

Special Issue

Nanomaterials for Hydrogen Generation and Storage

Message from the Guest Editors

As the world pursues carbon neutrality, green hydrogen—produced from renewable sources—is emerging as a key solution for decarbonizing industry, transport, and power generation. However, large-scale adoption still depends on overcoming challenges in both production efficiency and safe, high-density storage. We invite you to submit original research or review articles on green hydrogen production and storage. Relevant topics include advanced electrolysis technologies powered by renewables, novel catalysts for water splitting, photoelectrochemical and biological production routes, as well as solid-state materials, high-pressure tanks, and liquid organic carriers for storage. We also welcome studies on system integration, techno-economic and lifecycle assessment, grid coupling, and intelligent safety monitoring. Your contributions will help advance the development of scalable and sustainable hydrogen energy systems. We look forward to your submissions.

Guest Editors

Dr. Qirui Liang

College of Materials Science and Chemical Engineering, Harbin Engineering University, Harbin 150001, China

Dr. Peng Wei

School of Materials Science and Engineering, Changzhou University, Changzhou 213164, China

Deadline for manuscript submissions

20 December 2026



Nanomaterials

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 10.3
Indexed in PubMed



mdpi.com/si/262509

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

[mdpi.com/journal/
nanomaterials](https://mdpi.com/journal/nanomaterials)





Nanomaterials

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 10.3
Indexed in PubMed



[mdpi.com/journal/
nanomaterials](https://mdpi.com/journal/nanomaterials)



About the Journal

Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano–alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

School of Geography, Earth and Environmental Science, University of
Birmingham, Birmingham B15 2TT, UK

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPIus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q1 (General
Chemical Engineering)