



REAGENTS IN ORGANIC SYNTHESIS

PROF. SUBHAS CHANDRA PAN

Department of Chemistry

IIT Guwahati

INTENDED AUDIENCE : M.Sc., Ph.D Students

PREREQUISITES : BSc (Chemistry)

INDUSTRY SUPPORT : Dr. Reddy's Laboratory, Lupin, Syngenta etc

COURSE OUTLINE :

This course will deal with the various synthetic strategies using organic reagents. Both classical and modern reagents shall be discussed emphasizing on the mechanistic details. This course shall be useful to students of undergraduate, post graduate and Ph.D. students preparing for NET and GATE examination will find this course extremely useful.

ABOUT INSTRUCTOR :

Prof. Subhas Chandra Pan obtained his B.Sc. degree in Chemistry Honours in 2001 from Calcutta University and M.S. degree in 2004 from Indian Institute of Science, Bangalore. During his MS thesis he worked in Prof. Goverdhan Mehta's laboratory on the total synthesis of epoxyquinone natural products. He obtained his PhD degree in 2008 under the guidance of Prof. Benjamin List at the Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, Germany. After doing postdoctoral studies at Harvard University with Prof. E J Corey and at the Scripps Research Institute, Florida with Prof. Glenn C. Micalizio, he joined IIT Guwahati as Assistant Professor in 2011 and was promoted to Associate Professor in 2015. So far he has published 56 research publications in peer reviewed journals and wrote a book chapter with Prof Benjamin List. He has over 1000+ citations with "h" index 15 and "i10" index of 24. So far he has guided 5 Ph.D and 10 master students for their dissertation. He is a recipient of DAE Young Scientist Research Award (2012) and Thieme Chemistry Journal Award (2018).

COURSE PLAN :

Week 1: Oxidizing Agents in Organic Transformations-Part-I

Week 2: Oxidizing Agents in Organic Transformations-Part-II

Week 3: Reducing Agents in Organic Transformations-Part-I

Week 4: Reducing Agents in Organic Transformations-Part-II

Week 5: Organic Transformations-Using Non-Transition Metals Part-I

Week 6: Organic Transformations-Using Non-Transition Metals Part-II

Week 7: Organic Transformations-Using Non-Transition Metals Part-III

Week 8: Organic Transformations-Using Transition Metals Part-I

Week 9: Organic Transformations-Using Transition Metals Part-II

Week 10: Organic Transformations-Using Transition Metals Part-III

Week 11: Organic Transformations-Using Transition Metals Part-IV

Week 12: Organic Transformations-Using Lanthanides Reagents