

## Tata Institute of Fundamental Research

Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad - 500 046

#### **Internal Webinar**

### 2-(2-Hydroxyphenyl) Benzimidazole-Based Four Coordinate Boron Compounds:Synthesis, Structural Characterization and Photophysical studies

# Ramar Arumugam

TIFR, Hyderabad

Design, synthesis and photo-physical studies of light emitting materials are of interest due to their applications in the field of organic light emitting diodes. (1) In view of this interest we synthesized six four coordinated Boron compounds 1-6 from differently substituted 2-(2-hydroxyphenyl) benzimidazole (HBI) chelating ligands (L1-L6). These are air- and moisture-stable and are soluble in organic polar solvents. These compounds (1-6) were characterized by 1H,11B and 19F-NMR spectroscopic methods as well as single-crystal X-ray diffraction analysis. The photophysical properties of these compounds are being investigated.

#### References:

(a) Li, D.; Zhang, H.; and Wang, Y.Chem. Soc. Rev. 2013, 42, 8416-8433. (b)Benelhadj, K.; Massue, J.; Retailleau, P.; Ulrich, G.; and Ziessel, R. Org. Lett. 2013, 12, 2918-2921. (c) Dhanunjayarao, K.; Mukundam, V.; Ramesh, M.; Venkatasubbaiah, K. Eur. J.Inorg. Chem. 2014, 539-545. (d) Liang, J.; Tang, B. Z.; Liu, B. Chem. Soc. Rev. 2015,44, 2798-2811

Tuesday, Dec14<sup>th</sup> 2021 4:30 PM