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Lithium-Metal Batteries: Applications, Challenges and Progress

Guest Editor:

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Deadline for manuscript submissions:
closed (10 March 2023)

Message from the Guest Editor

The development of next-generation high-energy-density lithium-metal batteries (LMBs) imposes higher requirements on the properties of almost every component (including cathodes, electrolytes, separators, and anodes) of LMBs. To further improve the energy density and lifespans of LMBs, further significant progress is needed in the widening and deepening of the scientific framework for lithium-metal batteries.

This Special Issue invites original articles dedicated to the following topics:

strategies for enhancing the structure stability of high-voltage cathodes; various efficient functional organic electrolytes which can enable suppressed battery decomposition and facilitate the formation of desirable solid electrolyte interfaces/cathode electrolyte interfaces (SEI/CEI); separators with improved physiochemical properties to reinforce the battery performances and/or safety; artificial SEI/CEI layers to suppress electrolyte decomposition; and metallic anode protecting technologies to suppress the formation of dendrites and improve the coulombic efficiency (CE) of batteries.

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Message from the Editor-in-Chief

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