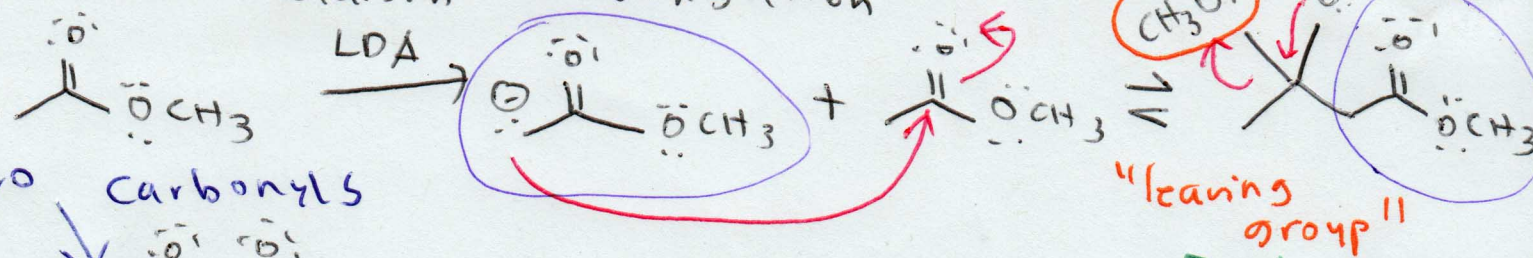
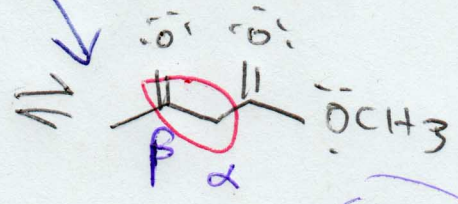


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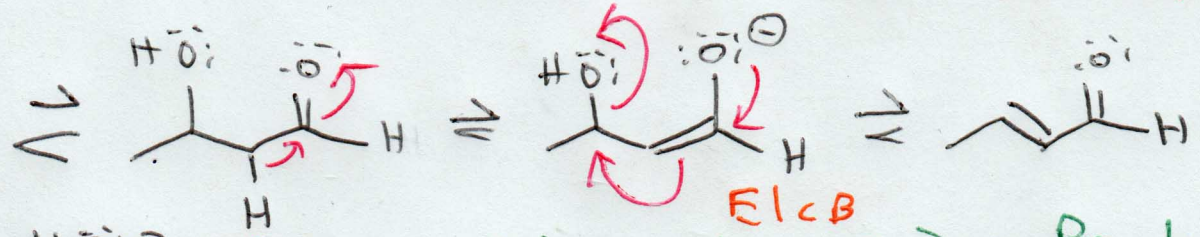
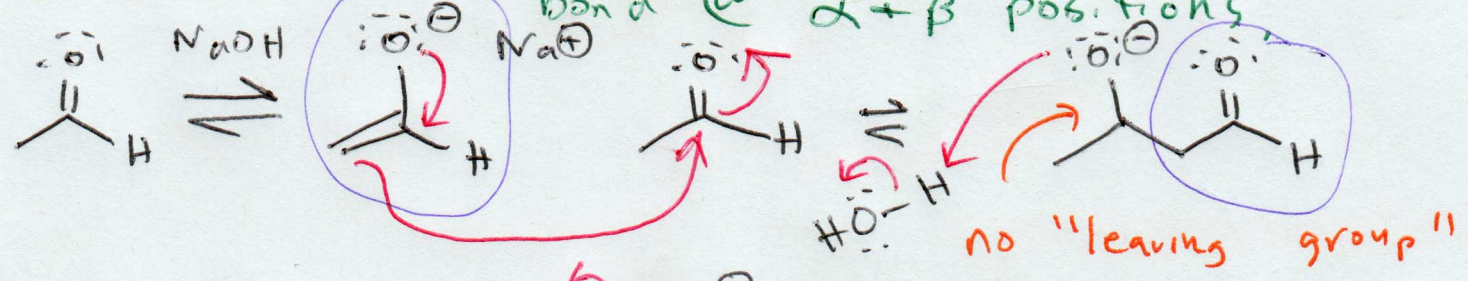
Claisen Condensation



two carbonyls

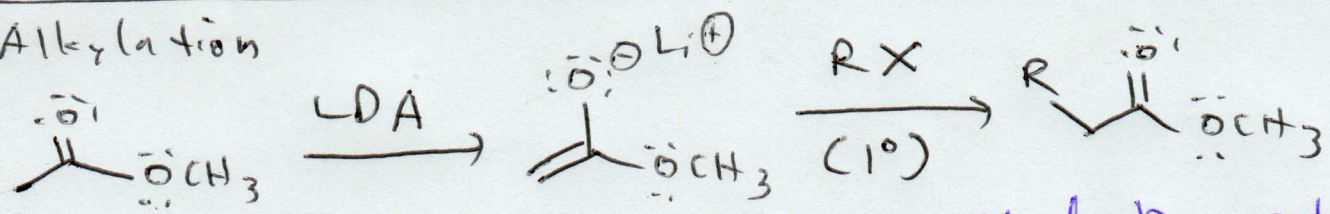


Claisen condensation - Product is β -ketoester, with a new C-C bond @ $\alpha + \beta$ positions



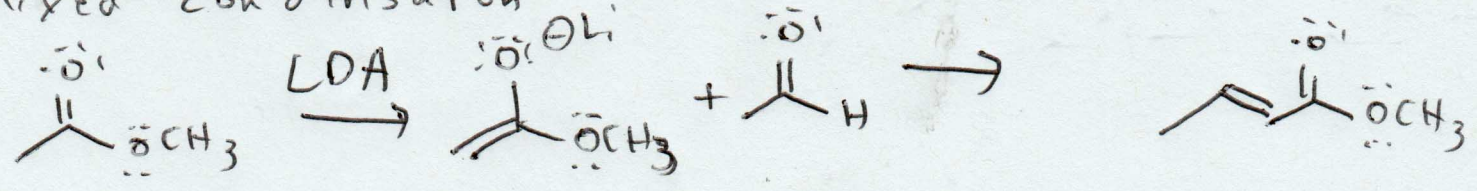
aldol condensation - Product is either a β -hydroxy aldehyde or ketone or a α, β -unsaturated aldehyde or ketone.

Alkylation

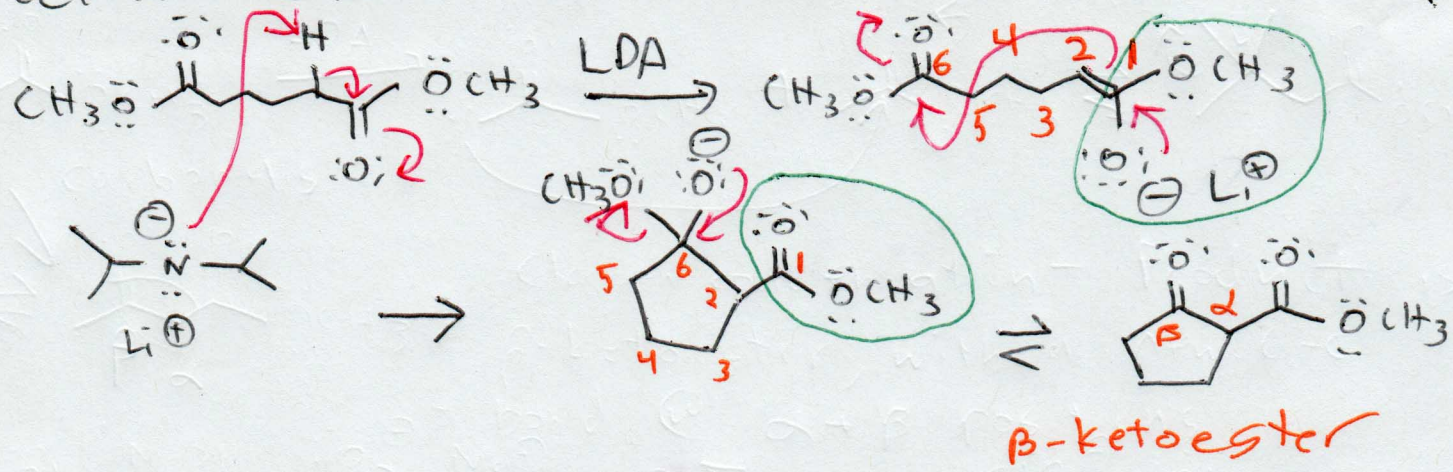


Claisen condensation can be avoided by adding the ester to an excess of LDA. That way, no significant quantity of the ester builds up for the enolate to react with.

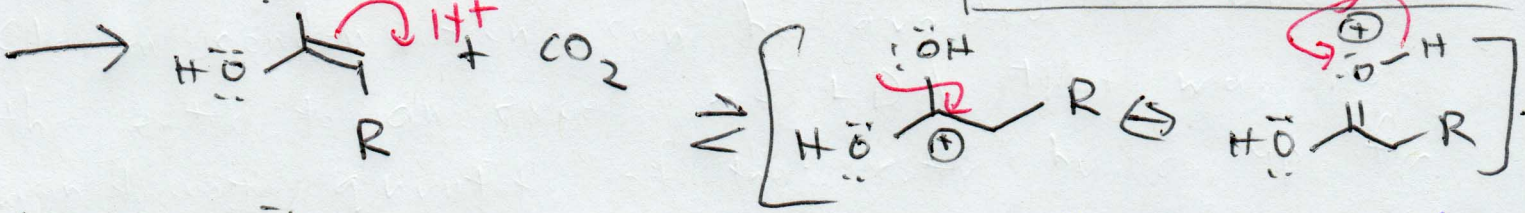
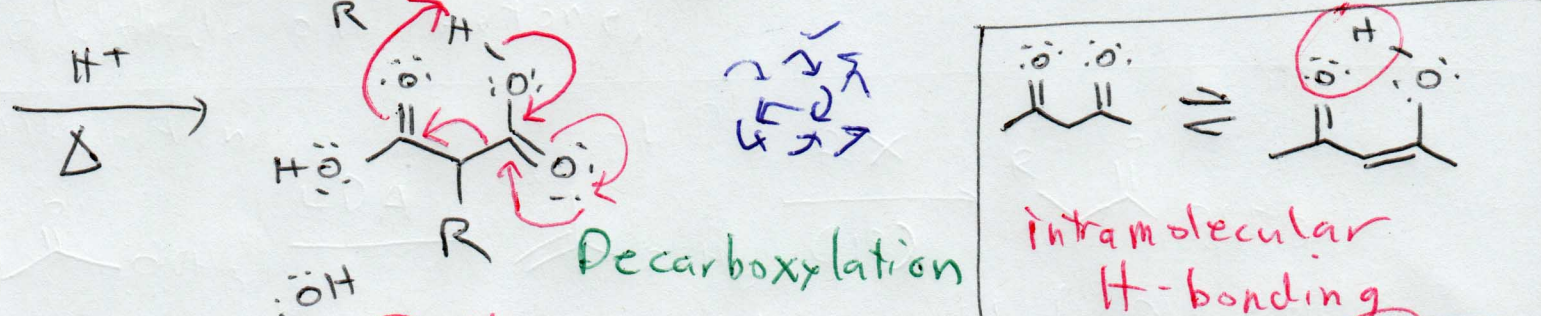
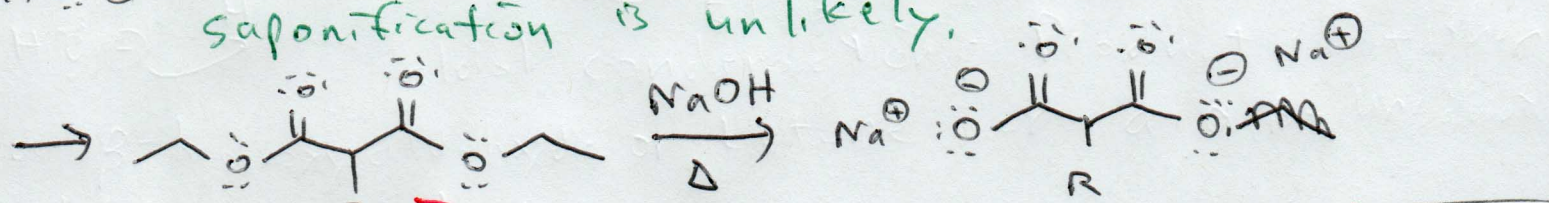
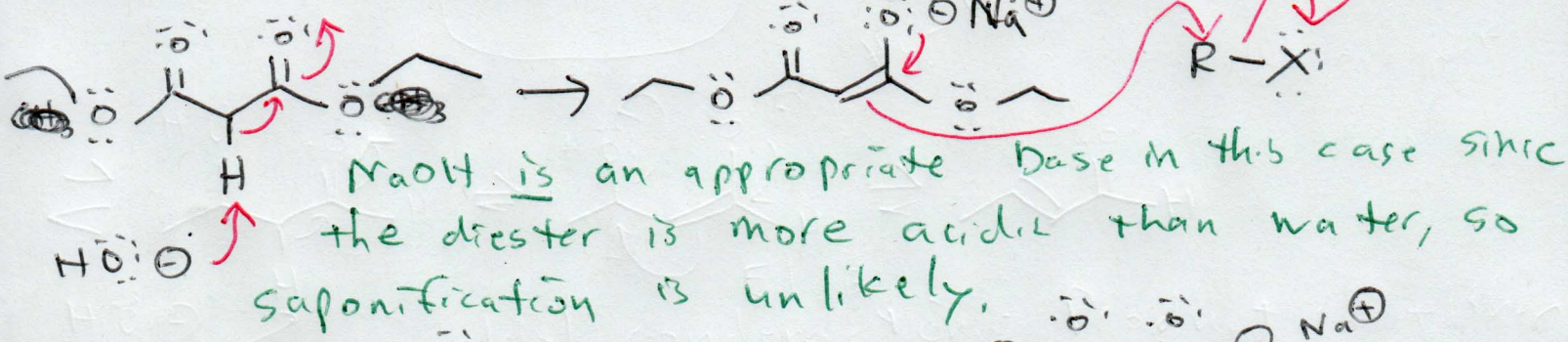
Mixed condensation



Dieckmann condensation - Intramolecular Claisen [2]



Malonic ester synthesis - Diethyl malonate



Malonic ester synthesis is used to prepare custom carboxylic acids under relatively mild conditions.

Acetoacetate synthesis

L3

