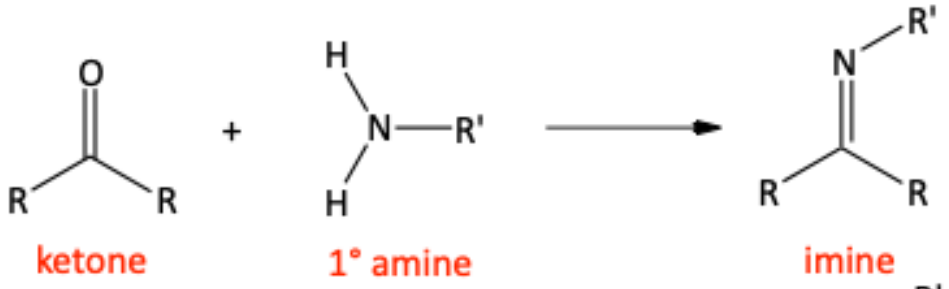
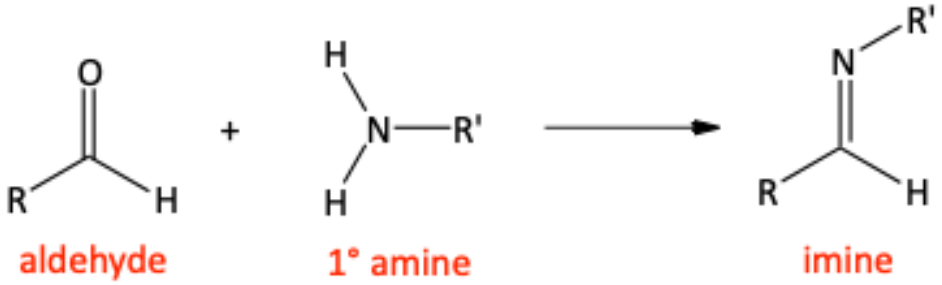
Carbonyl Reaction Review: Name the Reagents

Each reaction shows the starting material and the product. Write the reagents above the arrow.

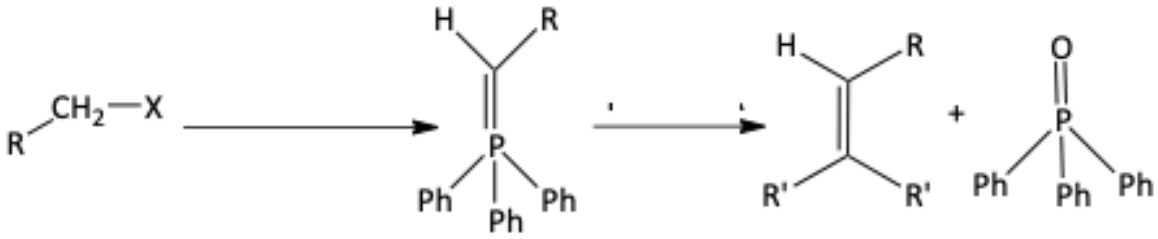
Name: _____ Date: _____

Ketones and Aldehydes to imines

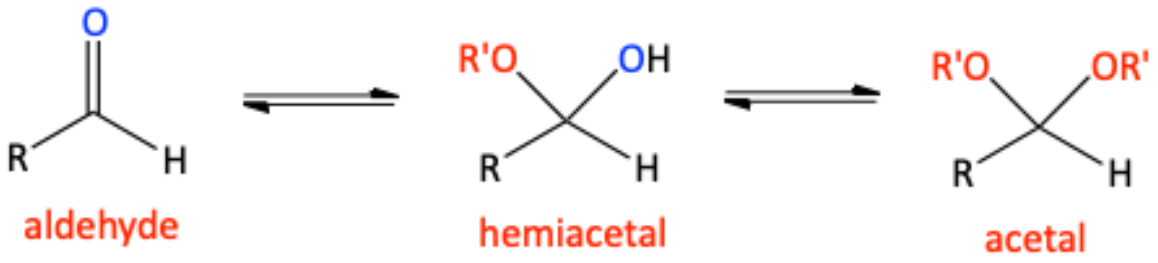


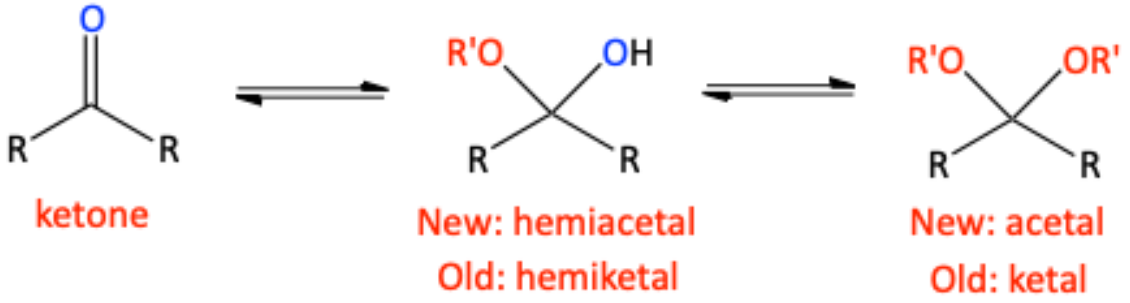


Wittig reaction - Ketones to alkenes

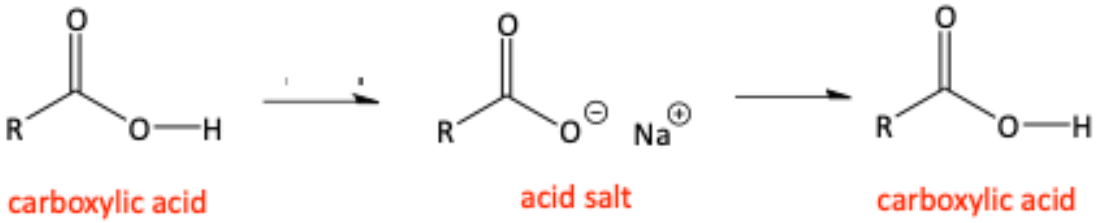


Ketones and aldehydes to acetals and ketals

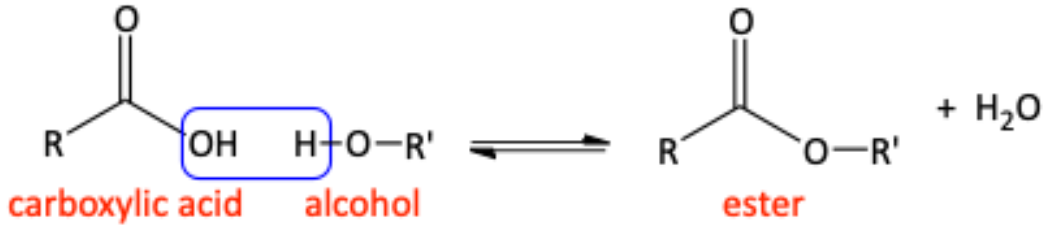




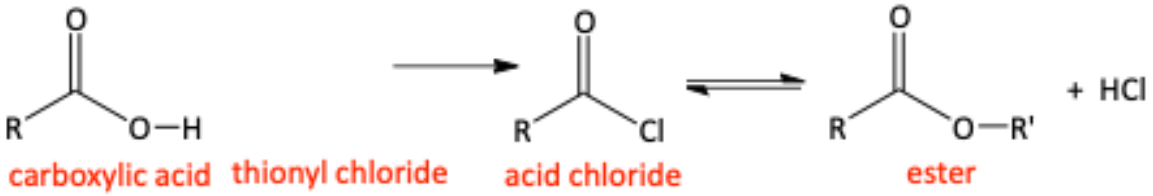
Deprotonation of carboxylic acid



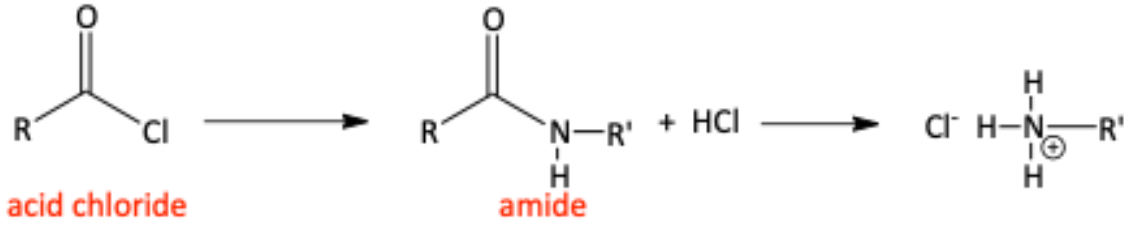
Fischer Esterification – carboxylic acid to ester



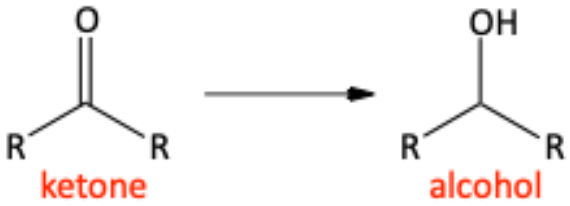
Carboxylic acid to acid chloride to ester

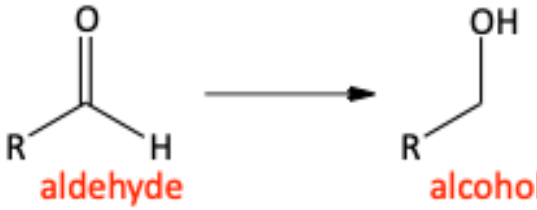


Acid chloride to amide



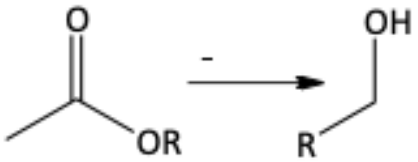
Reductions of carbonyls



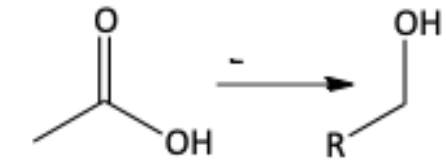




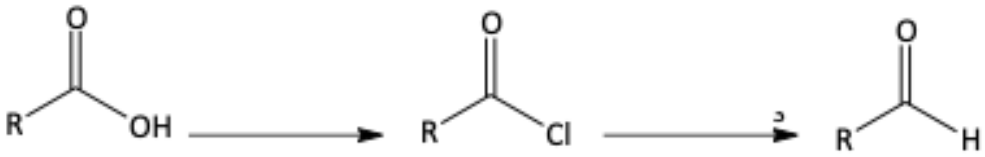
acid chloride alcohol



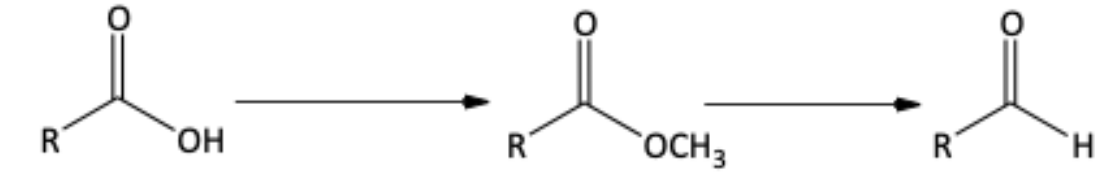
ester alcohol



carboxylic acid alcohol



acid chloride aldehyde



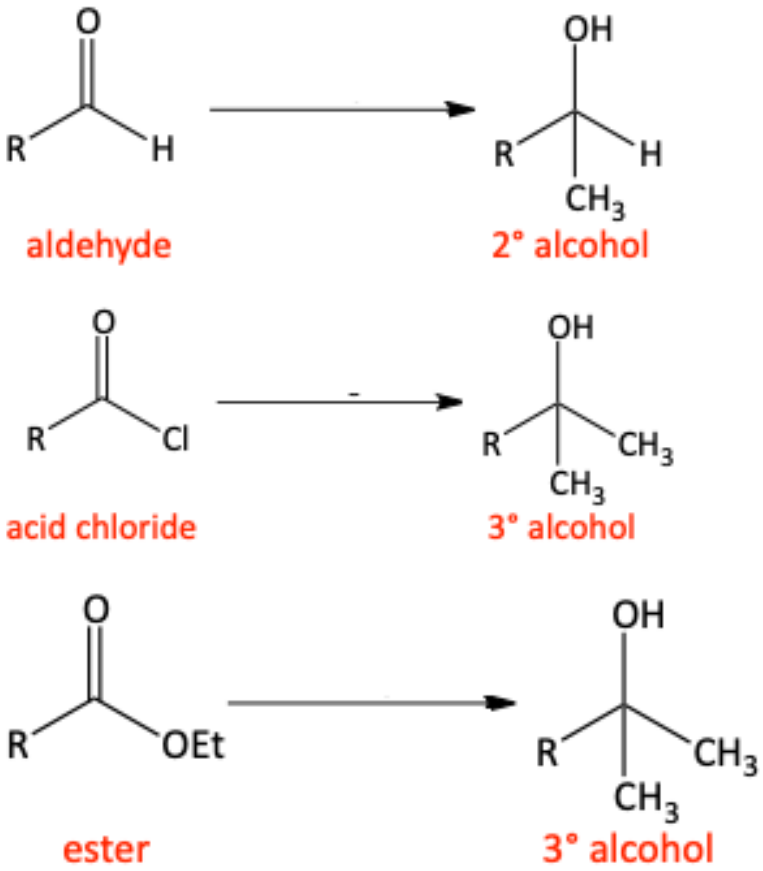
carboxylic acid ester aldehyde



Grignard reagent attacks of carbonyls



ketone 3° alcohol


O
R
H
OH
R
H
CH3
aldehyde
2° alcohol
O
R
Cl
OH
R
CH3
CH3
acid chloride
3° alcohol
O
R
OEt
OH
R
CH3
CH3
ester
3° alcohol