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State-of-the-Art Nanomaterials and Nanotechnology in Drug Delivery and Release

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Message from the Guest Editors

Nanosystems in the form of nanoparticles, nanocomposites, nanogels, inclusion complexes, and stimuli-responsive nanohydrogels offer multiple advantages, such as localized drug delivery, target-specificity, and extended and triggered drug release, thereby improving efficacy, stability, and tolerability of active agents.

This Special Issue aims to provide readers with a snapshot of the new design strategies for smart and targeted drug delivery nanosystems, as well as of the advanced testing tools based on bio-engineered tissue and organ mimics. We welcome submissions that cover, but are not limited to, the following topics:

1. Nanosystem design and characterization.
2. Surface or bulk functionalized nanosystems for active targeting.
3. Stimuli-responsive nanosystems for triggered drug delivery.
4. Safety, stability, biodistribution, tolerability, and fate of nanosystems.
5. Bioengineered three-dimensional models for nanosystem testing.
6. Regulatory aspects of nanosystem introduction into clinical practice.



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Special Issue



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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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