



Interactions of Nanomaterials with Biological Matrices

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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.





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Message from the Editor-in-Chief

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