



Biofunctionalization and Applications of Magnetic Particles

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Message from the Guest Editors

Magnetic nanomaterials (MNMs) have been widely used not only in electrical industry but especially potential in the biomedical field, including hyperthermia, magnetic resonance imaging, drug carriers, gene delivery, biological detection, cell sorting, fishing any biological macromolecules or microorganisms after loading specific probes, etc. So, the preparation of different types of nanomaterials and their functional modification have been an attractive subject. In addition to a few MNMs are based on cobalt (Co) and nickel (Ni), iron (Fe) is the most common ferromagnetic transition elements in MNMs be it pure iron, iron based alloy, iron oxides, or coordination complexes of iron. Fe is also an element playing multiple roles in biochemical activities reflecting its biosafety to human body. Still, there is room for improvements in preparation technology of MNMs, development of new types of magnetic nanospecies with different geometries and functionalities, and broad application areas.

