TIFR Centre for Interdisciplinary Sciences
21, Brundavan Colony, Narsingi, Hyderabad 500 075

Seminar

Unraveling the Chemistry of Organostibonic Acids

Viswanathan Baskar

School of Chemistry, University of Hyderabad

Synthesis of arylstibonic acids ($RSbO_3H_2$) were first reported by Doak and Freedman in 1946. Organostibonic acids are insoluble, ill-defined, high molecular weight polymers whose solid state structures has been a matter of considerable debate. Recently in a break through work, *Beckmann et al* reported the controlled hydrolysis of 2, 6-$Mes_2C_6H_3SbCl_4$ under basic conditions leading to the isolation of the first molecular arylstibonic acid which crystalized as a dimer in solid state. Our work in this field of research is primarily concerned with increasing the solubility of the organostbonic acids so as to use it as a versatile ligand for binding to transition metal ions and lanthanides. We have primarily used two methods to overcome this problem of insolubility. The first method involves moderating the steric and electronic features of the organic part attached to antimony atom and the other method wherein these stibonic acids were subjected to reactions with various protic ligands with the aim of depolymerizing the starting precursor and isolating soluble discrete cluster forms. The organostibonate clusters ability to act as pro-ligands for coordination to metal ions are also being investigated.

Thursday, Mar 17th 2016

4:00 PM (Tea/Coffee at 3:45 PM)

Seminar Hall, TCIS