Special Issue

Cutting-Edge Technologies for Lithium Battery Energy Storage

Message from the Guest Editor

This Special Issue aims to recognize the necessity of research into cutting-edge lithium battery technologies for energy storage. This Special Issue aims to provide a breakdown of the most prominent advancements in this field. Potential topics include, but are not limited to, the following:

- Solid-state batteries—replacing liquid electrolytes with solid ones;
- Lithium-ion batteries;
- Lithium–sulfur (Li–S) batteries, which use sulfur instead of traditional cathode materials;
- Lithium–iron phosphate (LFP)—an improved version of LFP with an enhanced thermal stability and life cycle;
- Lithium–air batteries, with one of the highest theoretical densities;
- Silicon anode batteries, which replace or augment graphite anodes with silicon;
- Cobalt-free / low-cobalt chemistries, which reduce reliance on environmentally and ethically problematic cobalt;
- Battery management systems (BMSs) with AI—predictive analytics to extend battery life and safety;
- Anode-free lithium–metal batteries;
- Three-dimensional-printed materials;
- Recyclable/green batteries.

Original work highlighting the latest research and technical development is encouraged, but review papers and comparative studies are also welcome.

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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