

Colloquium

Recognition and Sensing of Phosphates by Synthetic Receptors

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Phosphates are indispensable in nature because of the significant role played by them in some of the biological processes e.g. signal transduction, energy storage to living organisms, and environmental issues, such as, eutrophication of water body. Recognition of phosphates is important and challenging due to high hydration energy of phosphates and the existence of various anionic forms of phosphates depending on pH of the solution. The main focus of this talk is based upon our experimental findings regarding selective recognition, sensing and extraction of phosphates by utilizing some newly synthesized organic, and metal ion complex based receptors. In this regard, discussion will be mainly focused on our systematic studies on receptors which deal with tripodal urea based systems for trapping of phosphates, ratiometric fluorescence sensing of pyrophosphate by a small organic molecule, Zn(II) complexes as selective probes for phosphates, and bis-heteroleptic Ru(II) complexes of pyridyl triazole as selective and sensitive probe for recognition, sensing and extraction of phosphates.

Wednesday, Apr 24th 2019

4:00 PM (Tea/Coffee at 3:30 PM)

Auditorium, TIFR-H