

Special Issue

Synthesis and Application of Nanoscale Heterogeneous Catalysis

Message from the Guest Editors

Nanocatalysts are widely used in a range of important heterogeneous catalytic reactions, such as electrocatalysis, photocatalysis, and thermal catalysis. The controllable synthesis of these nanocatalysts is the key to the optimization of catalytic activity. It is still difficult to control the synthesis process used to prepare the catalysts we want. Furthermore, explaining the relationship between the structure/morphology and catalytic activity of the synthesized catalyst is also a key factor in developing high-activity catalyst, but more research is still needed. Therefore, the present Special Issue of *Nanomaterials* aims to present the current state of the art in the synthesis and application of nanoscale heterogeneous catalysts. The synthesized nanocatalysts include (but are not limited to) noble metal nanocatalysts, non-noble metal nanocatalysts, single-atom catalysts, carbon-based catalysts, etc. In the present Special Issue, we invite contributions (reviews or research papers) with the aim of providing a balanced overview of the current state-of-the-art advances in this discipline.

Guest Editors

Dr. Linfang Lu

College of Material, Chemistry and Chemical Engineering, Hangzhou Normal University, Hangzhou 311121, China

Dr. Haiyan Jin

Department of Chemistry and Materials Science, Nanjing Forestry University, Nanjing 210037, China

Deadline for manuscript submissions

closed (30 June 2025)



Nanomaterials

an Open Access Journal
by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed



mdpi.com/si/223300

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 4.3
CiteScore 9.2
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)