Frontier Research in Sodium-Ion Batteries

Message from the Guest Editors

Lithium-ion batteries (LIBs) currently represent the major device for electrical energy storage. The consequent growing consumption of lithium and its limited availability, restricted to a few countries, represent a serious concern for the large-scale commercial manufacturing of LIBs.

Since sodium exhibits a similar chemistry to lithium and its resources are more abundant and better distributed, sodium-ion batteries (SIBs) potentially represent a more sustainable, cost effective and environmentally friendly alternative to LIBs in all sectors of energy storage.

The development of SIB technology requires the discovery and the investigation of new electrode materials, as well as of proper battery components (electrolytes, additives, binders, etc.) to be used in combination with them. Besides, many other challenging aspects (from the environmental sustainability of the SIB production processes to proper battery design to meet the market demands in terms of shape/bendability) require the optimisation efforts of researchers.

This Special Issue aims to depict the state of the art and to outline possible future scenarios in the field of all types of sodium-based batteries, providing important insights into scientific and practical issues in their development. Contributions from all researchers (material scientists, chemists, physicists, engineers, etc.) on the following topics are welcome.

Submission Deadline:

28 February 2019

Welcome to submit !!!

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Fair peer-review process (rejection rate: 70% in 2017)