



an Open Access Journal by MDPI

Effects, Analysis and Applications of Nanomaterials in Biological Systems

Guest Editors:

Prof. Dr. Marianna Kulka

Nanotechnology Research
Centre, National Research
Council Canada and University of
Alberta, Edmonton, AB, Canada

Dr. Bernadette Quemerais

University of Alberta, Edmonton,
Canada

Dr. David Kennedy

National Research Council
Canada, Ottawa, ON, Canada

Deadline for manuscript
submissions:

closed (30 December 2021)

Message from the Guest Editors

Dear Colleagues,

Biological systems function at the nanoscale, communicating with one another using nanosized packages, activating functions using nano-switches and building structures based on biological nanomaterials. Not surprisingly, synthetic nanomaterials can manipulate these biological systems to create desired outcomes in both healthy protective functions and pathology. The effect of nanomaterials on biochemical pathways and biomarker expression is still poorly understood, and in order to design smart, biologically relevant nanomaterial interventions, we must first further elucidate the complex ways in which biological systems interact with nanomaterials. In this Special Issue, we will explore how nanobiotechnology and biomaterial engineering is expanding our understanding of nanotoxicity, tissue engineering and drug delivery. This issue will bring together expertise in environmental toxicology, metrology, nanopharmacology, nanomaterial synthesis and synthetic biology to define the nexus in these developing areas. See more information in

<https://www.mdpi.com/si/64320>

Prof. Dr. Marianna Kulka
Dr. Bernadette Quemerais
Dr. David Kennedy
Guest Editors



[mdpi.com/si/64320](https://www.mdpi.com/si/64320)

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

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