Special Issue

Magnetic Nanostructures with Optical Properties for Biomedical Applications

Message from the Guest Editor

In the field of biomedical applications, magnetic nanoparticles are the state-of-the-art theranostic agents. They are widely used as contrast agents for magnetic resonance imaging (MRI) in particular for cell tracking as well as for therapeutic magnetic hyperthermia (MHT), and in drug delivery. Beside the magnetic functionality of the nanoparticles, their optical properties can be engineered to provide them with absorption in the biological window. Another approach to increase the theranostic functionalities of the magnetic particles while endowing them with optical properties suitable for biomedical applications is based on their association with other materials such as plasmonic and metallic materials as gold or plasmonic semiconductors such as copper sulfide. The present Special Issue aims to cover all research areas related to the synthesis, and engineering of magnetic nanoparticles or magnetic nanostructured assemblies having optical properties, their characterization, and various applications, specifically emphasizing biomedical applications.

Guest Editor

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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.

Editor-in-Chief

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