



## Perovskite Nanostructures: From Material Design to Applications

Guest Editors:

**Dr. Dimitra Vernardou**

Department of Electrical &  
Computer Engineering, Hellenic  
Mediterranean University,  
Estavromenos, 71410 Heraklion,  
Greece

**Dr. Athanasia Kostopoulou**

Foundation for Research and  
Technology-Hellas (FORTH),  
Institute of Electronic Structure  
and Laser (IESL), Heraklion,  
Greece

Deadline for manuscript  
submissions:

**closed (20 September 2021)**

### Message from the Guest Editors

In the past decade, perovskite materials have attracted great scientific and technological interest due to their interesting opto-electronic properties. Nanostructuring of the perovskites due to their reduced dimensions are advantageous in offering large surface area, controlled transport and charge-carrier mobility, strong absorption and photoluminescence, and confinement effects. These features, together with the unique tunability in composition, shape, and functionalities in addition to the ability to form efficient, low-cost, and light-active structures make the perovskite nanocrystals efficient functional components for multiple applications ranging from photovoltaics and batteries to lasing and light-emitting diodes.

The purpose of this Special Issue is to give an overview of the latest experimental findings concerning the tunability in composition, shape, functionalities, growth conditions, and synthesis procedures of perovskite structures and to identify the critical parameters for producing materials with functional characteristics.





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](#), [CAPlus / SciFinder](#), [Inspec](#), and [other databases](#).

**Journal Rank:** JCR - Q2 (*Chemistry, Multidisciplinary*) / CiteScore - Q1 (General Chemical Engineering)

## Contact Us

*Nanomaterials* Editorial Office  
MDPI, Grosspeteranlage 5  
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](https://x.com/nano_mdpi)