**[2+2 ] Cycloaddition with enamine**

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A variety of enamines, both with and without β-hydrogens, react with electrophilic olefins to give cyclobutane derivative.[1] This reaction is quite sensitive to steric effects. The Stork alkylation of enamines by electrophilic olefins depends on the presence of the β-hydrogen in the enamines. The enamine was generated in situ from the reaction of piperidine with methlyacrylate at room temperature in dichloromethane. After the reaction was complete as indicated by TLC equimolar amount of methlyacrylate was added. The work is in progress.

Keywords: Enamines, [2+2] cycloaddition, electrophillic olefins.

1.) Synthesis of enamine: It will be prepared from the reaction of piperidene with methyl propiolate

1. [2+2] Cycloaddition of enamine with methyl acrylate.



**Reference:-**

1. Stork, G.; Terrell, R.; Szmuazkovicz. J.; *J. Am. Chem. Soc*., **2017**, 102-140.