

Internal Webinar

Mono and Polynuclear Lanthanide and Transition Metal Complexes as Single-Molecule and Single-Ion Magnets

Joydev Acharya

IIT, Kanpur

In last few years, the field of Single Molecule Magnet (SMM) is emerging very rapidly owing to its potential application in various filed of modern technologies. SMMs are the class of paramagnetic molecules which once magnetized can retain their magnetization for a very long period of time even after moving it from an applied magnetic field and slowly relax back to its equilibrium position by the mechanism called “slow relaxation of magnetization”. These kinds of molecules can be mononuclear as well as multinuclear paramagnetic metal complexes comprising of 3d, 4f, and 5f metal ions. From the synthetic point of view the properties and the performances of the SMMs can be controlled by tuning the electronic surrounding around the metal ions which can be done by proper choice of metal ions and the perfect design of ligands being involved. In deep, some of our findings on understanding the structure-property relationship by tuning ligand field; coordination number; geometry will be discussed in the talk.

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3:00 PM