

Special Issue

Multifunctional Magnetic Nanoparticles: Synthesis, Properties, and Biomedical Applications

Message from the Guest Editor

Magnetic nanoparticles (MNPs) have emerged as a cornerstone of molecular materials science due to their distinctive size-dependent magnetic, structural, and surface properties. Their molecular-level functionalization enables tunable behavior, offering remarkable versatility for biomedical, chemical, and environmental applications. This Special Issue focuses on recent progress in the synthesis, molecular design, and multifunctional integration of magnetic nanoparticles, highlighting their expanding role in targeted drug delivery, magnetic resonance imaging (MRI), molecular diagnostics, catalysis, magnetic sensing, energy storage, and environmental remediation. We invite original research articles and in-depth reviews addressing novel synthesis strategies, biofunctionalization methods, surface molecular interactions, magnetocaloric effects, nanocomposite fabrication, and hybrid magnetic–molecular systems. Contributions that emphasize molecular-level structure–property relationships, interdisciplinary innovations, and translational applications in medicine and biotechnology are especially welcome.

Guest Editor

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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