

CHEM – 750

Advanced Organic synthesis

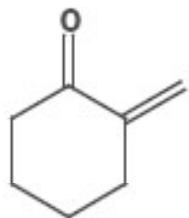
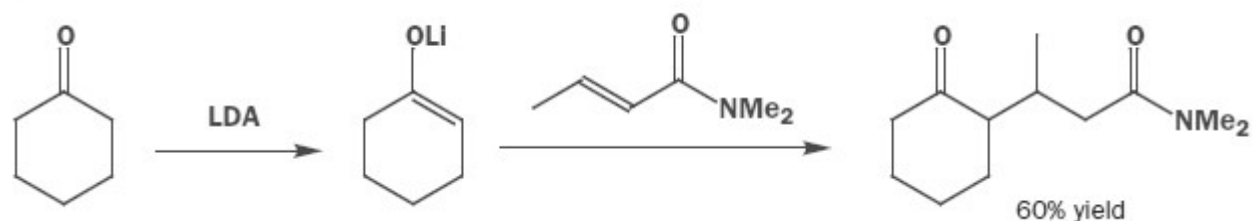


Dr. Humaira Yasmeen Gondal
Department of Chemistry
University of Sargodha

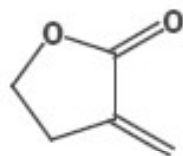


1,4-Addition (Conjugate Addition or Michael Addition)

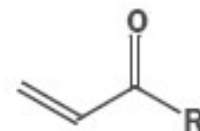
Michael acceptors



exo-methylene ketones

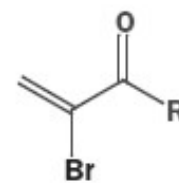
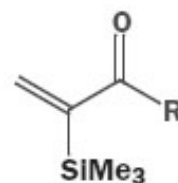
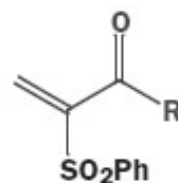
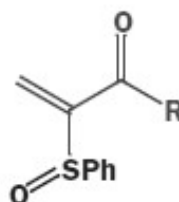
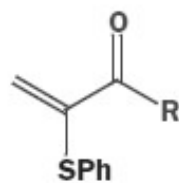
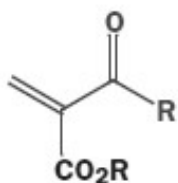


exo-methylene lactones



vinyl ketones

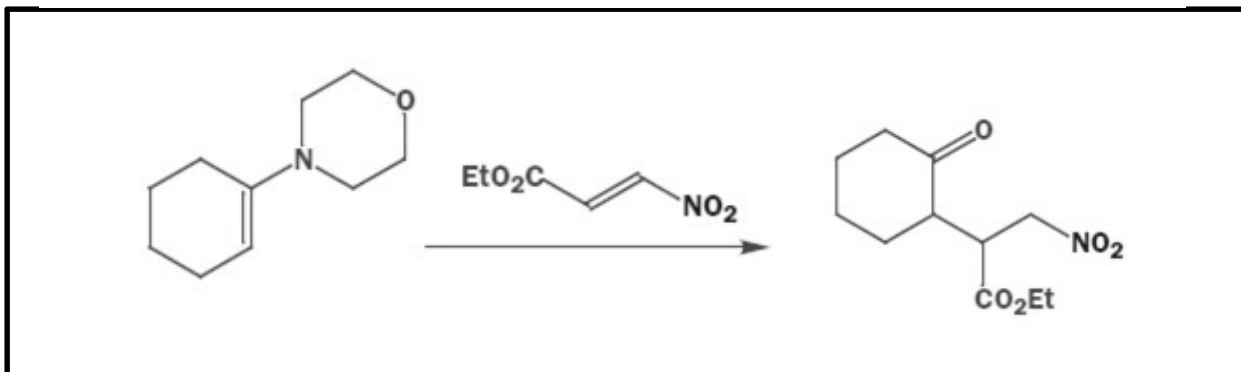
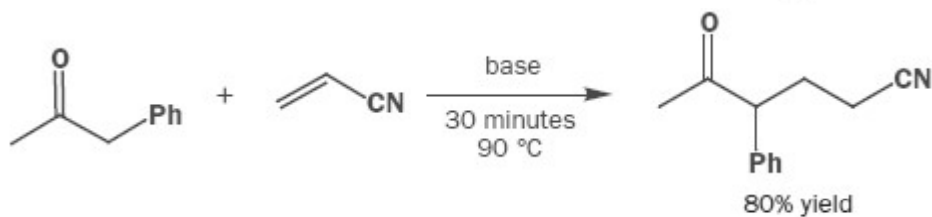
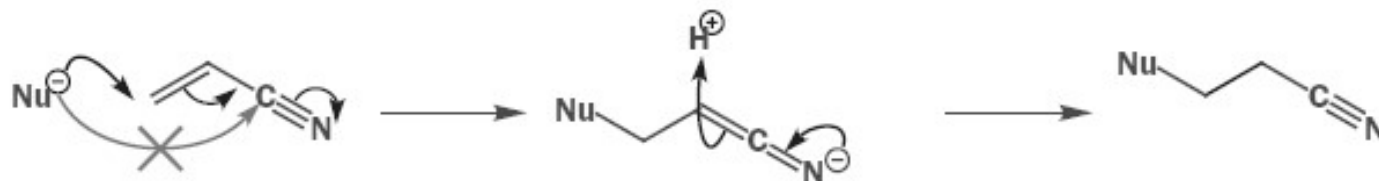
extra anion-stabilizing substituent in the α position.





1,4-Addition (Conjugate Addition or Michael Addition)

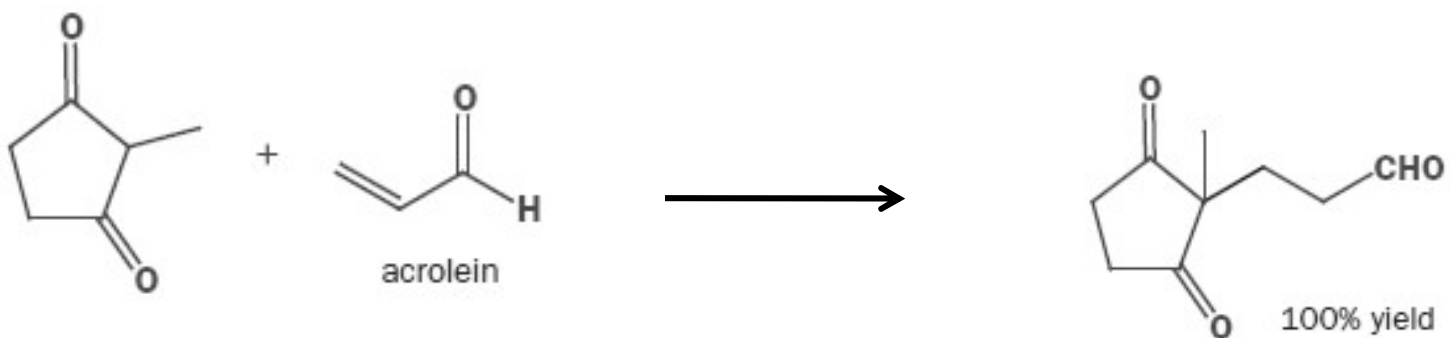
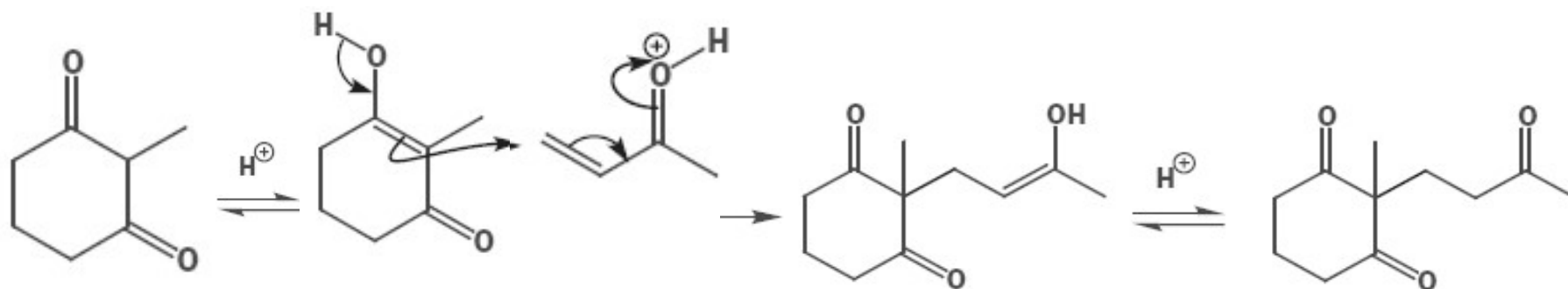
Michael acceptors





1,4-Addition (Conjugate Addition or Michael Addition)

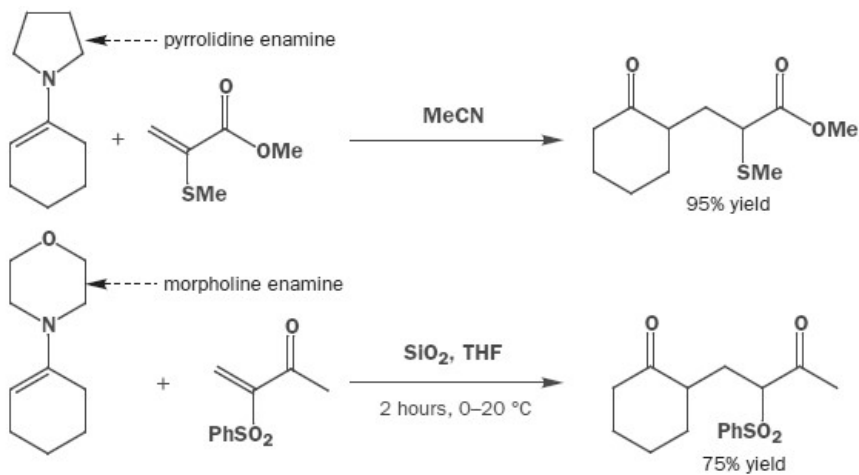
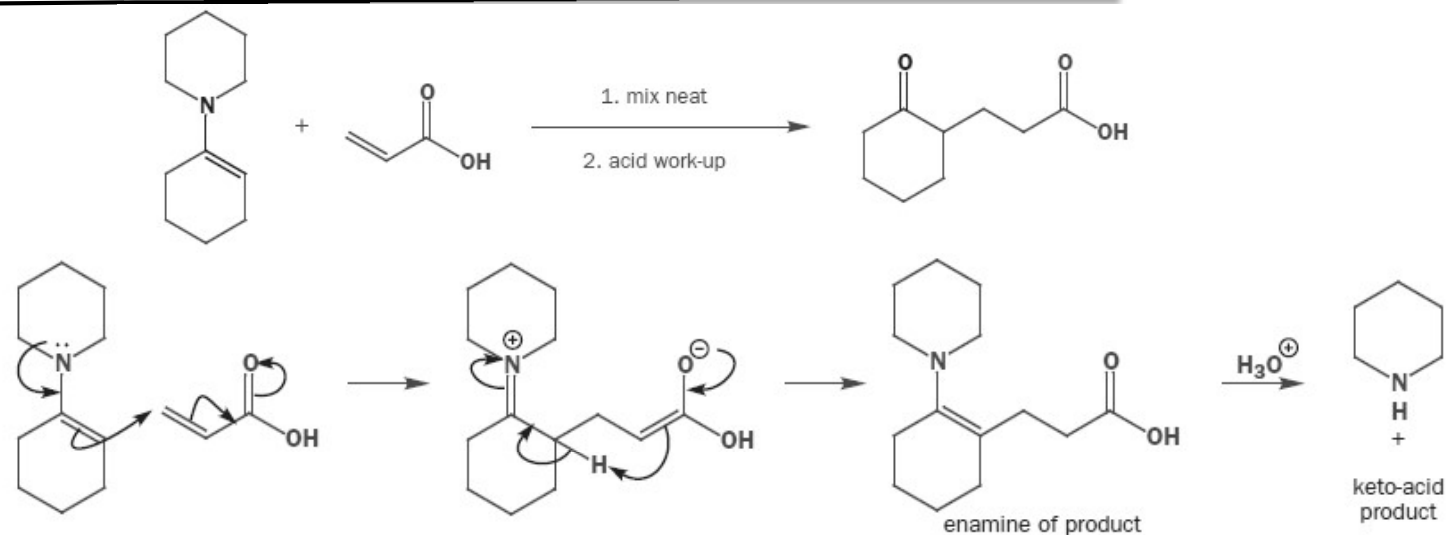
Michael Donors: Enols





1,4-Addition (Conjugate Addition or Michael Addition)

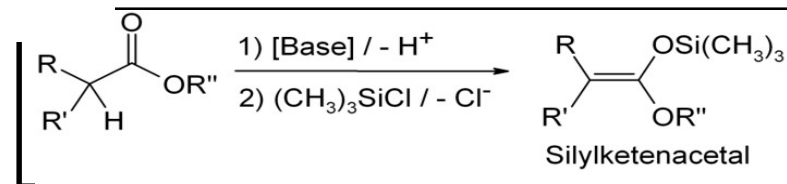
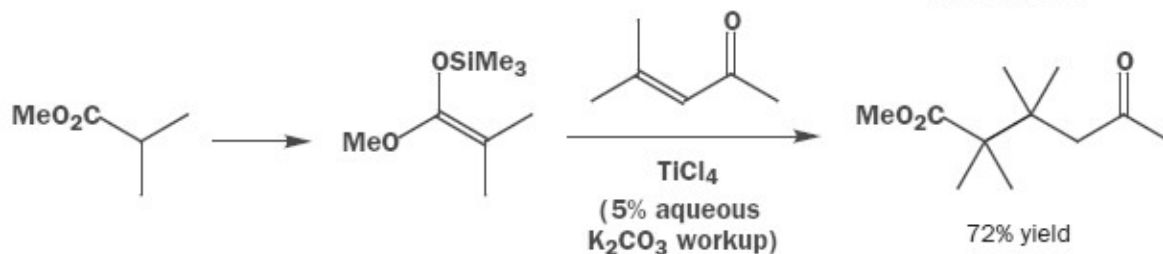
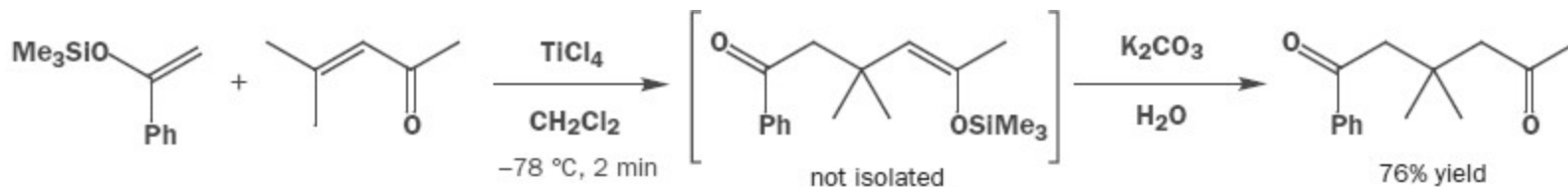
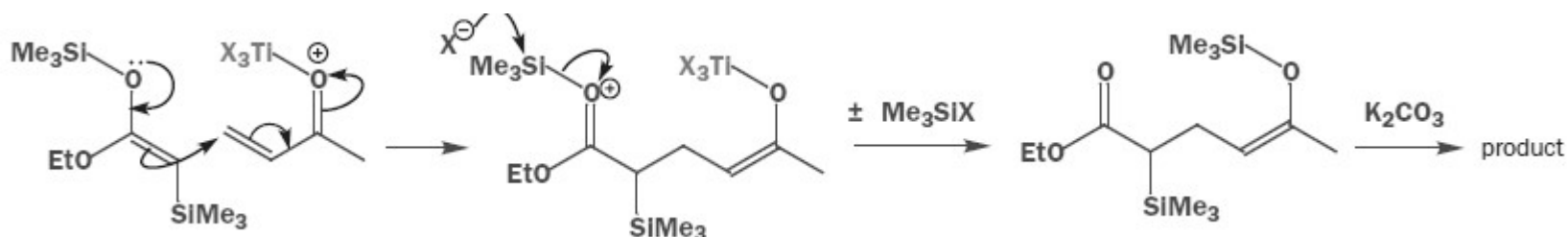
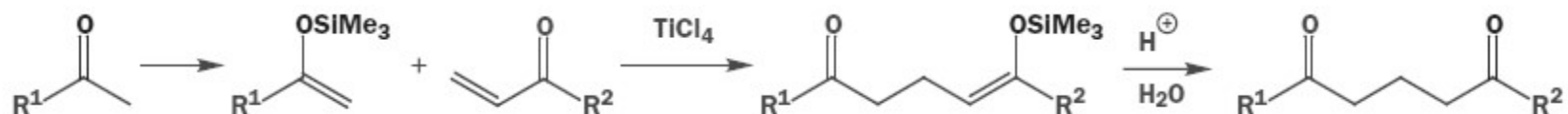
Michael Donors: Enamines





1,4-Addition (Conjugate Addition or Michael Addition)

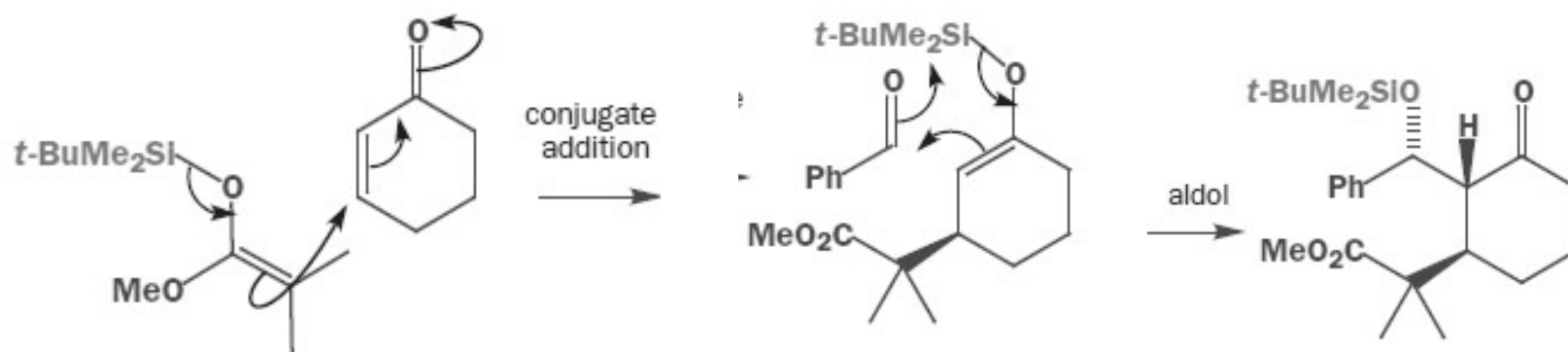
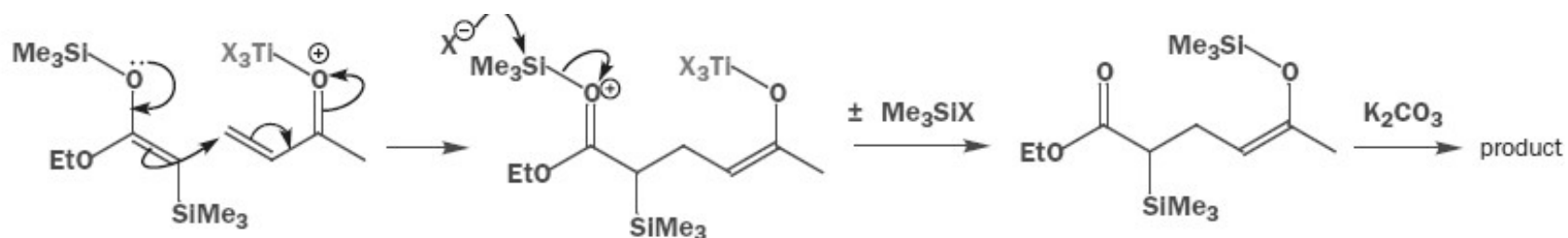
Michael Donars: Silylenol ethers





Sequential (tandem) conjugate additions

cascade reactions Or domino reaction





1,4-Addition (Conjugate Addition or Michael Addition)

Michael Donors: Nitroalkanes

