



**DEPARTMENT OF CHEMISTRY
PONDICHERRY UNIVERSITY**

Invites you to the lecture on

**"THERE IS STILL PLENTY OF ROOM AT THE
BOTTOM: INVESTIGATIONS ON THE MECHANISM
OF 1,3-DIPOLAR ADDITION REACTIONS"**

By


Dr. Prathapan Sreedharan

Department of Applied Chemistry
Cochin University of Science and Technology
Kochi, Kerala

11th Feb. 2014 (Tuesday)

Time: 3.30 pm

Venue: Department of Chemistry, PU


(Prof. K. Anbalagan)

**PROFESSOR & HEAD
DEPARTMENT OF CHEMISTRY
PONDICHERRY UNIVERSITY
PUDUCHERRY - 605014.**


(Dr. C. Sivasankar)
(Seminar Coordinator)



Dr. C. SIVASANKAR
Associate Professor
Department of Chemistry
Pondicherry University
Puducherry - 605 014, India

**THERE IS STILL PLENTY OF ROOM AT THE BOTTOM:
INVESTIGATIONS ON THE MECHANISM OF 1,3-DIPOLAR ADDITION REACTIONS**

Dr. Prathapan Sreedharan
Department of Applied Chemistry
Cochin University of Science and Technology
Kochi, Kerala
e-mail: prathapan@cusat.ac.in

Abstract

We have examined 1,3-dipolar addition reactions between azomethine oxides/imines and a few electron deficient acetylenes with a view to understand whether 1,3-dipolar reactions follow a concerted mechanism or not. In some cases, unexpected products were generated. Generation of such unexpected products could not be explained on the basis of a concerted 1,3-dipolar addition mechanism. Experimental results are explained on the basis of a zwitterion mediated step-wise mechanism. In some cases, single electron transfer reactions could be observed. We have demonstrated that the reaction between nitrones and appropriate acetylenes provides easy access to highly substituted quinolone and indole derivatives.