Special Issue

Next-Generation Energy Systems and Renewable Energy Technologies

Message from the Guest Editors

This Special Issue aims to present and disseminate the latest research findings, technological innovations, and practical advancements in the field of next-generation energy systems and renewable energy technologies. We welcome original research articles, reviews, and case studies addressing theoretical developments, experimental results, and industrial applications. Topics of interest for publication include, but are not limited to, the following:

- Design and optimization of next-generation renewable energy systems;
- Hybrid renewable energy systems (wind–solar–hydrogen–ESS integration);
- Advanced control and operation of energy storage systems (ESS and battery management);
- Smart grid and microgrid technologies for renewable energy integration;
- AI- and data-driven energy management and forecasting systems;
- Power conversion and inverter technologies for renewable applications;
- Reliability, diagnostics, and predictive maintenance of renewable systems;
- Digital twin and modeling of renewable energy assets;
- Grid stability, frequency regulation, and power quality in renewable-dominant systems;
- Techno-economic and environmental analysis of renewable energy technologies.

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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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