



# Institute Seminar

**26 May 2016**

**4:00 p.m.**

**Fermion**

**Speaker:**

**Prof. S. Natarajan**

*Framework Solids Laboratory, Solid State and Structural Chemistry Unit,  
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**Title:**

**Metal oxo-clusters in MOFs – Synthesis, Structure and magnetism**

**Abstract:**

Research in the area of metal-organic framework compounds or inorganic coordination polymers has been in the forefront during the last two decades. There are studies using aromatic poly carboxylic acids in the assembly of such structures, which resulted in many interesting compounds with excellent adsorptive and related properties. The many reviews and books published during the last few years are testament to the continuing interest in this area.

We have been interested in the role of time and temperature on the formation of such compounds. During the course of this study, we realized that metal oxo-clusters can be assembled at relatively low temperatures. Some of the compounds exhibit interesting properties such as ferromagnetism, high proton mobility, Lewis acid catalysis, photocatalysis. In the present presentation, the studies pertaining to the assembly of new metal oxo-clusters, inter-conversion of structures, magnetic interactions etc would be presented.

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