



## Magneto-Electronic Properties of Material for Spintronic Applications

Guest Editor:

### Dr. Suryakant Mishra

Argonne National Laboratory &  
Pritzker School of Molecular  
Engineering, University of  
Chicago, Chicago, Illinois, USA

Deadline for manuscript  
submissions:

**closed (31 October 2021)**

### Message from the Guest Editor

Spintronics is a new technology for storing, displaying, and processing information based on changes brought in the electronic properties of the material by magnetic fields. The magnetization alignment can influence asymmetric interaction with various biological systems and furthermore can be used for spintronic applications by utilizing quantum-mechanical effects.

Recently, parallel efforts to induce spin selective charge imbalance have attracted enormous attention in the interdisciplinary community. There is the belief that electronic spin couples its degree of freedom with one of the most intriguing asymmetries in nature, chirality. Interestingly, moving electrons with specific spin also follow chiral paths due to their asymmetric momentum. This enables the chiral system to couple with a spin degree of freedom of an electron and allows specific spin to travel through this chiral system, and vice versa for opposite spin. On this note in the past, there were many systems developed which are able to create spin imbalance, like spin filtering or spin polarized current.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Carlos J. Gómez  
García**

Department of Inorganic  
Chemistry, Faculty of Chemistry,  
University of Valencia, C/Dr.  
Moliner 50, 46100 Burjassot, Spain

## Message from the Editor-in-Chief

*Magnetochemistry* constitutes a multidisciplinary field where chemists and physicists not only study magnetic properties but also design and synthesize chemical compounds with desired magnetic properties. *Magnetochemistry* is inviting contributions in any field related with this area, such as theoretical models, crystal engineering, molecular magnetism, SMM, SIM, SCM, SCO, magnetic nanostructures, magnetic MOFs, magnetic recording, qubits, magneto-caloric materials, etc. Our goal is to share your contribution in a timely fashion and in a manner that will be valued by the scientific community.

## Author Benefits

**Open Access:**— free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility:** indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [Inspec](#), [CAPlus / SciFinder](#), and [other databases](#).

**Journal Rank:** JCR - Q2 (Chemistry, Inorganic and Nuclear) / [CiteScore - Q2 \(Electronic, Optical and Magnetic Materials\)](#)

## Contact Us

---

*Magnetochemistry* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/magnetochemistry](http://mdpi.com/journal/magnetochemistry)  
[magnetochemistry@mdpi.com](mailto:magnetochemistry@mdpi.com)  
[X@Magnetochem](#)