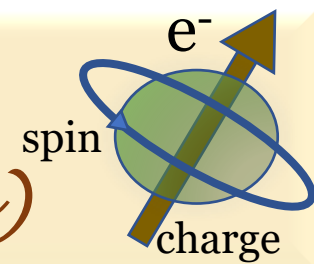




W2S Seminar

(Webinar series on Spintronics)



Organic Molecular Magnetism and Spintronics

Speaker: Prof. Md. Ehesan Ali
Quantum Materials and Devices Unit
Institute of Nano Science and Technology,
Mohali, India

Date and time:
12.11.2020 at
6.30 pm
Via
Zoom

Abstract

The manifestation of an organic-inorganic hybrid spin-interface due to molecule-substrate interactions has substantial potential to control and manipulate the magnetic properties and generates the spin-polarized current at the interfaces. Such phenomena have immense potential for technological applications for spintronics devices. In this talk, we will discuss the first-principle based designing of organic molecular magnets (metal free) and various chemical tweaking to enhance the magnetic properties and their merostabilization. We will discuss the first-principle calculations of isotropic exchange interactions and magnetic-anisotropy at different interfaces. The challenges with density-based methods (DFT) in computing the magnetic properties and beyond DFT perspectives will be also be discussed. Finally, we will also discuss how high-spin magnetic molecules invoke the Anomalous Quantum Interference effect when placed in the gold leads and generate spin-polarized currents.

If interested to attend then please visit <https://www.niser.ac.in/w2s-seminar/index.php>