

# TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Homi Bhabha Road, Mumbai-400 005

November 27, 2017

## ASET Colloquium

**Speaker** : Prof. Debabrata Maiti (*IIT Bombay*)

**Title** : Designing of templates to reach the distal C-H bond

**Date & Time** : Thursday 30 November 2017 at 16:00 hrs.

**Venue** : Lecture Theater (AG-66.)

### Abstract :

Mimicking the nature has always been a coveted target for scientific communities. A precise understanding has emerged as to how enzymes accomplish the chemical transformations. Enzymes catalyze inert C-H bond functionalization in a regio- and stereoselective manner using metal-active site. Inspired by the nature, we have developed catalytic methods to functionalize carbon-hydrogen (C-H) bonds which provides significant economic and environmental benefits over traditional synthetic methods. Applicability of our strategies towards synthesis of various complex molecules will be discussed.

### References:

1. Deb, A.; Bag, S.; Kancharla, R.; Maiti, D. *J. Am. Chem. Soc.* 2014, 136, 13602-13605.
2. Bera, M.; Maji, A.; Sahoo, S. K.; Maiti, D. *Angew. Chem. Int. Ed.* 2015, 54, 8515-8519.
3. Bag, S.; Patra, T.; Modak, A.; Deb, A... Bera, M.; Maiti, D. *J. Am. Chem. Soc.* 2015, 137, 11888-11891.
4. Patra, T.; Bag, S.; Kancharla, R... Modak, A.; Maiti, D. *Angew. Chem. Int. Ed.* 2016, 55, 7751-7755.
5. Bag, S.; Jayarajan, R.; Dutta, U.; Chowdhury, R.; Mondal, R.; Maiti, D. *Angew. Chem. Int. Ed.* 2017, 56, 12538-12542.

### About the Speaker:

Prof. Debabrata Maiti received his PhD from Johns Hopkins University (USA) in 2008 under the supervision of Prof. Kenneth D. Karlin. After postdoctoral studies at Massachusetts Institute of Technology (MIT) with Prof. Stephen L. Buchwald (2008-2010), he joined the Department of Chemistry at IIT Bombay in 2011 wherein currently he is an Associate Professor. His research interests are focused on the development of new and sustainable synthetic and catalytic methodologies. Currently he is an Associate-Editor of *Journal of Organic Chemistry*.



Dr. Satyanarayana Bheesette  
(Coordinator, ASET Forum)