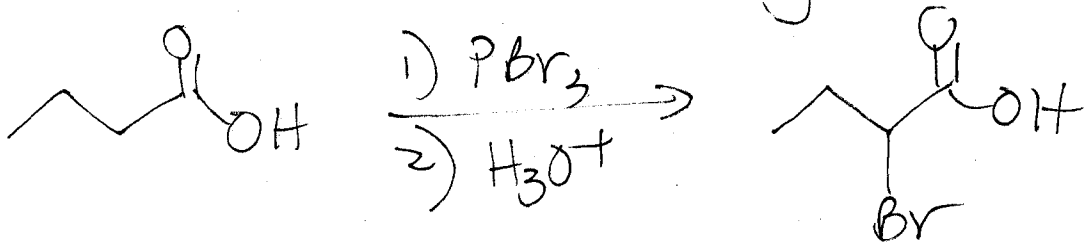
From Ch. 18

Everything I said Friday April 9th

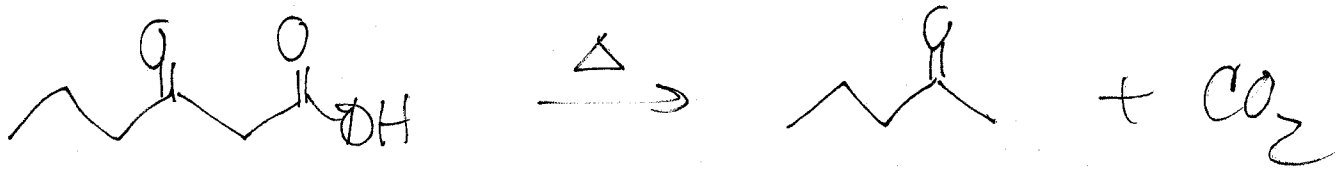
sorry, I meant Friday, April 4th!

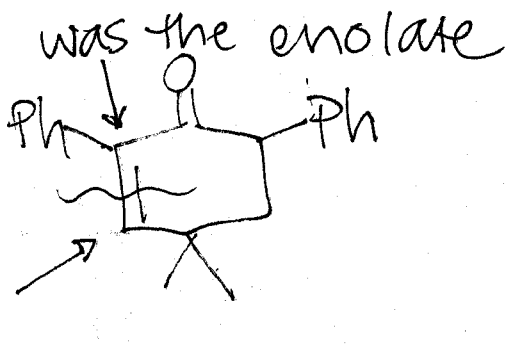
And:

1. Hell-Volhard-Zelinsky (no mechanism)



2. Decarboxylation of β-keto acids

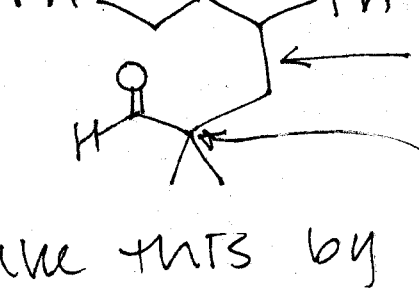


make 

was a C=O

From the usual –
- 3 carbons (or less) alcohols / RX / epoxides
- benzene

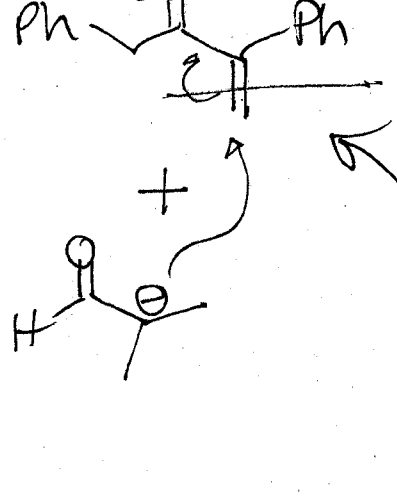
aldol ↑ NaOH △

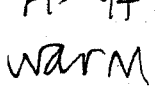


was an alkene

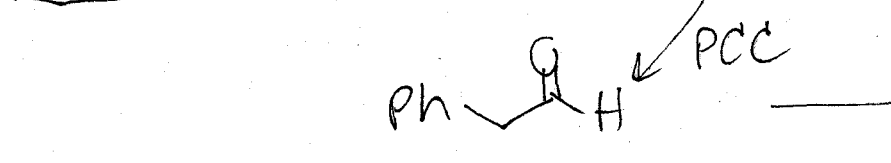
was the enolate

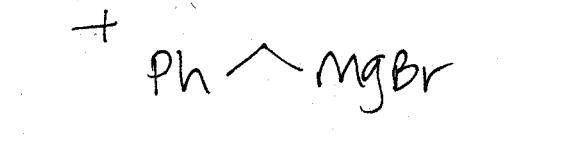
make this by a Michael addition



1) LDA
2) 
warm

lots of ways →



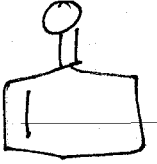


PCC →

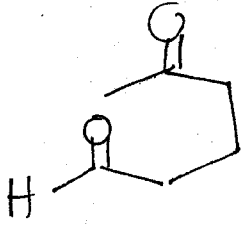
PCC

CH_3OH

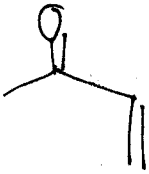
The basic structure is



aldol

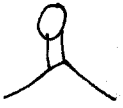


michael

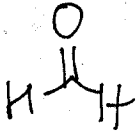


+

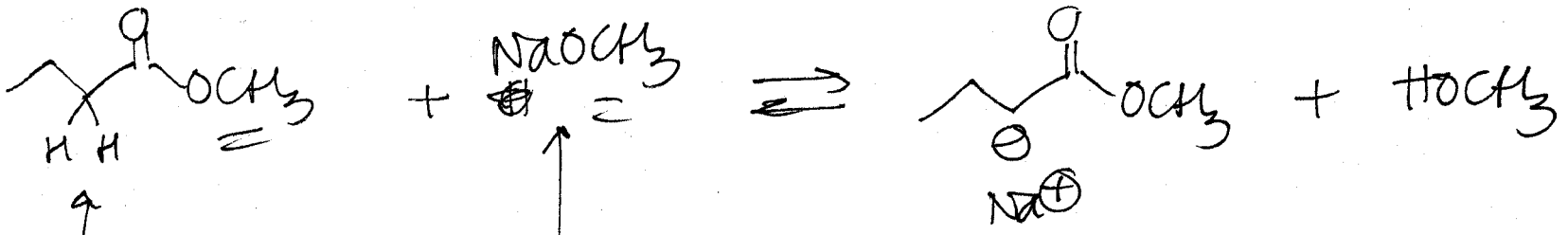
aldol



+



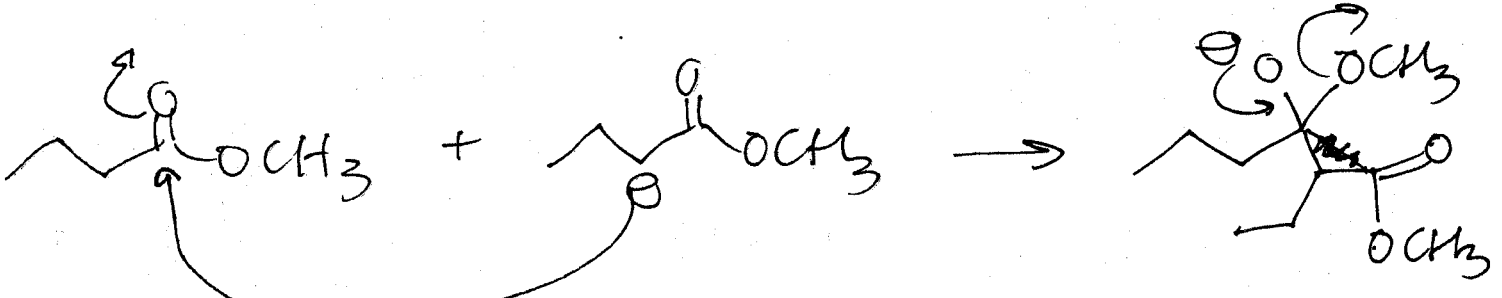
Claisen condensation

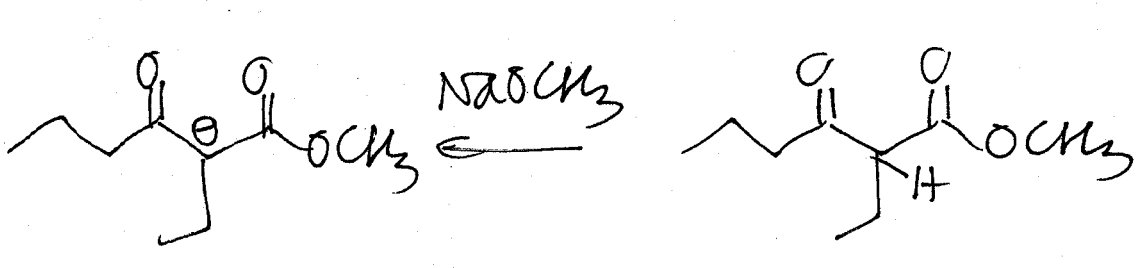


acidic

pick the alkoxide that matches the ester

an ester enolate
+ good nucleophile
<25% enolized

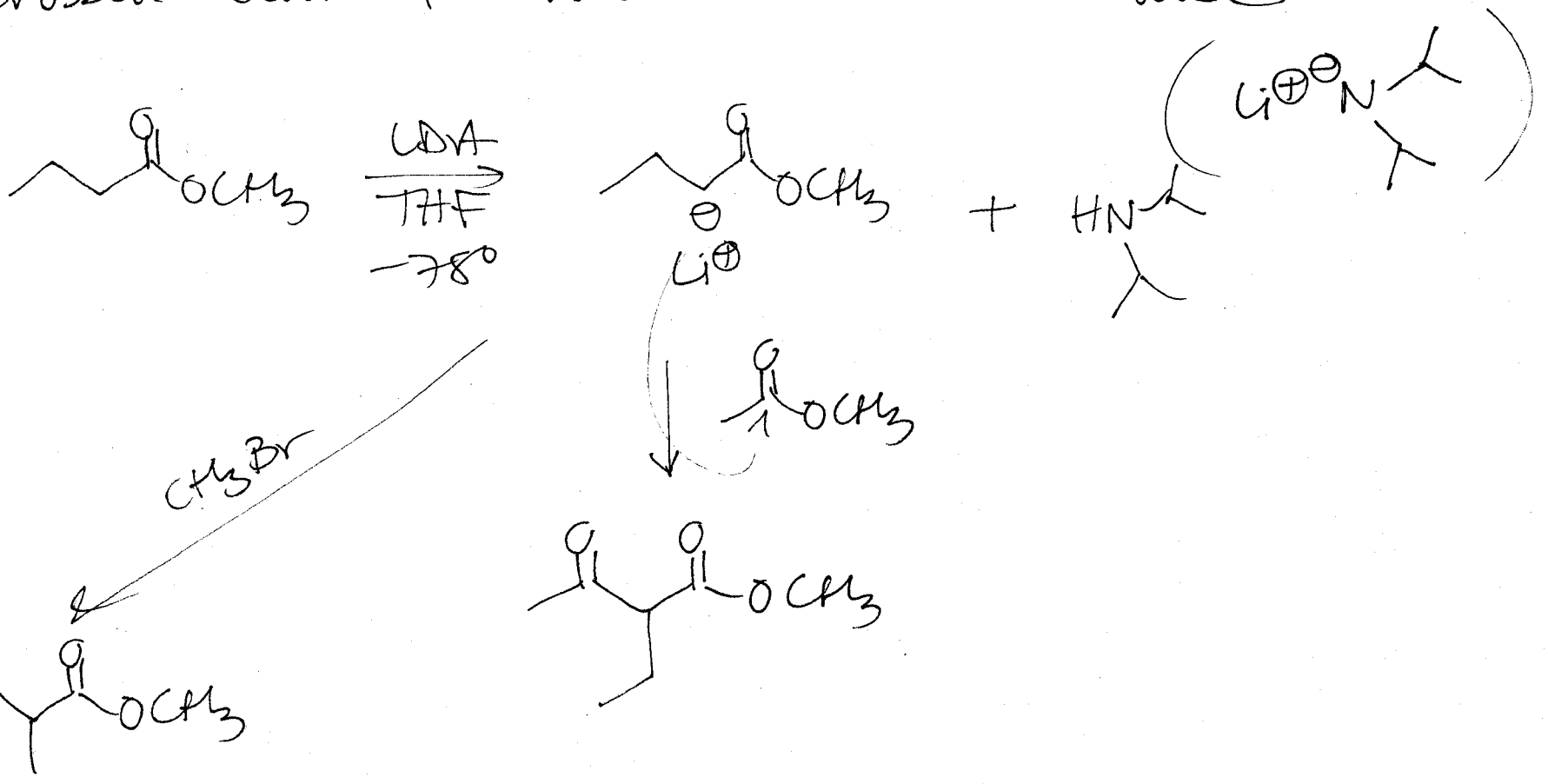




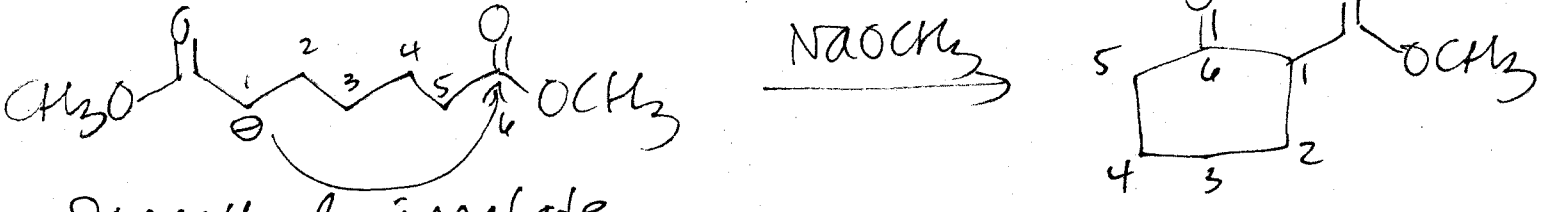
acyl substitution

β-keto esters

Crossed Claisen - use LDA as the base

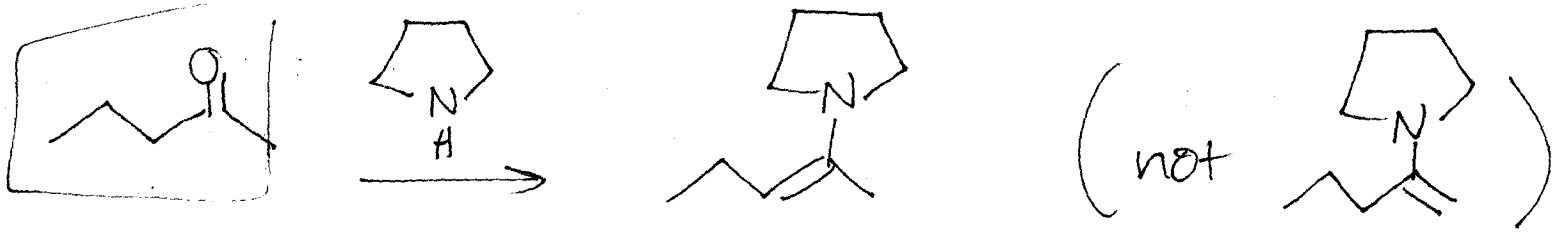


Intramolecular Claisen – it's a Dieckmann.

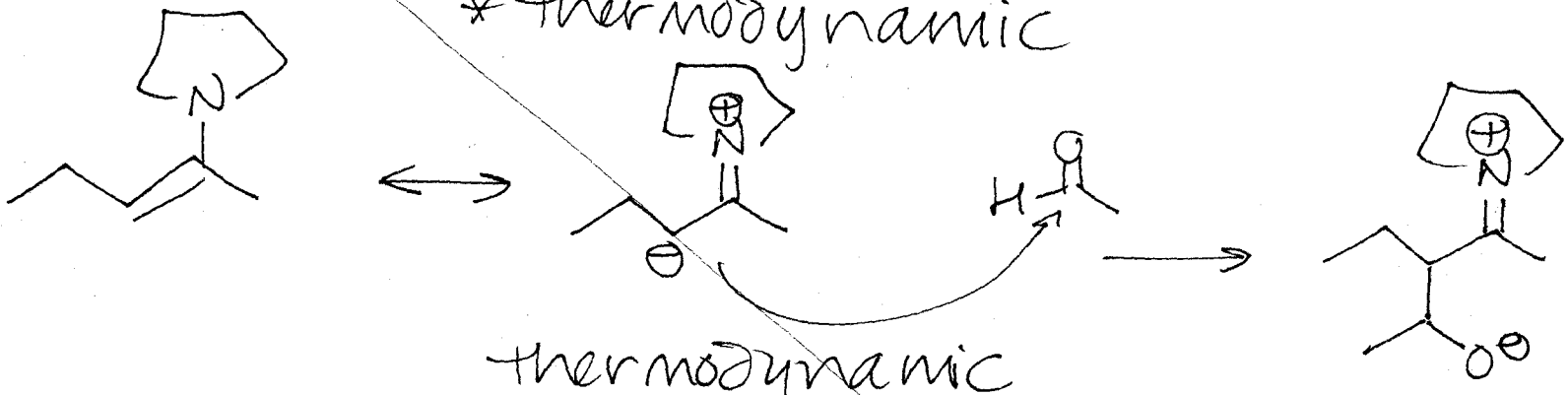


dimethyl pimelate

Stork enamine synthesis



enamine
(more stable alkene)
* thermodynamic



thermodynamic enolate

dehydrate