



Special Issue Reprint

Magnetic Nanomaterials for Hyperthermia-Based Therapy, Imaging, and Drug Delivery

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Edited by Constantin Mihai Lucaciu

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In the rapidly advancing field of nanomedicine, this Special Issue delves into the cutting-edge developments of magnetic nanoparticles (MNPs) that have revolutionized medical applications. Over the years, the remarkable progress in nanomaterials has especially paved the way for magnetic nanoparticles to emerge as key players in biomedical advancements.

Magnetic nanoparticles have demonstrated exceptional properties, notably their responsiveness to external magnetic fields, enabling remote control and manipulation. This characteristic has led to their widespread adoption in biomedical applications, with a particular focus on Magnetic Resonance Imaging (MRI), Magnetic Particle Imaging (MPI), and magnetic hyperthermia (MH) for cancer treatment.

This Special Issue explores the multifaceted capabilities of MNPs, showcasing their potential in hyperthermia-based therapy, medical imaging, and drug delivery. Authors contribute their latest findings on the development and application of magnetic nanomaterials, covering various aspects of medical applications, from theoretical insights to experimental breakthroughs.

Researchers highlight the critical role of MNPs in cancer therapy, especially in hyperthermiabased treatments. When combined with chemotherapy, magnetic hyperthermia presents a promising strategy for cancer therapy by synergizing high temperatures with chemotherapeutic effects. The potential for MNPs to induce an immune response against tumors adds a new dimension to their therapeutic efficacy.



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