GAVIN CONFERENCES

International Conference on
Petrochemical Engineering
July 10-12, 2017 Dubai, UAE

Solid acid-base and redox heterogeneous catalysts in petrochemical reactions.

N. Nagaraju. M.Sc Ph.D
St.Joseph's college, Bangalore, INDIA

Most of the industrially important organic transformations especially those in petrochemical industry are catalyzed reactions. Applications of heterogeneous catalysts in petrochemical industries outweigh those of homogeneous catalysts, due to several advantages of the former associated with low cost of the process and environment compatibility. There are several industries/ companies all over the world, who have invested heavily on research and development of catalytic process, implying the importance of catalysis in industry. Heterogeneous catalysis research in general encompasses three broad areas: preparation/ synthesis of catalytic materials, characterization of materials and investigation on their catalytic activity. Some of the important types of materials that have been extensively investigated for their catalytic activity in petrochemical industry include Zeolites, Mesoporous solids (MCM-41, SAPOs etc.,), HPAs, Clays, single /binary metal oxides and their modified forms. The petrochemical processes catalyzed by these material are of different kinds: such as selective oxidation of hydrocarbons, alkene hydrodeformylation, deep desulphurization of petroleum fractions, hydrotreating and O-xylene isomerisation, ethanol to olefins, ethyl benzene oxidation, FCC light oil gasoline etherification etc.,

The catalytic performance of the heterogeneous catalysts depends on several of their pre and post synthesis modification as well as on their intrinsic acid-base and redox properties. In the present presentation it is propose to highlight the basic structural features of a few solid catalysts, which contribute towards their catalytic activity, by taking results from some of our own research works.

Biography:

N. Nagaraju, is a professor of Chemistry at St.Joseph's college Research centre, Bangalore India. He has 30 years of research experience in the area of heterogeneous catalysis. He has guided 9 Ph.D students and has been teaching Post graduate and graduated students, various topics of chemistry He did his postdoctoral research at Namur University, Belgium. He has published more than 80 research articles and has two patents to his credit.

nagarajun@yahoo.com