



Application of Nanomaterials in Biomedical Imaging and Cancer Therapy

Guest Editor:

Dr. James C L Chow

Department of Radiation
Oncology, University of Toronto
and Radiation Medicine Program,
Princess Margaret Cancer Centre,
University Health Network,
Toronto, ON M5G 1X6, Canada

Deadline for manuscript
submissions:

closed (20 November 2021)

Message from the Guest Editor

This Special Issue of *Nanomaterials* will cover the most recent advances in biomedical applications of nanomaterials in medical imaging, drug delivery, and cancer therapy. In biomedical diagnostic and therapeutic applications, nanomaterials such as gold nanoparticles can act as a contrast agent and dose enhancer in image-guided nanoparticle-enhanced radiotherapy using kilovoltage cone-beam computed tomography. Similarly, magnetic nanoparticles made of iron or iron oxide can act as a contrast agent in magnetic resonance imaging and an enhancer in thermotherapy, such as hyperthermia. For the rapid progress of synthesis technology, nanomaterials with variables of size, shape, composition, morphology, and surface chemistry can easily be fabricated through precise control. In addition, integrating functional ligands in the particles can enable them to perform multiple biomedical functions on the molecular and cellular level simultaneously.





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

mdpi.com/journal/nanomaterials
nanomaterials@mdpi.com
[X@nano_mdpi](https://x.com/nano_mdpi)