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Nanoparticles: Properties and Potential Applications in Tumor Diagnosis and Therapy

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Message from the Guest Editors

Nanoparticles can be used as cancer therapeutics and diagnostic reagents to treat cancer due to their advantages of reduced toxicity, biocompatibility, better stability, enhanced permeability and retention effect, and precise targeting.

This SI will present comprehensive research outlining progress on the application of nanoparticles to improve the efficacy of cancer diagnosis and therapy. This includes improvements in nanoparticle performance through functionalized nanoparticles, optimized nanoparticle size, surface chemistry, cellular targeting, etc. We invite authors to contribute original research articles and review articles covering the current progress on nanoparticle properties and potential applications in tumor diagnosis and therapy. Potential topics include but are not limited to:

- Synthesis of novel nanoparticles.
- Fabrication of nanoparticles for improving tumor therapy or diagnosis.
- Optimization of lipid nanoparticles for delivery of small molecules or macromolecules including nucleic acids.
- Improvement in tumor therapy efficacy based on nanoparticles.
- Combined cancer therapy based on nanoparticles.



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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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