

Special Issue

Superoleophobic Surfaces from Nanomaterials or Nanostructures

Message from the Guest Editors

For decades, superoleophobic surfaces obtained through biomimetic techniques have triggered giant billows in the field of nanomaterials. In the beginning, inspired by the natural oil-repellency of leafhoppers and springtails, researchers utilize re-entrant structures (locked air cushion) and low-surface-energy substances (mainly fluorinated compounds) to fabricate superoleophobic surfaces in air. Later, fish scale provided another preparation strategy for underwater superoleophobic surfaces by utilizing superhydrophilicity (locked water cushion) in the air. Nanomaterials and nanostructures can enhance the effect of air or water cushioning between oil and surfaces by stacking to form multi-scale rough structures. At the same time, a low/extreme-surface-energy state can be achieved by chemical modification of nanomaterials. To date, a wide range of multifunctional artificial superoleophobic surfaces have been fabricated, with promising applications in fundamental research and industrial applications. The present Special Issue aims to introduce the latest progress in superoleophobic surfaces.

Guest Editors

Prof. Dr. Youfa Zhang

School of Materials Science and Engineering, Southeast University, Nanjing 211189, China

Prof. Dr. Junping Zhang

Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou 730000, China

Deadline for manuscript submissions

closed (20 June 2023)



Nanomaterials

an Open Access Journal
by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed



mdpi.com/si/143731

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)