Special Issue

Efficient Energy Conversion and Storage via Electrochemical Strategies

Message from the Guest Editors

Efficient energy conversion and storage (EECS) through electrochemical strategies have gained significant attention due to the growing demand for sustainable energy solutions. Reliable and scalable storage systems to support the integration of renewable energy sources into the grid are urgently needed. Current trends in EECS include the development of advanced battery technologies, such as lithium-ion and solid-state batteries, as well as the exploration of novel materials and designs for fuel cells, water-based electrolysis, and (super)capacitors. To address the challenges in this field, it is crucial to focus on improving the energy density, cycle life, and safety of electrochemical devices, as well as reducing costs and environmental impact. This can be achieved through continued research into novel materials, manufacturing processes, and system integration, as well as the optimization of control and management strategies for energy storage systems. By addressing these aspects, more efficient and sustainable energy conversion and storage solutions are welcomed to be addressed in this Special Issue.

Guest Editors

Dr. Shun Lu

Dr. Ling Fang

Dr. Yanwei Wang

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Energies
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

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