Special Issue

Pumped Storage Hydropower: Innovations in Energy Conversion and Storage Integration

Message from the Guest Editors

To meet the demands of future energy system transformations, the field of pumped storage hydropower urgently requires innovative research in areas such as new pumped storage technologies (e.g., seawater pumped storage and underground pumped storage), intelligent operation and control (e.g., AI and big data-based smart dispatch systems, coordinated control technologies with renewable energy generation systems), equipment and material innovations (e.g., corrosion-resistant and wear-resistant new materials, as well as applications of new energy storage materials), and environmentally friendly and sustainable development (e.g., eco-friendly construction solutions and ecological restoration technologies, as well as integrated development models with eco-tourism and agricultural irrigation). This Special Issue will cover, but is not limited to, the following topics:

- Applications of new methods and technologies in pumped storage;
- Innovative experimental methods and equipment for hydrodynamic studies;
- Cavitation, vortex, and multiphase flow in hydraulic machinery;
- Pumped storage, tidal, and ocean energy.

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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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