



## Nanomaterials for Electrolytes in Electrochemical Devices

Guest Editors:

**Prof. Dr. Christian M. Julien**

Institut de Minéralogie, de  
Physique des Matériaux et de  
Cosmochimie (IMPMC), Sorbonne  
Université, CNRS-UMR 7590, 4  
Place Jussieu, 75252 Paris,  
France

**Prof. Dr. Alain Mauger**

Inst Mineral Phys Mat &  
Cosmochim IMPMC, CNRS,  
Sorbonne University, UMR 7590, 4  
Pl Jussieu, F-75252 Paris, France

Deadline for manuscript  
submissions:

**closed (15 June 2023)**

### Message from the Guest Editors

Dear Colleagues,

In recent years, the rapid development of all-solid-state electrochemical devices has attracted the emergence of new nanostructured electrolytes that are commonly used in solid-state Li batteries, supercapacitors, sensors, fuel cells, Li-air, and Li-S batteries.

The specific challenge of this Special Issue is to outline the progress made on the nanostructured electrolytes in electrochemical devices with various chemical compositions (inorganic oxides and sulfides, polymers, and composites). Indeed, it is essential to pay attention to the manufacturing technology and the experimental conditions, such as the effects of pressure and operating parameters, on the electrochemical storage performance and mechanical properties. The electrolyte/electrode interfacial mechanisms and the detailed degradation mechanism of the electrolyte membrane under electrochemical conditions can be also covered. For this reason, it is with great pleasure that we invite authors to submit original research papers or reviews to this Special Issue.

See more information at <https://mdpi.com/si/116328>. We look forward to receiving your contributions.

Guest Editors





an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Shirley Chiang**

Department of Physics, University  
of California Davis, One Shields  
Avenue, Davis, CA 95616-5270,  
USA

## 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.

## 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](#), [CAPus / SciFinder](#), [Inspecc](#), and [other databases](#).

**Journal Rank:** JCR - Q1 (*Physics, Applied*) / CiteScore - Q1 (*General Chemical Engineering*)

## Contact Us

*Nanomaterials* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/nanomaterials](http://mdpi.com/journal/nanomaterials)  
[nanomaterials@mdpi.com](mailto:nanomaterials@mdpi.com)  
[X@nano\\_mdpi](#)