**One-pot 1,3-Dipolar Cycloaddition of Isoquinolinium Ylide with Dimethyl Acetylenedicarboxylate in Water.**

Yashasvi Yadav, R.K.Bansal\*
The IIS University

Yashasviyadav22684@iisuniv.ac.in

1,3-dipolar cycloaddotion reaction of pyridinium and other related ylides constitutes an important synthetic strategy for preparing indolizine derivatives. A survey of the literature revealed that this reaction has been so far accomplished in multiple steps using halogenated organic solvents. We have for the first time developed a strategy in which the whole process including generation of the ylide and its subsequent 1,3-dipolar cycloaddition with dimethyl acetylenedicarboxylate has been accomplished in one-pot using water as the solvent.

**Scheme 1.** Formation of 2-phenacylisoquinolinium bromide.



**Scheme 2.** Formation of isoquinolinium phenacylide.



**Scheme 3.** 1,3-Dipolar cycloaddition of isoquinolinium phenacylide with DMAD.



The product was identified on the basis of IR, 1H NMR, and 13C NMR spectroscopy.