

Special Issue

Symmetry and Geometry, Key Parameters in 3d and 4f Molecular Magnetism

Message from the Guest Editors

In molecular magnetism, 3d and/or 4f complexes are usually associated with a specific geometry, which is then linked to a particular symmetry.

Almost 10 years later, Ishikawa et al. presented the existence of coordination compounds based on a single 4f ion, which also present slow relaxation of magnetization. The slow magnetic relaxation is due to the anisotropy of the 4f orbitals, and the relaxation mechanisms are defined by thermal processes (Orbach, Raman, and direct) and by quantum phenomena (quantum tunnelling of magnetization (QTM)), which is thermally independent. For these types of complexes, geometry (and, therefore, symmetry) plays a key role in the design of high performance LnIII-SIMs, since changes in the geometry of LnIII ions will modify their crystal field parameters and thereby influence the dynamic magnetic properties.

This Special Issue of Magnetochemistry aims to publish a collection of research contributions highlighting the recent achievements in the relation of geometry and symmetry with the magnetic properties of 3d and/or 4f complexes.

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