



Advances in Nanotoxicology: Health and Safety

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Message from the Guest Editors

Nanotoxicology has emerged as a prominent field within toxicology, driven by the urgent need to assess the safety of engineered nanomaterials for both human health and the environment. With the rapid integration of nanoscale materials into various aspects of daily life, such as cosmetics, food packaging, drug delivery systems, therapeutics, and biosensors, the number of individuals exposed to nanomaterials continues to rise. While nanoparticles offer significant benefits and advancements in preventing and treating various disorders, concerns have grown regarding their potential risks to human health and the environment. Consequently, nanotoxicology studies initially focused on understanding the dose–response relationship between nanomaterials and their toxicity using in vitro cell models.

This Special Issue aims to compile articles that assess the potential effects of emerging nanomaterials on the environment, evaluate their impact on human health, and elucidate the toxic mechanisms induced by nanoparticles. Original research articles and reviews are welcomed.





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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 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.

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