Special Issue

Energy Nanomaterials and Surface/Interface Modification Strategies

Message from the Guest Editor

This Special Issue is titled “Energy Nanomaterials and Surface/Interface Modification Strategies” with the aim of gathering the latest scientific advancements related to novel energy nanomaterials, with a focus on surface and interface engineering of catalyst nanostructures for various energy-conversion and storage applications. The main research areas covered include surface/interface studies of electrochemical energy-conversion nanomaterials; surface/interface studies of nanomaterials for energy storage; novel nanophotonic and photovoltaic devices; surface/interface engineering for coating protection strategies; and sensor materials for energy gases such as hydrogen. Specific subtopics include, but are not limited to, the controlled synthesis and surface/interface structural regulation of energy nanomaterials; the physicochemical properties and energy/mass transfer mechanisms at the surface/interface; electrocatalytic energy conversion; surface/interface modification of functional films; energy storage systems; surface and interface engineering for special protection; and in situ characterization and theoretical simulation of surface/interface processes.

Guest Editor

Dr. Guoqin Cao
School of Materials Science and Engineering, Zhengzhou University, 100 Science Avenue, Zhengzhou 450001, China

Deadline for manuscript submissions

5 June 2026

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/263394

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

mdpi.com/journal/nanomaterials

MDPI

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

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, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

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

MDPI