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Transition Metal (3d,4d,5d) Single-Ion Magnets

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Message from the Guest Editor

Dear Colleagues,

Single-ion magnets (SIMs) are, in theory, the smallest possible components for spin-based electronic devices, among which data storage is one of the most laureate 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. This Special Issue of the open access journal *Magnetochemistry*, devoted to SIMs, provides an excellent opportunity for researchers working in the field to publish their most recent discoveries.

Keywords

- Transition metal ions
- Slow relaxation of the magnetization
- SIMs based on isolated molecules
- SIMs consisting of coordination polymers
- Alternating current (ac) susceptibility



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Special Issue



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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.

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