



## Prospects of Nanoparticles in Cancer Nanomedicine

Guest Editors:

### Dr. Wensheng Xie

State Key Laboratory of Organic-Inorganic Composites, Beijing Laboratory of Biomedical Materials, College of Life Science and Technology, Beijing University of Chemical Technology, Beijing 100029, China

### Prof. Dr. Lingyun Zhao

State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science and Engineering, Tsinghua University, Beijing 100084, China

Deadline for manuscript submissions:

**closed (10 June 2024)**

### Message from the Guest Editors

Dear Colleagues,

The juncture of nanotechnology and medicine gave rise to the field of ‘nanomedicine’ in the archetypal form of nanoparticles carrying drug molecules, which quickly became one of the most intriguing, but also controversial, branches of a new science. Nanoparticle-based nanomedicine can be broadly defined as the branch of medicine that makes use of nanotechnology for disease prevention, monitoring, and intervention through new modalities for imaging, diagnosis, treatment, repair, and regeneration of biological systems. A first unique attribute of nanomedicines is the ability to modulate the distribution of a payload, resulting in improved bioavailability with increased deposition at the biological target and diminished systemic toxicity. Another unique attribute of nanomedicines is their ability to create a ‘nanoenvironment’ providing the necessary solubility, stability and protection to the selected payload.

Nanomedicine holds the potential to improve anticancer therapy and diagnosis. No actively targeted or stimulus-responsive cancer nanomedicine has yet been granted regulatory approval. Why have so few nanomedicines entered the marketplace?





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

## Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

## 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, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

## Contact Us

Materials Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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

[mdpi.com/journal/materials](http://mdpi.com/journal/materials)  
[materials@mdpi.com](mailto:materials@mdpi.com)  
[X@Materials\\_Mdpi](https://twitter.com/Materials_Mdpi)