

Special Issue

Application of Lipid Nanoparticles in Drug and Gene Delivery

Message from the Guest Editor

Among the existing variety of nanoparticles, lipid nanoparticles, liposomes, solid lipid nanoparticles, nano-emulsions, and nanocrystals have advantages over other types of nanoparticles for drug delivery. Lipid systems are natural and biodegradable materials with low toxicity and biocompatibility, thus meeting preclinical safety requirements. The purpose of this Special Issue is lipid nanoforms of a new generation, namely, ligand-targeted, sensitive to stimuli, capable of improving the physicochemical and biological properties and achieving the maximum therapeutic effect. This Special Issue welcomes original research papers and comprehensive reviews that demonstrate or summarize significant advances about biomedical applications of lipid nanoparticles for the treatment of socially significant diseases. Original works aimed at creating new lipid materials, including synthesis of new lipid compounds, new lipid compositions, new generation of lipid carriers with improved properties and applications in nanomedicine, are welcome.

Guest Editor

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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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

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