

## Special Issue

# Synthesis, Physicochemical Characterization and Application of Nanostructured Metals and Metal Oxides

### Message from the Guest Editors

Metal and metal oxide nanostructured materials are widely applied in different fields such as catalysis, biomedicine, molecule and gas sensing, environmental remediation, sorption, and energy harvesting. Their central role in technological progress arises from their unique physicochemical properties compared to their bulk counterparts, namely chemical, textural, electrical, optical, magnetic, and thermal properties. Moreover, efficient synthesis methods have been developed so far to tailor their composition, microstructure, shape, size, and texture and to combine different phases in nano-heterostructures to produce materials with controlled and ad hoc physicochemical properties. Therefore, the Special Issue entitled “Synthesis, Physicochemical Characterization and Application of Nanostructured Metals and Metal Oxides”, hosted by *Nanomaterials*, is devoted to the collection of recent advances in the field of metal and metal oxide nanostructures, applied in different research fields through the publication of reviews, regular research papers, communications, and short notes.

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### Guest Editors

Dr. Valentina Mameli

Prof. Dr. Carla Cannas

Dr. Marco Sanna Angotzi

Dr. Fausto Secci

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### Deadline for manuscript submissions

closed (19 December 2025)



## Nanomaterials

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*Nanomaterials*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[nanomaterials@mdpi.com](mailto:nanomaterials@mdpi.com)

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## 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.

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### Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

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

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