment strategies.

Bio: Dr. Vasiliki (Vicky) Karanikola is an Associate Professor of Chemical and Environmental Engineering at the University of Arizona. She holds degrees in Mechanical, Civil, and Environmental Engineering from institutions in Greece, San Diego State University, and the University of Arizona, where she also earned her PhD. Before joining UA in 2019, she completed a postdoctoral fellowship at Yale University. Her research focuses on sustainable water treatment technologies, with an emphasis on novel materials and processes at the water-energy nexus. Dr. Karanikola's work has been recognized with the 2021 U.S. APEC ASPIRE Prize, the UA Provost Early Career Award, and a Haury Faculty Fellowship for her collaborations with Tribal Nations.

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