Special Issue

Advanced Characterization of Na-Ion Batteries

Message from the Guest Editor

As concerns regarding the sustainability and cost of lithium-ion batteries (LIBs) continue to grow, it is important to shift our research and development focus towards cheaper and safer alternatives for energy storage applications. Sodium-ion batteries (SIBs) have raised tremendous interest due to sodium's low cost and high abundance in the Earth's crust. However, compared with the current LIBs technology, SIBs often have compromised electrochemical performance such as lower capacities and poor cycling performance. Therefore, advanced characterizations on SIBs electrodes or cells are crucial to diagnose the failure mechanism of each system. This Special Issue invites the submission of original research on advanced characterizations for SIBs including, but not limited to, the following techniques:

- In-situ measurements such as in-situ transmission electron microscopy (TEM), in-situ atomic force microscopy (AFM).
- Neutron diffraction and pair distribution function (PDF) analysis.
- 3D tomography.
- X-ray absorption near edge structure (XANES) with extended X-ray absorption fine structure (EXAFS).
- Solid-state nuclear magnetic resonance (NMR) spectroscopy.

Guest Editor

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Deadline for manuscript submissions

closed (21 August 2024)

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/140821

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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