



Advances in Pharmaceutical Applications of Lipid-Based Nanoparticles

Guest Editor:

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Message from the Guest Editor

This Special Issue of *Nanomaterials* will focus on recent advances and ongoing cutting-edge research in the development of lipid nanoparticles (LNPs), liquid crystalline nanocarriers (cubosomes, spongosomes, hexosomes, and liposomes), nanostructured lipid carriers, solid lipid nanoparticles, and lipid–drug conjugates for potential new applications. The uses of LNPs and lipid-based nanomaterials as mono- and multidrug sustained delivery systems and their therapeutic uses in anti-viral therapies, cardioprotection, regenerative nanomedicine, slowing down of neurodegenerative disorders, and treatment of cancer, inflammation and infection diseases will be highlighted, among other possible applications. The preclinical and clinical status and the future prospects for lipid nanoparticle uses in diagnostics imaging, topical, intranasal, oral, and parenteral drug delivery as well as brain targeting will be considered. Remarkable attention will be given to the role of nanoparticle architectures and surface modifications in their cellular uptake mechanism.





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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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