

## **Internal Seminar**

### **Lanthanide and Transition Metal Complexes as Single Ion Magnets /Single Molecule Magnets**

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The field of molecular magnetism especially Single-Molecule Magnets (SMMs) has witnessed considerable development in synthesising a variety of lanthanide (Ln= Dy<sup>III</sup>, Tb<sup>III</sup>, Er<sup>III</sup>) and transition metal complexes (TM = Co, Mn, Fe, V, Ni) ranging from discrete molecular species to 3D coordination polymers for their potential applications in high-density information storage devices, spintronics, and magnetocaloric materials. From the synthetic point of view the properties and the performances of the SIMs/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. We have synthesised and structurally characterised a range of transition and lanthanide metal complexes using the flexible Schiff base ligands. The magnetic properties of these complexes were explored which helped us in understanding the structure-property relationship. The detailed study will be discussed in the talk.

***Friday, Nov 24<sup>th</sup> 2023***

***10:00 AM***

***Auditorium***