Special Issue

Smart and Functional Materials for Lithium-Ion Battery

Message from the Guest Editors

In a society increasingly based on mobility, the efficient use of energy is often intimately related to energy storage. The most used energy storage systems are lithium-ion batteries, with a global market growth of 8.5% for portable electronic devices and electric vehicles. The common challenges associated with lithium-ion battery systems include the improvement of performance, conversion efficiency, energy/power density, discharge rate, and lifetime, while reducing the production and operation costs. In order to improve lithium-ion battery performance it is essential to develop a new generation of smart and (multi)functional materials for both electrodes and separators, allowing the fine control and optimization of the key physico-chemical processes that influence battery performance. It is our pleasure to invite you to submit original research papers, short communications, or state-of-the-art reviews within the scope of this Special Issue. Contributions can range from fundamental properties of materials, their processing, and characterization to innovations in processing technologies, geometries, or lithium-ion battery applications.

Guest Editors

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Message from the Editor-in-Chief

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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