

## Special Issue

# Nanomaterials for Electrochemical Applications

### Message from the Guest Editors

Electrochemical devices are attracting major attention in the fields of sensing, batteries, supercapacitors, water splitting reaction, CO<sub>2</sub> reduction, fuel cells, electrocatalysis, and ecc. The direct conversion of chemical into electrical energy represents a smart solution in the field of energy storage and conversion.

On the other hand, the direct acquisition of an electrical signal stemming from an analyte presence represents a quick and simple method for the development of a sensor. Nanomaterials are a powerful tool to boost performances of electrochemical devices due to their high surface/volume ratio, surface reactivity, and improved accessibility. In this Special Issue, we welcome research papers and reviews focusing on the recent applications, synthesis, and characterization of nanomaterials for electrochemistry, as well as cutting-edge technological strategies for their use in real life. We would like to discuss the challenges that their development will bring. Long-term stability, low cost, and high efficiency should be obtained to attain a high technology readiness level for commercialization and to achieve a real impact on every-day life.

---

### Guest Editors

Prof. Dr. Domenica Tonelli

Department Industrial Chemistry "Toso Montanari", University of Bologna, Viale Risorgimento 4, 40136 Bologna, Italy

Dr. Isacco Gualandi

Department of Industrial Chemistry "Toso Montanari", University of Bologna, Viale Risorgimento 4, 40136 Bologna, Italy

---

### Deadline for manuscript submissions

closed (30 April 2023)



## Nanomaterials

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.3  
CiteScore 9.2  
Indexed in PubMed



[mdpi.com/si/86199](https://mdpi.com/si/86199)

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

---

### 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)