



Lithium-Sulfur Batteries: Research Progress of Key Materials

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Message from the Guest Editors

Dear Colleagues,

This Special Issue on Lithium-Sulfur Batteries is focused on the research progress of key materials. Aiming at the severe shuttle effect, the continuous consumption of electrolyte and the growth of lithium dendrites, how can we perform to substantially improve the practicability of lithium-sulfur batteries?

In terms of the main components of lithium-sulfur batteries, great enhancements of electrochemical performances have been made through electrocatalysis by polar substrates or solid-phase conversion by short-chain sulfur in cathodes, functional modification on separators, non-ether-based or solid-state electrolytes, as well as surface engineering on lithium anodes. Can these strategies be rationally designed and coupled to efficiently increase the energy density and lifespan for application?

This Special Issue welcomes novel research on key materials to promote the performance of lithium-sulfur batteries, and provides valuable guidance for their large-scale commercialization.

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