



an Open Access Journal by MDPI

## Nanocomposites for Bio-MEMS/NEMS Applications

Guest Editor:

**Prof. Dr. Fatimah Binti Ibrahim**

Department of Biomedical Engineering, Centre for Innovation in Medical Engineering, Faculty of Engineering, University Malaya, Kuala Lumpur, Malaysia

Deadline for manuscript submissions:

**closed (31 March 2023)**

### Message from the Guest Editor

Dear Colleagues,

This Special Issue intends to advocate the revolution on the advancements and applications of various nanocomposites in the development of robust and reliable Bio-MEMS/NEMS devices. Nanocomposites have recently achieved impetus in the context of micro/nano-electro-mechanical systems (MEMS/NEMS) development due to their exceptional physiochemical properties. The nanocomposites are known for their greater electrical, mechanical, and tribological properties at the nanoscale. Particularly, the advancements enable the incorporation of excellent properties of nanocomposites at the interface of Bio-MEMS/NEMS devices. This novel approach is the best solution for common nanotribology and nanomechanics problems in Bio-MEMS/NEMS system development which drastically compromises the device performance and reliability. Moreover, the large surface area of nanocomposites also helps to significantly enhance the bio-adhesion, biocompatibility and facilitate reaction kinetics through reduction of frictions on the bio-MEMS/NEMS surfaces.

For more detailed information please see the Special Issue webpage.

Prof. Dr. Fatimah Binti Ibrahim  
*Guest Editor*



[mdpi.com/si/107195](https://mdpi.com/si/107195)

# 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, 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)