Stony Brook University
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SIR RUN RUN SHAW LECTURE SERIES

21st Century Solvents for Demands of Modern Society

Dr. Burcu Gurkan

Kent H. Smith Professor II
Case School of Engineering
Case Western Reserve University

Solvents are central to industrial manufacturing, enabling synthesis, separations, and reactions critical to energy storage and conversion. This talk explores unconventional solvents—including ionic liquids, deep eutectic solvents, and water-in-salt systems—and their applications in separations, carbon capture, flow batteries, and critical materials recovery.

Dr. Gurkan earned her PhD from the University of Notre Dame. She is Director of Breakthrough Electrolytes for Energy Storage Systems (BEES2), a U.S. Department of Energy Energy Frontier Research Center, and an associate editor for *ACS Applied Engineering Materials*. Her honors include the NSF CAREER, NASA Early Career Faculty, and PECASE awards, and recognition as a 2019 Influential Researcher by the *Industrial & Engineering Chemistry Research,* a journal of American Chemical Society.

Wednesday, May 6, 2026 • 12:30 pm
Student Union Auditorium

Presented by the Department of Chemistry, and the Institute of Sustainability, Electrification, and Energy (I:SEE)

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