Special Issue

In Vivo Toxicological Evaluation of Metal Nanoparticles

Message from the Guest Editor

Metal nanoparticles (NPs) are used in a wide range of applications. Because of their small size, NPs can easily enter the human body and may reach the most sensitive organs (spleen, liver, lungs, heart, gastrointestinal tract, brain, endocrine system, or female and male reproductive organs). In order to clear these NPs from the body, the components of the immune system are activated. Interactions between NPs and biomolecules, such as proteins or nucleic acids, interfere with their biological functions and can lead to cell damage. Thus, the adverse effects of nanoparticles need to be studied extensively to gain a deep understanding of the toxicological profiles of these compounds. The aim of this Special Issue is to highlight the latest research on the toxicology of metal nanoparticles. We invite the submission of original research articles and reviews in which the effects of nanoparticles are investigated and their in vivo toxicity in experimental animals is evaluated. Potential topics include, but are not limited to, the immunotoxicity, genotoxicity, reproductive toxicity and other organ toxicities of metal nanomaterials.

Guest Editor

Dr. Miroslava Lehotska Mikusova

Department of Immunology and Immunotoxicology, Faculty of Medicine, Slovak Medical University in Bratislava, Limbová 12, 833 03 Bratislava, Slovakia

Deadline for manuscript submissions

closed (31 March 2023)



Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3 CiteScore 9.2 Indexed in PubMed



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Nanomaterials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

mdpi.com/journal/nanomaterials





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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 nanometerscale 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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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