

Special Issue

Interactions of Nanomaterials with Biological Matrices

Message from the Guest Editor

Engineered nanomaterials (NMs) have become an indispensable part of our lives. Though the benefits that nanomaterials provide to society are unquestionable, their interactions with biological systems remain obscure. NMs have been reported to induce oxidative stress, DNA damage, inflammation, and many other adverse effects that are known to be crucial to the development of lifestyle diseases. Malfunction of mitochondria, leading to the generation of free radicals and, subsequently, oxidative stress, seems to be a major cause of NM toxicity. In addition, nanomaterial-generated oxidative stress triggers signal transduction and affects cellular functions. This, in turn, usually affects tissue and organ functions.

This Special Issue is focused on interactions of nanomaterials with biological systems on different levels of organization. We welcome both experimental works and review papers regarding biological effects of nanomaterials on the molecular and cellular levels, tissues and organs, and whole organisms. We also welcome studies on animal model systems and environmental and occupational exposure of humans to nanomaterials.

Guest Editor

Prof. Dr. Marcin Kruszewski

1. Centre for Radiobiology and Biological Dosimetry, Institute of Nuclear Chemistry and Technology, Dorodna 16, 03-195 Warsaw, Poland
2. Department of Molecular Biology and Translational Research, Institute of Rural Health, Jaczewskiego 2, 20-090 Lublin, Poland

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences,
Sez-Biochimica, Faculty of Medicine, Università Politecnica delle
Marche, Via Ranieri 65, 60100 Ancona, Italy

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