Special Issue

Advances in Spintronics of Noncollinear Magnets

Message from the Guest Editor

The term noncollinear magnetic materials refers to the class of materials in which the direction of spins depends on position in such a way that there is no specific direction in which all the spins are aligned (anti)parallel. This spin arrangement can be coplanar or noncoplanar, including systems with spin spirals and helicoids, canted spins and skyrmions. These noncollinear spin structures, which produce real-space or momentum-space Berry phases, can give rise to novel physical phenomena including the topological Hall effect, anomalous Hall effect, spin-polarized current, spin Hall effect, multiferroicity and Weyl fermions. This Special Issue calls for original research and review articles on key developments of noncollinear magnets for spintronics. This includes novel theoretical developments towards the understanding of noncollinear spin effects and experimental works utilizing these effects to realize novel spintronic applications and device functionalities. It is my pleasure to invite you to submit original research papers, short communications, and state-of-the-art reviews for this Special Issue.

Guest Editor

Dr. Aisha Aqeel

Physics Department, Technical University of Munich, 85748 Garching, Germany

Deadline for manuscript submissions

closed (20 April 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/104598

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

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

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