

Katherine Betts

Bio

Katherine Betts is a graduate student at University of Las Vegas, Nevada, working towards her PhD in Chemistry. Katherine specializes in *in-situ* electrochemical spectroscopy, with publications in the fields of battery electrolyte behavior and environmental PFAS adsorption. She has worked teaching high school and college level science classes and has previous career experience in architecture and construction. Through the application of specialized, surface sensitive techniques, she hopes to develop innovative solutions for sustainable energy storage and advanced technologies for space exploration systems.

NASA's Space Technology Mission Directorate has ambitious targets for energy storage systems, requiring a novel approach to electrolyte solvents. Katherine's research aims to explore weakly solvating electrolytes, designed to enhance battery efficiency for low temperature applications. Using surface-enhanced infrared absorption spectroscopy, electrolyte systems with low melting points and low solvation properties will be explored. The study aims to identify electrolyte solvents that can contribute to the development of ultra-cold battery systems for space exploration and lunar habitats.