

9th Workshop "Lithium-Sulfur Batteries"

November 28–29, 2022 | Online



PROGRAM*

Monday, November 28

Session 1: Mechanisms

Chair: Stefan Kaskel

- 12:00 (CET) Opening
Stefan Kaskel | Fraunhofer IWS, TU Dresden
- 12:15 Plenary: Identifying the fundamental causes limiting the performance of metal-sulfur batteries
Nuria Garcia-Araez | University of Southampton
- 13:00 Multidimensional operando analysis of Li/S batteries with neutrons and photons
Sebastian Risse | Helmholtz-Zentrum Berlin
- 13:20 Morphologic simulations of lithium-sulfur cathodes using the lattice Boltzmann method
Julius Weinmiller | German Aerospace Center (DLR)
- 13:40 On problems of optimizing amount of electrolyte in lithium-sulfur batteries
Elena Karaseva | Institute of Chemistry of the Russian Academy of Sciences
- 14:00 [Coffee Break | Meet the Poster Presenter](#)

Session 2: Cell Development

Chair: Holger Althues

- 14:45 Keynote: How much potential is hidden in next-gen battery technologies, and can they be successfully placed in the automotive market?
Elizaveta Kessler | P3
- 15:15 Developing anodes and cathodes in a Li-S system
Abdul-Rahman Raji | Zeta Energy
- 15:35 Advanced lithium-sulfur batteries enabled by Lyten 3D graphene®
Kumar Bugga | LYTEN
- 15:55 Theion, a high-energy lithium-sulfur technology
Andréa Martin | Theion GmbH
- 16:15 Concluding remarks
Holger Althues | Fraunhofer IWS

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Session 3: Materials

Chair: Holger Althues

- 09:00 (CET) Opening
Stefan Kaskel | Fraunhofer IWS, TU Dresden
- 09:15 Plenary: Challenges and promises of Lithium Metal Anode in practical Lithium-Sulfur Batteries
Qiang Zhang | Tsinghua University
- 10:00 Sulfur cathodes with self-organized cellulose nanofibers in stable Ah-Level, >300 Wh kg⁻¹ Lithium-Sulfur Cells
Yingyi Huang | Monash University
- 10:20 High-performing sulfur cathode development through rationally incorporated graphene-derived carbon materials
Julen Castillo | CIC
- 10:40 Impacts on the volumetric energy density of the Li-S battery
Tom Boenke | Fraunhofer IWS, TU Dresden
- 11:00 [Coffee Break | Meet the Poster Presenter](#)

Session 4: Solid State

Chair: Felix Hippauf

- 11:45 Influence of carbon porosity on the sulfur utilization in Lithium-Sulfur battery cells with sulfidic electrolyte
Magdalena Fiedler | Fraunhofer IWS, TU Dresden
- 12:05 Investigation in charge-discharge mechanism of Li₂S–LiI solid solution for all-solid-state Li/S batteries
Yushi Fujita | Osaka Metropolitan University
- 12:25 Elucidation of capacity degradation for graphite in sulfide-based all-solid-state lithium batteries: a void formation mechanism
Kentaro Kuratani | AIST
- 12:45 Keynote: Effective ionic transport in Li-S solid state batteries
Wolfgang Zeier | Universität Münster
- 13:15 Concluding remarks
Holger Althues | Fraunhofer IWS