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Development of Magneto Nanoparticles for Biomedical and Environmental Applications

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Message from the Guest Editors

Dear Colleague,

The potential of magneto nanoparticles for biomedical and environmental applications has been recognized, owing to their physicochemical and magnetic properties. Nanoparticles with superparamagnetic behavior are preferred for these purposes, as they exhibit a strong magnetization only when an external magnetic field is applied.

In biomedical applications, magnetic nanoparticles have been widely investigated for drug delivery, hyperthermia, and biological imaging as MRI contrast agents. Considering environmental applications, ferrites have shown potential in contaminant removal, remediation, and water treatment, as well as in the photodegradation of dyes and photoinduced water splitting.

This Special Issue is devoted to the development of magnetic nanoparticles and their biomedical or environmental applications, including synthesis methods, characterization techniques, and structural and magnetic properties. The development and applications of magnetic nanoparticle-based systems, such as magnetic microemulsions, magnetic liposomes, magnetogels, and semiconductor/metallic nanoscale heterojunctions, are also welcome.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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