



Next Generation Batteries with Advanced Electrolytes and Interlayers

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Message from the Guest Editors

The next-generation battery chemistries demand modification in electrolyte design from “conventional” to “novel”, in order to overcome the challenges (e.g., Li-S battery chemistry is accompanied by polysulfide cross-over, for which functional trappers are necessary). In this view, research on new classes of high-voltage, highly stable, safer electrolytes, interlayers, and separators is need of the hour. Importantly, they should enhance ionic conductivity and interfacial compatibility, minimize electrode dissolution and the crossover of discharge products, and of course should provide safe operational characteristics.

The purpose of this Special Issue is to promote important research developments and contribute to the sustainable growth of a green future with next-generation “batteries”. We cordially invite potential authors/research groups to submit experimental and theoretical works (articles, communications) or reviews related to all types of electrodes, electrolytes, separators, and interlayers dedicated towards alkali metal/metal-ion, metal–sulphur, metal–air, and all-solid-state batteries and beyond.





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Message from the Editor-in-Chief

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