Special Issue

Advances in CO_2-Free Energy Technologies

Message from the Guest Editors

Renewables-based CO2-free clean energy technologies are being deployed widely, and include solar, thermal, wind, hydro, biomass, and geothermal energies, the utilization of CO2-free green fuels (including hydrogen, ammonia, and biofuels), storage technologies, etc. The development of efficient and cost-effective CO2-free clean energy technologies will encourage the replacement of conventional fossil-fuel-based energy systems, which is ultimately required for the development of a sustainable society. The purpose of this Special Issue of *Energies* is to bring together ideas, solutions, and challenges for the implementation of CO2-free green energy technologies in the form of research articles and review papers. Topics of interest for publication include, but are not limited to:

- Solar, wind, geothermal, and bioenergy, and their applications;
- Energy conversion and storage;
- Materials and devices for energy storage (e.g., batteries and supercapacitors);
- Catalysts, electrocatalysts, and photocatalysts;
- Hydrogen production and storage;
- Ammonia synthesis and its combustion as a source of energy;
- Clean fuel and fuel cell applications.

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Deadline for manuscript submissions

closed (14 April 2023)

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/118311

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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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