Special Issue

Fabrication, Characterization and Application of Magnetic Thin Films

Message from the Guest Editor

The interplay of spin, charge, and the lattice in quantum materials provides a rich playground for physics research. Thin films comprising such materials can tune these properties through interface engineering. This has been enabled through the technology in fabricating these materials and the development of probes. This led to significant technological advancements, such as the discovery of giant magneto-resistance and perpendicular anisotropy. In addition, research in thin films has also led to developments in magnetism, such as skyrmions. Other developments include influencing magnetism by injecting currents through spin-orbit torque or using electric fields by artificially combining materials that have ferromagnetic and ferroelectric properties. There is also a drive to develop functional antiferromagnet films to take advantage of the higher THz frequency dependence and zero-stray field advantages. This Special Issue aims to showcase the most recent advances in this exciting field, celebrating not just the advanced physics behind these materials but also their advanced fabrication methods, highly sensitive characterization, and potential applications in future devices.

Guest Editor

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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.

Editor-in-Chief

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