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Lithium-Sulfur Batteries

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Deadline for manuscript submissions:
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Message from the Guest Editors

Dear Colleagues,

The development and the optimization of reliable electrolytes are one of the most important challenges in the development of lithium–sulfur batteries. In these systems, in fact, the electrolyte has an enormous impact in terms of cycle life, rate capability, safety, and life span and is therefore a fundamental component of a high-performance battery. The solubility of polysulfides, implying the parasitic polysulfide shuttle mechanism, as well as the stability versus lithium metal are the main properties that must be tailored in order to improve the battery operation, and the rational design of an electrolyte cannot be made without taking into account their impact. This is usually obtained by both the extensive study of the role of Li salt concentration/ionic strength for the polysulfide solvation and a detailed description at the molecular level of the interactions allowing a limitation of polysulfide solvation and a stabilization of electrode–electrolyte interfaces.

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Guest Editors

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Message from the Editor-in-Chief

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