



# *RCMS · G-COE Seminar*



## **“Spin-Crossover Compounds**

**–Thermal, Optical and Magnetic Switches from Simple Metal Complexes”**



**Lecturer : Dr. Malcolm Halcrow**

**(University of Leeds)**

**Date : Tue. 21st July 16:30 – 18:00**

**Place : B-212**

We have been studying compounds of type  $[\text{FeL}_2]^{2+}$ , where L is a tridentate 2,6-di(pyrazol-1-yl)pyridine or 2,6-di(pyrazol-1-yl)pyrazine derivative, for 7 years. We can derivatise this ligand framework at different sites around the pyrazole and pyridine rings, leading to a wide range of iron(II) compounds showing different spin-crossover regimes, but all based around the same metal/ligand core. The talk will include the following aspects of our chemistry:

- Structure: function correlation in a series of cooperative, molecule-based spin-transition materials.
- An unusual angular Jahn-Teller distortion shown by several of our high-spin compounds, and its influence on spin-crossover functionality.
- Low-temperature spin-state trapping (the ‘LIESST effect’) on powder and single crystalline materials, including an investigation of heavy atom effects on LIESST relaxation. etc.

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