

The 118th **GREEN** Seminar



Liquid-Phase Processes for Advancing Materials and Interfaces in All-Solid-State Batteries

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Advanced inorganic materials are attracting growing interest for energy and environmental applications due to their multifunctionality and sustainability potential. This presentation focuses on recent developments in all-solid-state batteries, highlighting their promise for high-energy-density storage. Although solid electrolytes with high ionic conductivity and electrochemical stability have been developed, challenges at the electrode–electrolyte interface persist. We present strategies to reduce interfacial resistance, emphasizing oxide-type solid electrolytes and interfaces. Key approaches include low-temperature synthesis using glassy sintering additives and the integration of amorphous or hybrid materials. Inorganic interfacial layers are also explored as effective solutions to enhance contact and enable efficient solid-state battery performance.

Venue: Rm. 409/410, 4F, Collaborative Research Bldg.,
Namiki-site

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