

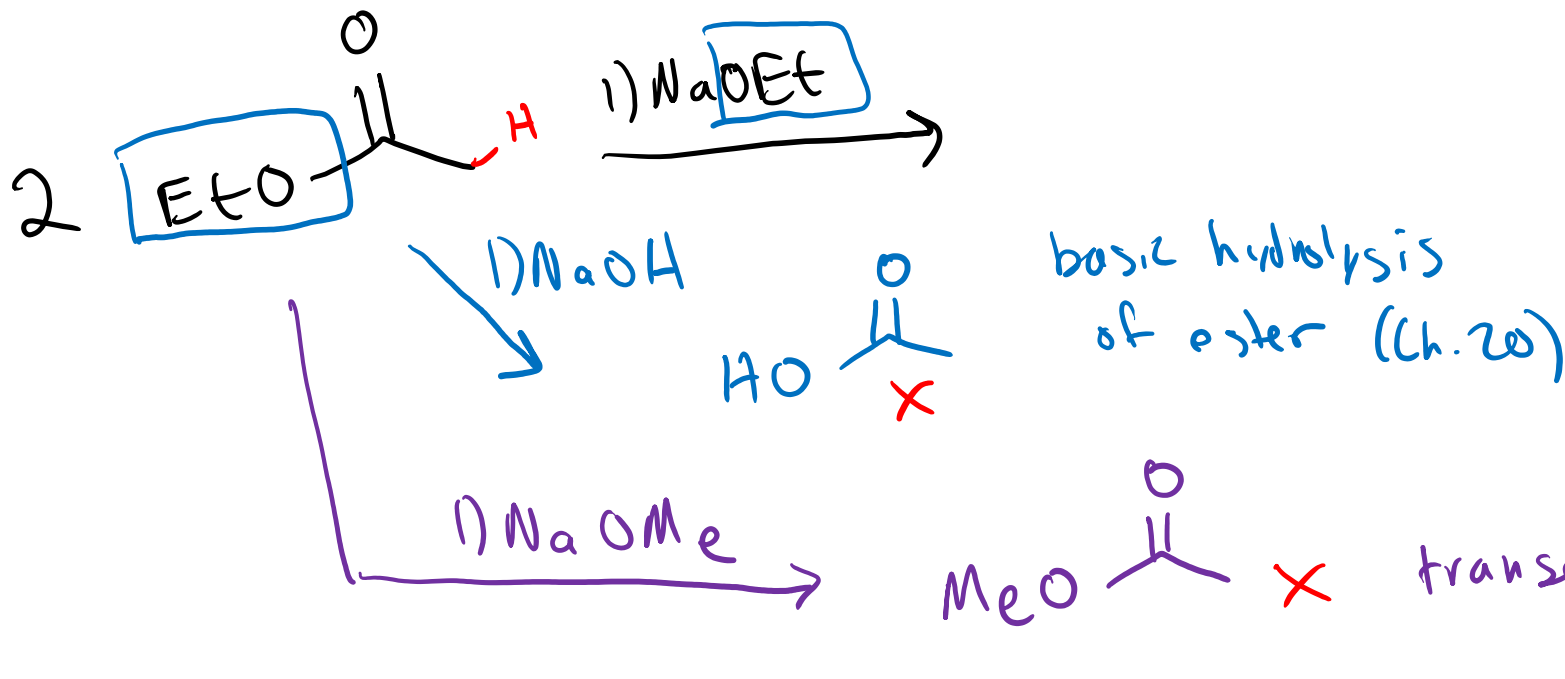
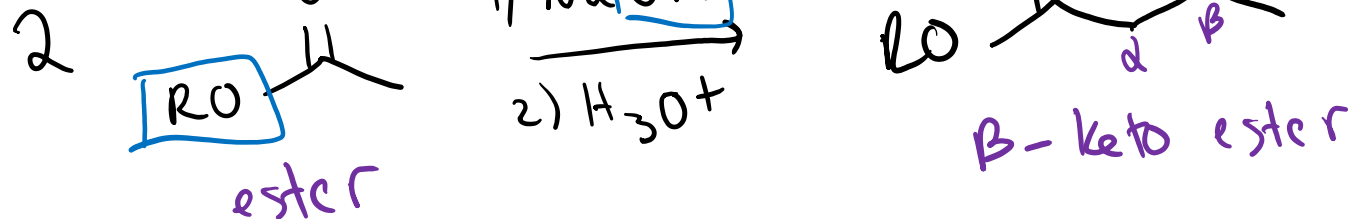
Aldol and Claisen Condensations

3/22/2022

Claisen Condensation

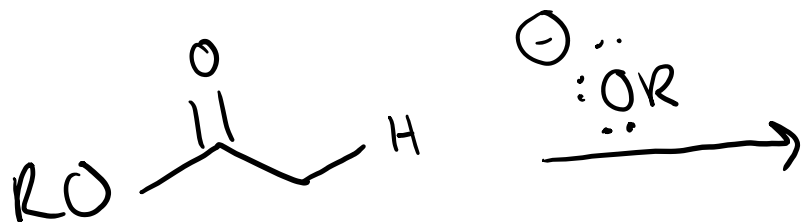
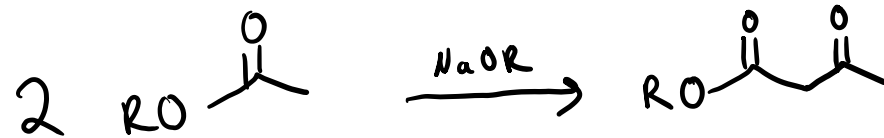
base must match OR group of ester!

(21.4)

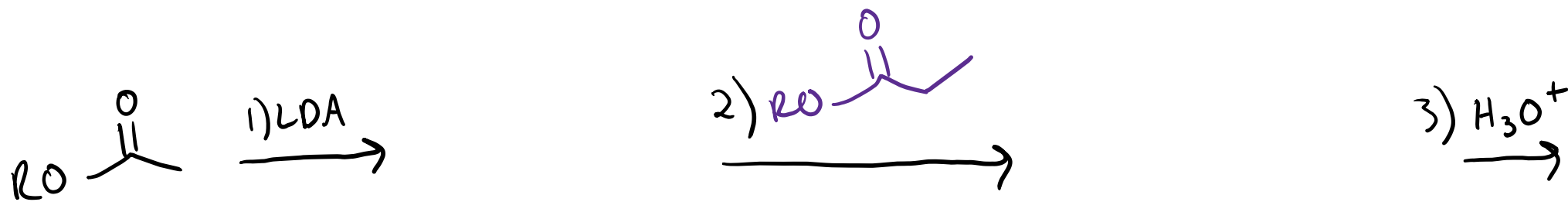
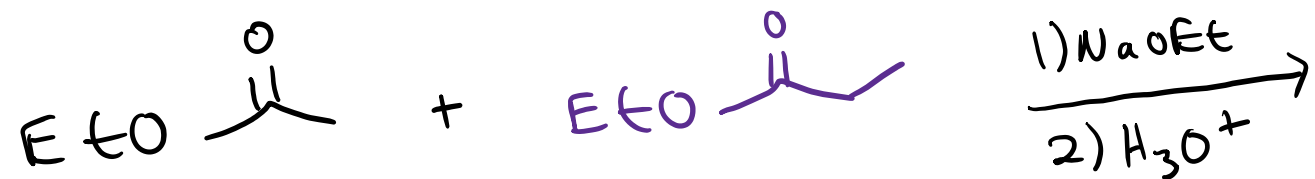


whatever base we choose could act as nucleophile instead!

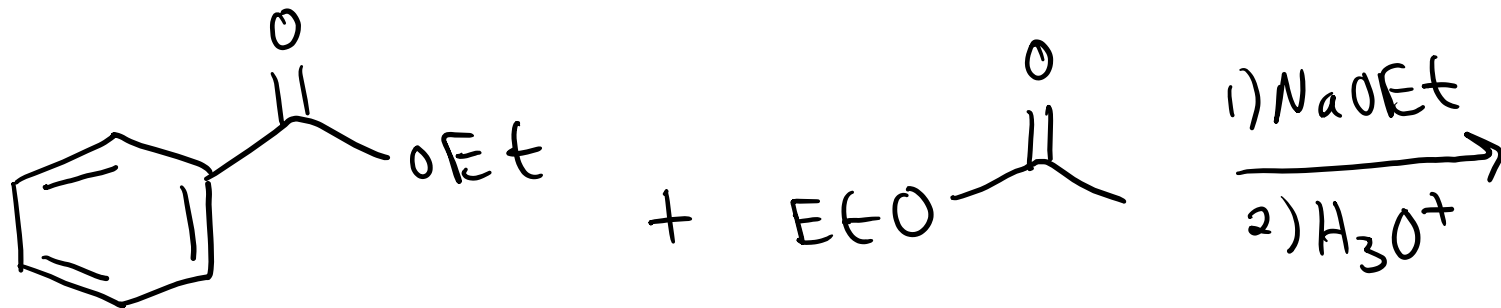
Claisen Condensation: Mechanism



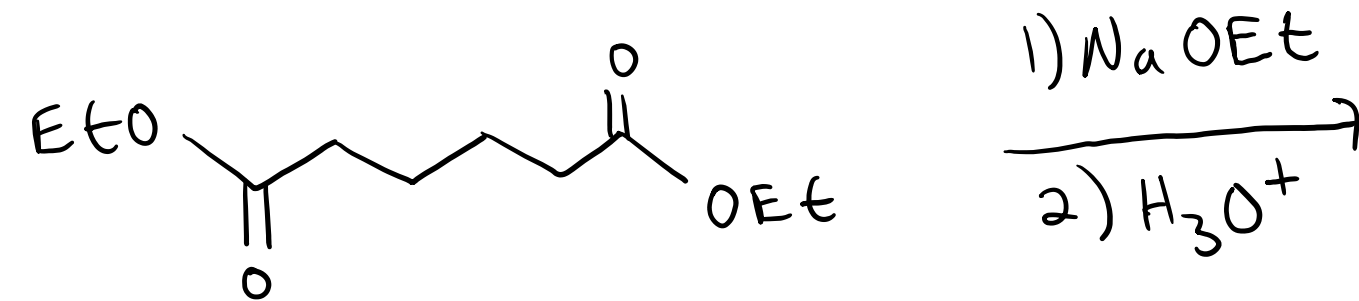
Crossed Claisen (or mixed Claisen)



or, if one reactant has no α -protons

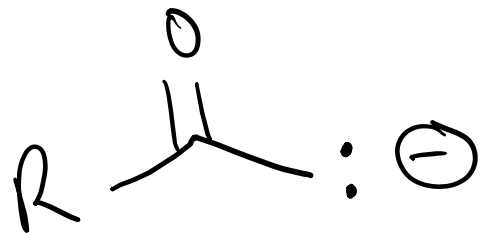


Intramolecular Claisen – “Dieckmann Cyclization”

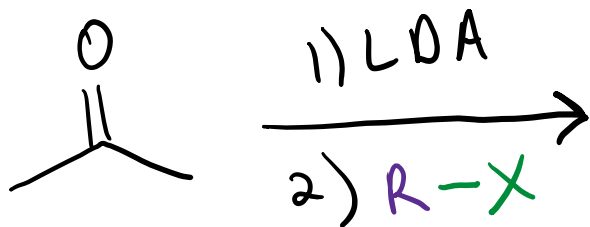


Alpha-Alkylation of Enolates

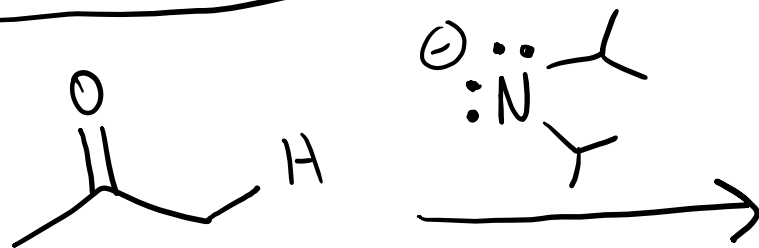
(21.5)



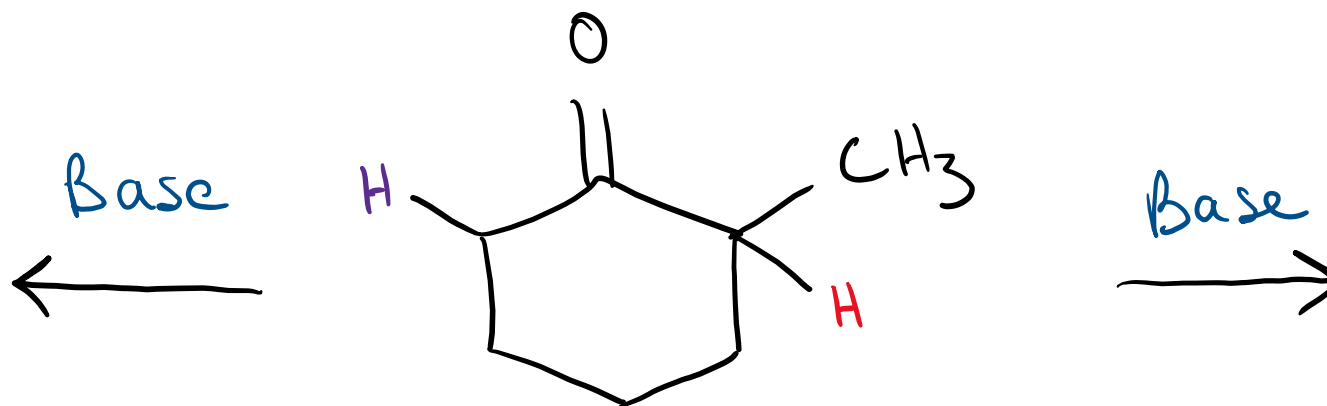
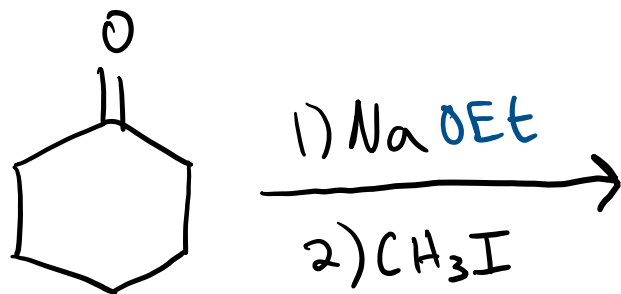
overall:



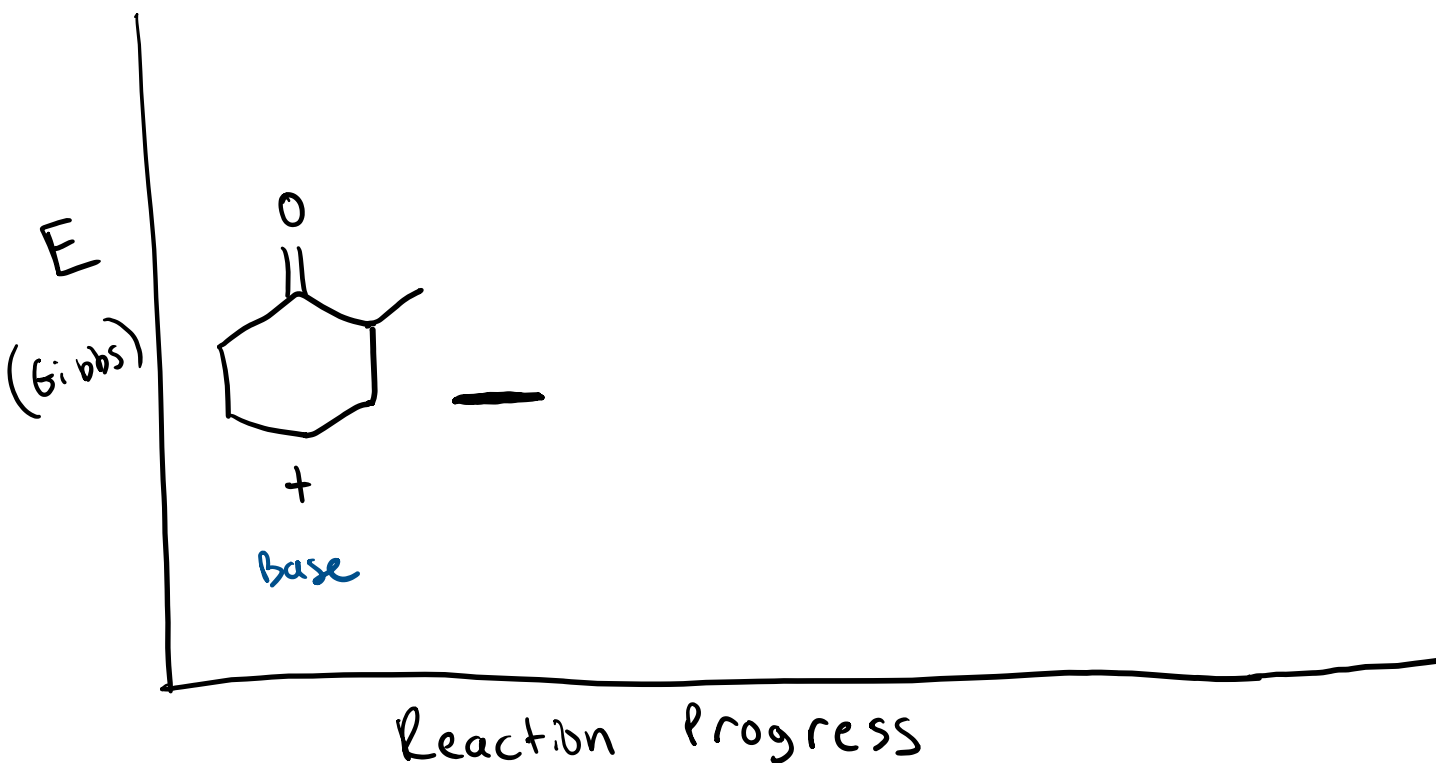
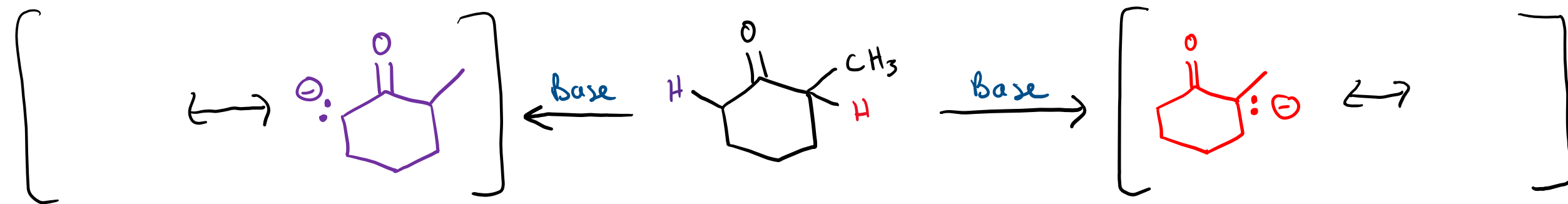
mechanism:



Alpha-Alkylation: Choosing a Base



Thermodynamic vs Kinetic Enolate: Choosing the right base



Thermodynamic vs Kinetic Enolate: Examples

