Special Issue

Sustainable Materials and Techniques for Energy Storage

Message from the Guest Editors

The global transition towards renewable energy sources necessitates advancements in energy storage technologies to address intermittency challenges and ensure grid stability. This Special Issue aims to showcase cutting-edge research focused on material engineering, synthesis methods, and device designs for energy storage applications. By bridging fundamental science and practical implementation, the goal of this Special Issue is to foster breakthroughs in reducing environmental impact, improving energy density, and extending the lifespan of storage systems. We welcome the submission of original research articles and reviews addressing, but not limited to, the following:

- Next-generation battery materials;
- Supercapacitors and hybrid energy storage systems;
- Sustainable electrode/electrolyte design for long-term stability;
- Low-cost synthesis techniques;
- Recycling and waste management strategies for energy storage devices;
- Lifecycle assessments (LCAs) and techno-economic analyses.

Guest Editors

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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