Special Issue

Novel Materials and Advanced Characterization for Energy Storage and Conversion

Message from the Guest Editors

Lithium-ion batteries have greatly improved people's lives and play an important role in reducing global carbon dioxide release. However, due to resource and cost constraints, many other batteries are also extensively researched and developed, such as sodium-ion batteries, zinc-ion batteries, magnesium-ion batteries, Li-S batteries, Li-O2 batteries, etc. In addition, to reduce the CO2 content in the atmosphere and convert it into high-added-value fuels and products, electrocatalysis and solid oxide electrolysis cells etc. are promising strategies. It is worth noting that both strategies are applicable for the production of H2 using water as feed. However, for both batteries and catalysis, there is still much room for improvement in order to meet the needs of practical applications. Such improvements will greatly facilitate the development of the fields through the application of novel materials and advanced characterization technologies. This Special Issue aims to present and publish the most recent novel materials, advanced characterization techniques, new theories and mechanisms in the fields of batteries and catalysis, etc.

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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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