Special Issue

The Application of 2D Nanomaterials in Enhancing the Performance of Multifunctional Coatings

Message from the Guest Editors

The emergence of 2D nanomaterials exhibit unparalleled mechanical strength, thermal stability, and tunable surface chemistry. Recent advances in scalable synthesis and functionalization techniques have further accelerated their adoption in industrial and biomedical coating systems, positioning 2D nanomaterials as a cornerstone of next-generation surface engineering. The Special Issue aims to explore the intersection of 2D nanomaterials and multifunctional coatings:

- Bridge fundamental insights into the structure–property relationships of 2D materials with their practical applications in coatings.
- Highlight innovations in synthesis, characterization, and integration strategies tailored for industrial scalability.
- Address interdisciplinary challenges, including environmental sustainability, cost-effectiveness, and performance durability under extreme conditions.
- Submissions spanning theoretical modelling, experimental breakthroughs, and real-world case studies are encouraged.

See more information in
http://www.mdpi.com/si/243073

Guest Editors

Dr. Lin Gu

School of Chemical Engineering and Technology, Sun Yat-sen University, Zhuhai 519082, China

Dr. Xin Yuan

School of Chemical Engineering and Technology, Sun Yat-sen University, Zhuhai 519082, China

Deadline for manuscript submissions

31 December 2025

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/243073

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

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

MDPI

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.

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)