



materials



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Novel Magnetic Nanomaterials: from Fundamental Sciences to Applications

Guest Editor:

Assoc. Prof. Lise Marie Lacroix

Universite de Toulouse,
Toulouse, France

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Message from the Guest Editor

Magnetic materials are widely spread in our daily life. Commercially available magnetic materials are inherently nanostructured materials and are usually prepared following classical metallurgy processes. Difficulties are however encountered when one wants to reduce the size of the final magnetic material, because of process incompatibilities. Indeed, the recent developments in nanochemistry have yielded an infinite richness of nanocrystals with tuneable sizes and shapes, which could be successfully used as optimized building blocks.

The conception and realization of novel magnetic nanomaterials rely on several scientific challenges : i) the synthesis of optimized magnetic nanoparticles, ii) the fine characterization of their magnetic performances, iii) their controlled assembly into new metamaterials, and iv) their final integration into functional devices.

Research efforts in these four key challenges are essential to design the next generation of magnetic materials, combining reduced sizes and optimal performances. Therefore, it is my pleasure to invite you to submit a manuscript for this Special Issue.



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Special Issue



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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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