Special Issue

Nanomaterials for Advanced Energy Storage and Conversion

Message from the Guest Editors

In order to meet different energy storage requirements, researchers have designed and commercialized various new kinds of advanced energy storage devices to replace traditional lead–acid batteries and nickel–metal hydride batteries. Meanwhile, a range of clean-energy conversion technologies such as solar cells, fuel cells, and electrocatalysis have also boomed in recent years. In brief, when it comes to the above-mentioned electrochemical energy storage and conversion technologies, the main obstacle is finding appropriate electrode materials, which are capable of providing high energy efficiency, superior kinetics performance, long cycling stability, and so on. Traditional electrode materials generally show inferior properties due to their intrinsic low conductivity, sluggish kinetics, and large volume changes upon cycling, which greatly hinder their practical application. To address these issues, the most effective strategy is to design and tune the morphology and structure at nanoscale.

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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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