

Special Issue

Transition Metal (3d,4d,5d) and Lanthanide(III) Based Complexes and Coordination Polymers Showing Single-Molecule Magnet Behaviour

Message from the Guest Editor

Single-molecule magnets (SMMs) are in theory the smallest possible components for spin-based electronic devices, among which data storage is one of the most laudable applications. Taking into account that the energy barrier (U_{eff}) is governed by the magnetic anisotropy of the complex and the spin ground state, transition metals (TM) have proven to be good candidates to give rise to SIMs since, coordinated to adequate ligands, their d orbitals are propitiously split by the field, while they are spatially arranged into isolated molecules or 1-, 2-, and 3-dimensional materials which present interesting structural and physical properties. Moreover, the large spin states available for lanthanide(III) ions, some of which are known to exhibit high magnetic anisotropy, occupy an honored position to build SMMs. This Special Issue devoted to SIMs, provides an opportunity to researchers working in the field to publish their most recent discoveries. Keywords

- Transition metal ions
- Lanthanide(III) metal ions
- Slow relaxation of the magnetization
- SMMs based on isolated molecules
- SMMs consisting of coordination polymers

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Magnetochimistry constitutes a multidisciplinary field where chemists and physicists not only study magnetic properties but also design and synthesize chemical compounds with desired magnetic properties.

Magnetochimistry 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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