Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad - 500107

Internal Seminar

Syntheses of Zn(II) and Mg(II)-metallophosphates using Bulky Aryl Phosphates and their Molecular Structures

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Zn(II) and Mg(II)-metallophosphates has drawn great attention over the last few decades not only for their structural diversity and biological importance, but also their several applications in various fields such as catalysts, adsorption and also use as a scavenger of small ions and molecules. The reaction of the mono organophosphates [$ArOP(O)(OH)_2$] (Ar = 2,6-$CHPh_2$-p-R-C_6H_2; R = Me, Et, ^{i}Pr, and ^{t}Bu) with Zn(II) ions produce several di- and multinuclear Zn(II)-metallohosphates [$Zn(II)_4$ and Zn(II)-polymer]. Mononuclear Mg(II)-metallophosphate was obtained by treating phosphate ligands with anhydrous $MgCl_2$ in presence of pyrazole. $Mg(II)_4$ and $Mg(II)_6$ metallophosphates ware obtained by treating $ArOP(O)(OH)_2$ (Ar = 2,6-dibenzhydryl-4-R-phenyl, R = i-Pr, t-But respectively) with anhydrous $MgCl_2$ in presence of 4,4'-bipyridine using different reaction conditions. All the newly synthesized metallophosphates have been characterized by single crystal X-ray diffraction study.

Wednesday, Sep 13th 2017

02:30 PM (Tea/Coffee at 01:45 PM)

Auditorium, TIFR-H (FReT-B)