

Special Issue

Magnetic Nanomaterials: Synthesis, Characterization and Applications

Message from the Guest Editors

This Special Issue will cover research on magnetic nanomaterials and their synthesis, characterization, and broad potential applications, including adsorbents, chemical synthesis, energy, polymers, sensors, immobilization, biotransformation, bioremediation, therapeutics, etc. Magnetic nanomaterials have emerged as a promising class of functional materials with diverse applications in nanobiotechnology, energy, biomedicine, and environmental remediation. These materials, often called magnetic nanoparticles, possess unique properties such as superparamagnetism, high magnetic saturation, ease of surface functionalization, a high surface area, and a large surface-to-volume ratio, making them highly versatile for various applications. Recent advances in their preparation and characterization have enabled control over their size, crystal structure, and surface properties. Further, various modification methods have been developed to produce biocompatible magnetic nanoparticles that can be effectively used to immobilize proteins for widespread applications in biosensors, biocatalysts, remediation, and affinity-based separation processes.

Guest Editors

Prof. Dr. Jung-Kul Lee

Department of Chemical Engineering, Konkuk University, Seoul 05029, Republic of Korea

Dr. Sanjay Kumar Singh Patel

Department of Biotechnology, Hemwati Nandan Bahuguna Garhwal University Srinagar, India

Deadline for manuscript submissions

31 March 2025



Materials

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 5.8
Indexed in PubMed



mdpi.com/si/209402

Materials

MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

[mdpi.com/journal/
materials](https://mdpi.com/journal/materials)





Materials

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 5.8
Indexed in PubMed



[mdpi.com/journal/
materials](https://mdpi.com/journal/materials)



About the Journal

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.

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

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q1 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q2 (Condensed Matter Physics)