

UNDERWRITERS LABORATORIES®

Battery Safety Science Symposium

August 11, 2021

Session I

Recent Advances: Safety Perspective

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Active mitigation of thermal runaway propagation

This work presents tools used to mitigate thermal runaway propagation. This builds upon work published previously that studied the heat conduction across active barriers and their role in reducing the likelihood of thermal runaway propagation. This work looks at expanding the external area of the barrier plates to aid in the carrying of heat away during thermal runaway events. We explore the results of this work and potential ramifications in designing propagation resistant systems.

About the speaker

Dr. Joshua Lamb is currently a Principal Member of the Technical Staff with the Advanced Power Sources R&D organization at Sandia National Laboratories. He primarily oversees the Battery Safety and Abuse Testing Laboratory (BATLab) team, and the Battery Safety and Reliability thrust of the DOE Office of Electricity Energy Storage Program. Battery safety science at Sandia focuses on the development of inherently safe lithium-ion batteries by understanding the consequences and mechanisms of failure, developing cradle-to-grave battery testing, and developing new materials for use in battery systems. Joshua earned his Ph.D. in Metallurgical Engineering in 2008 and his B.S. in Chemical Engineering in 2002 from the University of Nevada. Since joining Sandia in 2011, Joshua's research interests include advanced techniques for determining the stability of lithium-ion batteries and the development of advanced battery abuse and safety tests.

