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Advanced Applied Research toward Improving Solid-State Batteries

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Deadline for manuscript submissions:
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Message from the Guest Editors

In the past decade, a significant amount of academic and industrial research attention has shifted from liquid electrolyte lithium-ion batteries toward solid-state electrolytes. Solid-state electrolytes offer potential advantages in battery safety and energy density relative to lithium-ion batteries, however, to date most published studies have focused on basic materials research and small-scale testing.<false,>The aim of this Special Issue is to explore the practical issues facing solid-state batteries which must be resolved prior to commercialization. Mechanical failure of solid-electrolytes leading to dendrite formation and propagation, interfacial compatibility and interphase formation at both the anode-electrolyte and cathode–electrolyte interfaces, and acceptable battery safety for solid-state batteries utilizing lithium and silicon anodes are all major challenges. Submissions focused on relating synthesis and structure of electrolyte compounds, characterization of interphase formation, and mechanisms of parasitic side-reactions to full-cell solid-state battery performance are of particular interest to this Special Issue.

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Message from the Editor-in-Chief

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