



## Synthesis and Application of Nanoparticles in Novel Composites

Guest Editors:

**Prof. Dr. Edgar O'Rear**

School of Chemical, Biological  
and Materials Engineering,  
University of Oklahoma, Norman,  
OK 73019, USA

**Dr. Fernando Esteban Florez**

Department of Restorative  
Sciences, University of Oklahoma  
Health Sciences Center,  
Oklahoma City, OK 73117, USA

Deadline for manuscript  
submissions:

**closed (31 March 2023)**

### Message from the Guest Editors

Dear Colleagues,

The utilization of nanoparticles/nanostructures to improve the properties of engineered materials is ubiquitous in many disciplines. Their incorporation in the bulk or at the surface of a composite material provides an opportunity to impart desired properties. This Special Issue will provide an assessment of the most current approaches for the synthesis, incorporation, and functionalization of nanoparticles / nanostructures into novel materials with relevant antimicrobial, biomimetic, and mineralizing functionalities. Submitted manuscripts should pay special attention to the preparation, modification, and characterization of the nanoparticles / nanostructures of any composition and morphology, as well as the characterization of novel materials and their potential field/clinical applications.

Areas of interest include, but are not limited to, the following:

- Nanoparticle synthesis
- Nanoparticle surface modifications
- Dental and medical biomaterials
- Functionalized textiles
- Tissue engineering constructs
- Cements modified with nanoparticles
- Application of Janus nanoparticles in composites



[mdpi.com/si/70002](https://mdpi.com/si/70002)

Prof. Edgar O'Rear

Dr. Fernando Esteban Florez

Guest Editors

# Special Issue



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](#)