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 laureate applications. Taking into account that the energy barrier (Ueff) 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

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Deadline for manuscript submissions

closed (1 July 2021)

Magnetochemistry

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.6

mdpi.com/si/37833

Magnetochemistry
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Message from the Editor-in-Chief

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