Special Issue

Catalysis, Photocatalysis, and Photovoltaic Electrolysis for Solar Hydrogen Production

Message from the Guest Editor

This Special Issue focuses on the latest advancements in catalysts and photocatalysts for solar hydrogen production, a crucial technology in the pursuit of clean and renewable energy solutions. Hydrogen generated from solar energy is a promising pathway to address global energy and environmental challenges. Specifically, this Special Issue solicits papers in photocatalytic, photoelectrochemical, photovoltaic–electrochemical, solar thermochemical, photothermal catalytic and photobiological technologies for solar H2 production. Papers discussing the current level of development, experimental approaches, spectroscopic measurements, oxidation reactions, reaction mechanisms in alkaline and acidic media, hydrogen evolution reaction (HER), oxygen evolution reaction (OER), photoelectrodes, nanostructured noble-metal and non-noble metal-based catalysts/photocatalysts, solar-to-H2 (STH) conversion efficiency, economic viability and environmental sustainability are encouraged.

Guest Editor

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Deadline for manuscript submissions

closed (25 July 2025)

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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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