Special Issue

Nanostructured Photocatalysts for Hydrogen Production

Message from the Guest Editors

As the limitations of fossil fuels become increasingly evident, the development of photocatalysts for hydrogen production has emerged as a crucial step in our quest for clean and sustainable energy solutions. Nanostructured materials offer a promising path forward through solar-driven water splitting, owing to their exceptional light absorption, charge separation efficiency, and catalytic performance. Despite these advantages, challenges such as optimizing performance, stability, and cost-effectiveness persist. To address these challenges, innovative strategies are being actively pursued, including the development of hybrid materials, precise engineering of nanostructures, and advanced computational modeling. This Special Issue aims to highlight the latest research and breakthroughs in nanostructured photocatalysts for hydrogen production. We invite submissions of original research articles and reviews that explore novel synthesis techniques, comprehensive characterization, insightful studies on structure–property correlations, and pioneering applications.

- H2 evolution
- photocatalysis
- water splitting
- nanocrystals
- hybrid

Guest Editors

Prof. Dr. Chunzheng Wu

Department of Chemistry and Materials Engineering, Zhejiang A&F University, Hangzhou 311300, China

Dr. Huafeng Li

Department of Chemistry and Materials Engineering, Zhejiang A&F University, Hangzhou 311300, China

Deadline for manuscript submissions

30 November 2025

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/222466

Catalysts
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
catalysts@mdpi.com

mdpi.com/journal/catalysts

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/journal/catalysts

MDPI

About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan, KS, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, CAB Abstracts, and other databases.

Journal Rank:

JCR - Q2 (Chemistry, Physical) / CiteScore - Q1 (General Environmental Science)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).