

Internal Seminar

Synthesis of Chemically Stable Porous Material and Application of Hydrogel in In-Situ Loading of CdS Quantum Dots

Designing and Synthesis of Compartmental Ligands for the Synthesis of Magnetic Material

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Porous materials with high surface area and high chemical stability have drawn more and more attention in recent years because of their wide applications in physical adsorption and energy-efficient adsorptive separation processes etc.¹ Recently developed porous material such as Covalent organic frameworks (COFs) attained all such properties discussed above with high chemical stability. Utilizing this chemical stability one can utilize COFs in industry for sulfuric acid recovery.¹ Besides this, designing some amino acid based Schiff base ligand which can be further used for synthesis of hydrogel in presence of ZnII and CdII salt and in-situ CdS quantum dots can be loaded in the gel matrix.² A brief summary of such work along with the synthesis of various heterometallic complex³ as well as mono lanthanide complex will be discussed here.

References:

[1] A. Halder, S. Karak, M. Addicoat, S. Bera, A. Chakraborty, S. H. Kunjattu, P. Pachfule, T. Heine and Rahul Banerjee, *Angew. Chem. Int. Ed.* 2018, 130, 5899–5904.

[2] S. Bera, A. Chakraborty, S. Karak, S. Chatterjee, S. Saha and R. Banerjee, *Chem. Mater.* 2018, 30, 4755–4761.

[3] A. Chakraborty, J. Goura, P. Kalita, A. Swain, G. Rajaraman and V. Chandrasekhar, *Dalton Trans.*, 2018, 47, 8841–8864.

Friday, Sep 21st 2018

10:45 AM (Tea/Coffee at 9:30 AM)

Seminar Hall, TIFR-H