SDSU College of Engineering Mechanical Engineering

Mechanical Engineering Seminar Series

September 1, 2026,11:00AM

EIS 104

Title: Liquefied Gas Electrolytes: Why, What, and How?

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South 8

Abstract: Conventional Li-ion battery cells utilize a liquid solvent-based electrolyte, which limits safety, energy, and operation temperature. With liquid electrolyte performance plateuing, most next-generation electrolyte research focuses on solid-state electrolytes. This talk will introduce a novel class of Liquefied Gas (LiGas) electrolytes for Li-ion cells, which improves performance metrics, utilizes conventional manufacturing tools, and offers a cost competitive solution.

Bio: Cyrus Rustomji is Co-Founder & Chief Science Officer of South 8, a San Diego-based company focused on electrolyte for advanced lithium-ion batteries. Cyrus earned his PhD from UC San Diego for his original work on developing South 8's Liquefied Gas Electrolyte technology and a B.S. in Physics from UC Los Angeles. He has over fifteen years of research and product development experience. He has authored dozens of issued patents and scientific publications. Prior to earning his PhD, he worked with Eaton, ZPower, and Space Micro on developing products ranging from electrochemical capacitors, batteries, and space electronics and bringing multiple products to market. He has successfully led fundraising activities as well as multi-disciplinary teams on several projects including federal, state, and industry grants and contracts.