Special Issue

Nanomaterials for Sustainable Energy and Environmental Applications

Message from the Guest Editor

Nanomaterials have emerged as transformative materials in addressing global challenges related to energy sustainability and environmental protection. Due to their **unique properties**, such as high surface area, quantum size effects, tuneable electronic structures, and superior catalytic activity, nanomaterials offer groundbreaking solutions in renewable energy generation, energy storage, and environmental remediation. This Special Issue aims to highlight recent advances in nanomaterials and their transformative impact on clean energy and environmental sustainability. We welcome original research articles, reviews, and short communications on topics including but not limited to the following:

- **Nanomaterials for energy storage and conversion:** batteries, supercapacitors, fuel cells, hydrogen production, etc.
- **Nanostructured materials for solar energy applications.**
- **Photocatalysis and electrocatalysis for hydrogen fuel production.**
- **Nanomaterials for photocatalytic environmental remediation:** water purification, air filtration, pollutant degradation, etc.
- **Advanced characterization techniques for nanomaterials in energy and environmental applications.**

Guest Editor

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Deadline for manuscript submissions

5 November 2025

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/240164

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About the Journal

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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