



Nanoparticles for Biomedical Applications

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Message from the Guest Editors

Nanoparticles are categorized primarily as polymeric, inorganic, lipid, and carbon-based, each class featuring multiple forms, such as micelles, dendrimers, cyclodextrins, nanospheres, polymersomes, liposomes, lipid, metal and metal oxide nanoparticles, quantum dots, and carbon nanostructures.

Their architecture (size, shape, and charge) and surface properties can be fine-tuned to optimize their stability, solubility, drug loading capacity, and controlled release so as to prolong their circulation and enhance delivery of various payloads, including small molecules, biological macromolecules, and proteins, leading to their use in a wide variety of biological and pharmaceutical applications.

This Special Issue will highlight the latest research on nanoparticles focusing on their applications in the biomedical field, including but not limited to drug and gene delivery, stimuli-responsive therapeutics, antibacterials, bioimaging, theranostics, tissue engineering, and regenerative medicine.





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Message from the Editor-in-Chief

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