physchem

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CITESCORE 1.4

Batteries Beyond Mainstream

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Message from the Collection Editors

Battery storage technologies are actively pursued to address electricity storage needs in diverse applications from portable electronics to grid storage. While much effort has been concentrated on metal-ion secondary batteries based on Li and other alkali and alkali-earth metal cations with inorganic hosts, it is also important to explore batteries based on other principles, both primary and secondary batteries, which may be advantageous for specialized applications as well as to generate new ideas for mainstream, larger-scale deployment. This Special Issue aims to publish original research articles and reviews about these types of batteries. This includes, but is not limited to, the following:

Batteries utilizing non-alkali or alkali earth metal cations;
Non-metal cation-based batteries;
Nuclear batteries with thermal and non-thermal (including a, b, g-voltaic) conversion and other principles;
Metal ion batteries utilizing non-standard host and electrolyte materials (i.e., beyond transition metal oxides, carbons, etc.);
Organic batteries beyond mainstream materials;
Metal hydride and hydrogen batteries.