Special Issue

Perspectives on Lanthanides as Single-Molecule Magnets

Message from the Guest Editors

Single-molecule magnets (SMMs) are a textbook example of synergetic effects arising from the interplay of chemistry and physics that ultimately composes a vibrant and established research field of extraordinary multidisciplinary. Lanthanide ions are ideal candidates for designing SMMs as a result of their unparalleled magnetic anisotropy arising from the unquenched orbital angular momentum in the ligand field. Recently, SMMs containing a monolanthanide center have been the main focus of this field due to their outstanding performance in obtaining a large anisotropic barrier for the reversal of magnetization and high blocking temperatures. Therefore, this Special Issue of Magnetochemistry aims to publish a collection of research contributions highlighting the significance of lanthanide complexes in developing SMMs and promoting new investigations of their magnetic relaxation, quantum effects, multifunctionalities, etc.

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