Special Issue

Lithium Battery Recycling

Message from the Guest Editor

As the demand for lithium-ion batteries (LIBs) continues to surge, it opens new opportunities to enhance recycling processes, paving the way for sustainable battery production and effective management of end-of-life batteries. By focusing on the recycling of critical materials such as lithium (Li), cobalt (Co), manganese (Mn), nickel (Ni), and graphite from spent LIBs, it is possible to tackle the environmental challenges associated with their extraction. This approach prioritises reducing dependency on virgin materials and minimising ecological impact. Emerging direct recycling techniques represent a positive shift by aiming to preserve battery components for reuse, reducing waste and enhancing resource efficiency. In this Special Issue, we are addressing the following topics related to recycling of Li-ion batteries:

- Direct Recycling Techniques for Li-ion Batteries;
- Effect of Battery Chemistry on the Recycling and Repurposing Potential;
- Closed-Loop Recycling of Li-ion Batteries;
- Next-Generation Li-ion Battery Recycling;
- Upcycling, downcycling and repurposing of materials from spent Li-ion batteries;
- LCA of recycling schemes of Li-ion batteries;
- .....

Guest Editor

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Message from the Editor-in-Chief

Take the opportunity to publish your original scientific work or a review paper concerning battery materials, battery technology or battery application within this new open access journal. Along with material science, the journal also addresses engineering and multidisciplinary research topics, such as cell and system design or storage system integration. Publishing proffers visibility for the benefit of other experts and facilitates discussion of the research results within the field. You are invited to publish your work, read published papers and to participate in topical discussions.

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