(26) **Today**

Chap 19.8: Nucleophilic Addition of N Nucleophiles to Aldehydes and Ketones

Next Class (27)

Chap 15.2 – 15.6: Aromaticity

(28) **Second Class from Today**

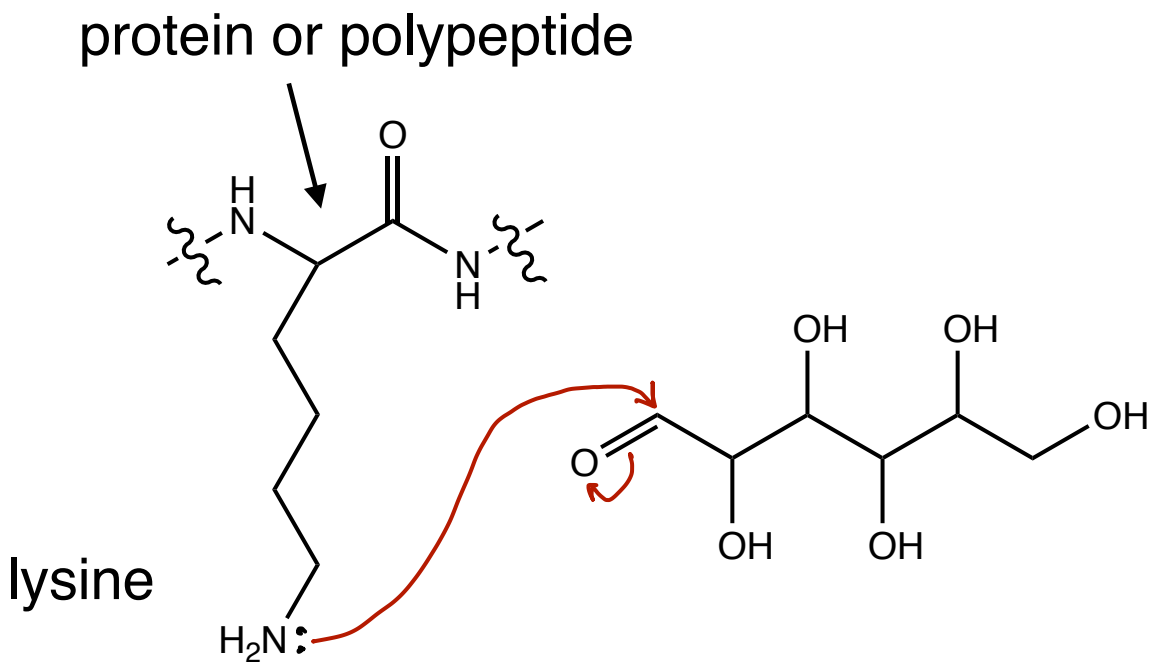
Chap 15.2 – 15.6: Aromaticity

Third Class from Today (29)

Chap 16.1 - 16.5: Electrophilic Aromatic Substitution

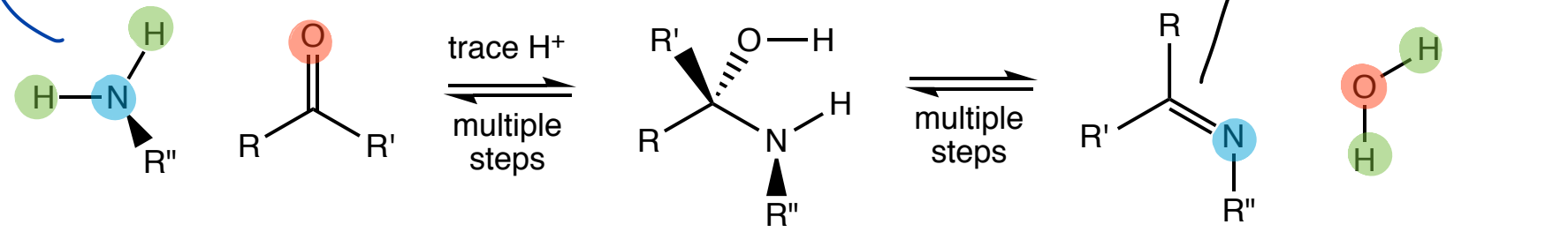
Please hand in reword test 2..

I do not need your test back. Please just hand in the reworked answers.

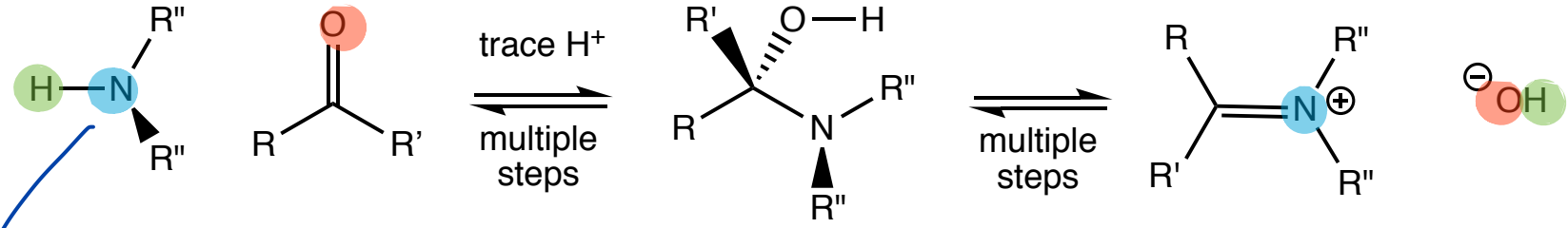


carbohydrates react with amino acid side chains to make proteoglycans or glycoproteins

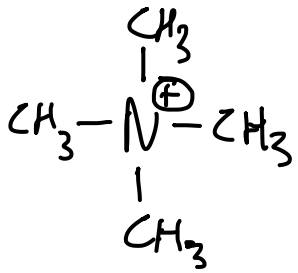
1° amine is N with 1 C atom directly bonded to it (2 H also)



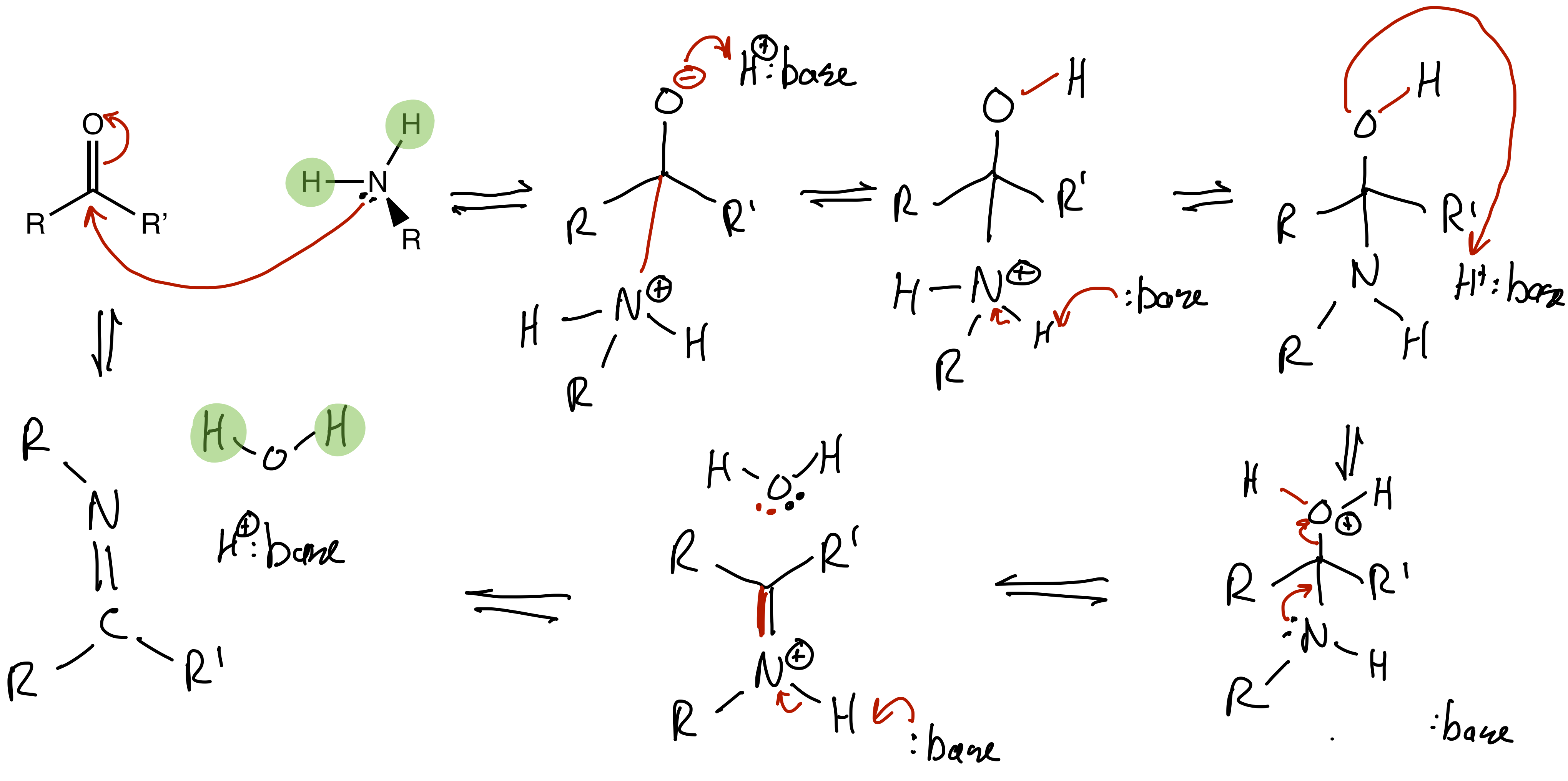
Imine
Schiff base



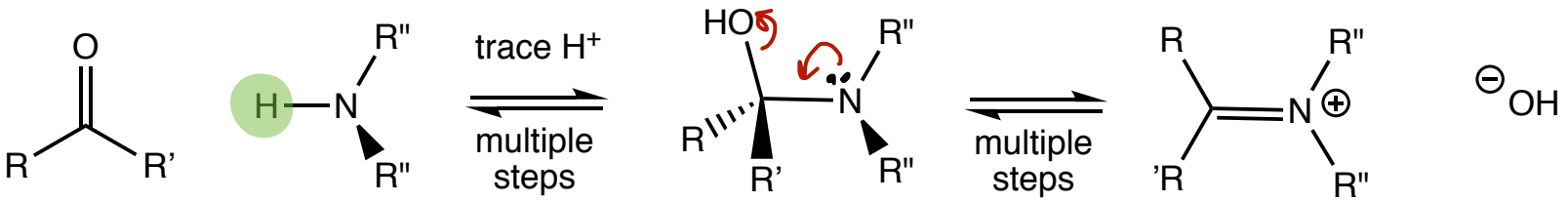
2° amine 2 C atoms directly bonded to N

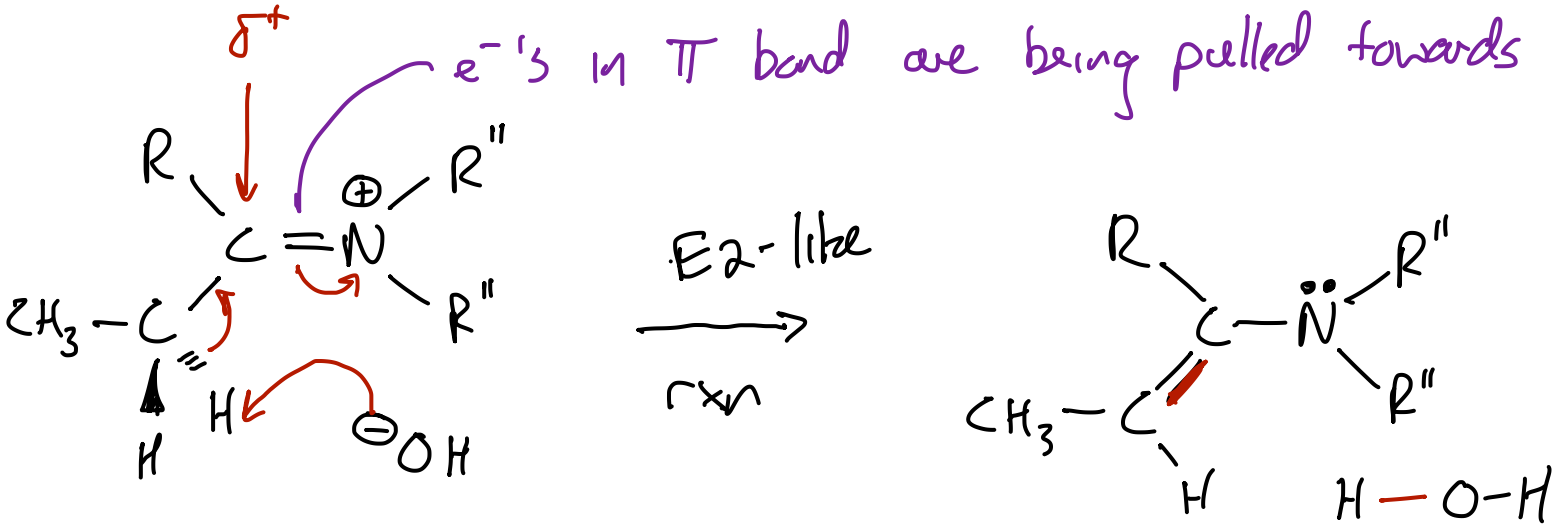


alkyl ammonium ion


O
R
R'
H
H
N
R
H:base
:base
H–O–H

aminol





alkene + amine on same C

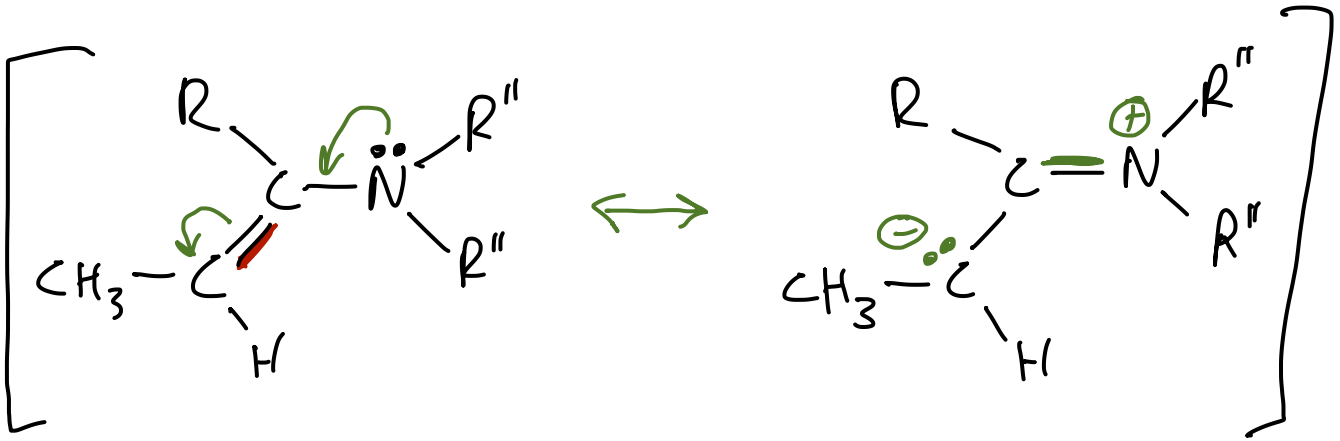
enamine

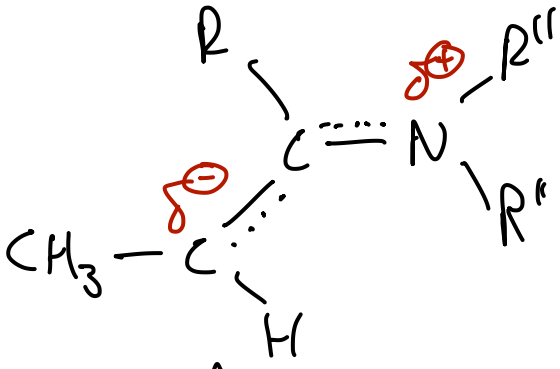
δ+ C atom is like an α-C of an alkyl halide

π bond of C to N db is like a LG

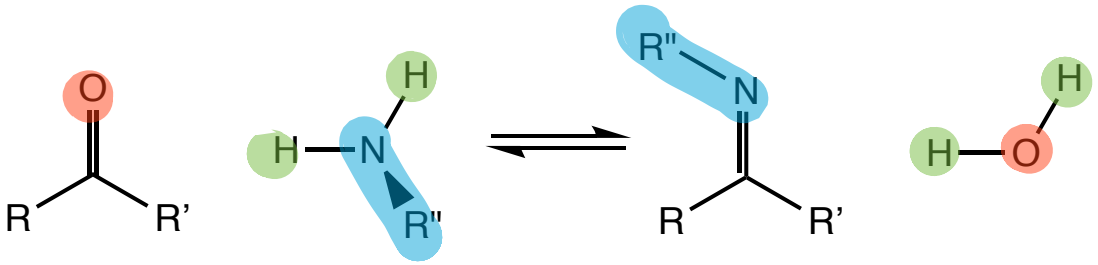
⁻OH is a strong base

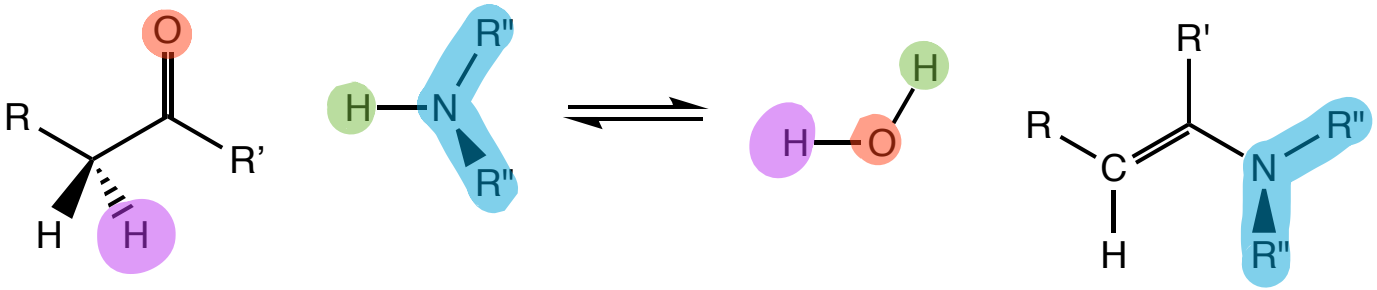
} E2



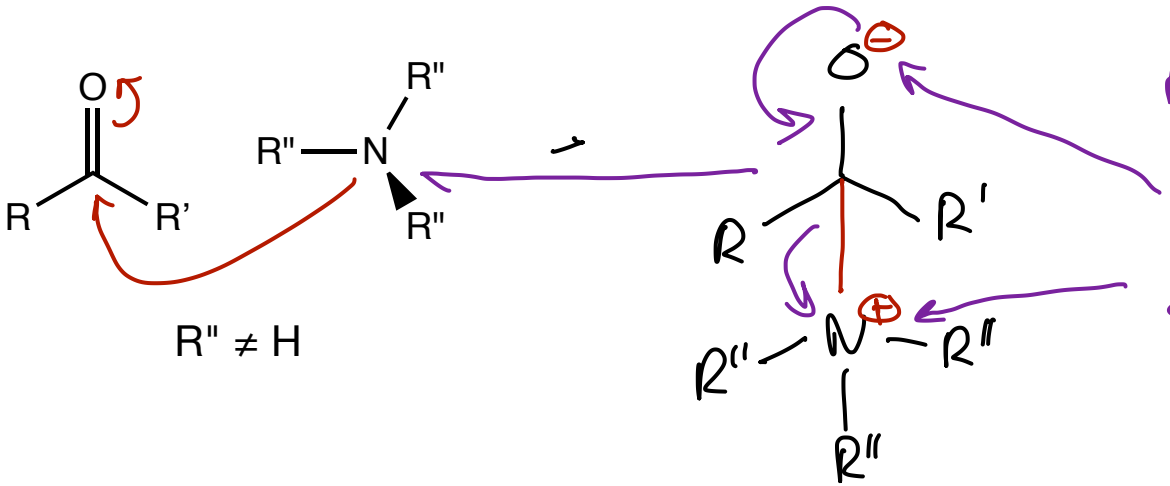


the C atom of an enamine is a nucleophile





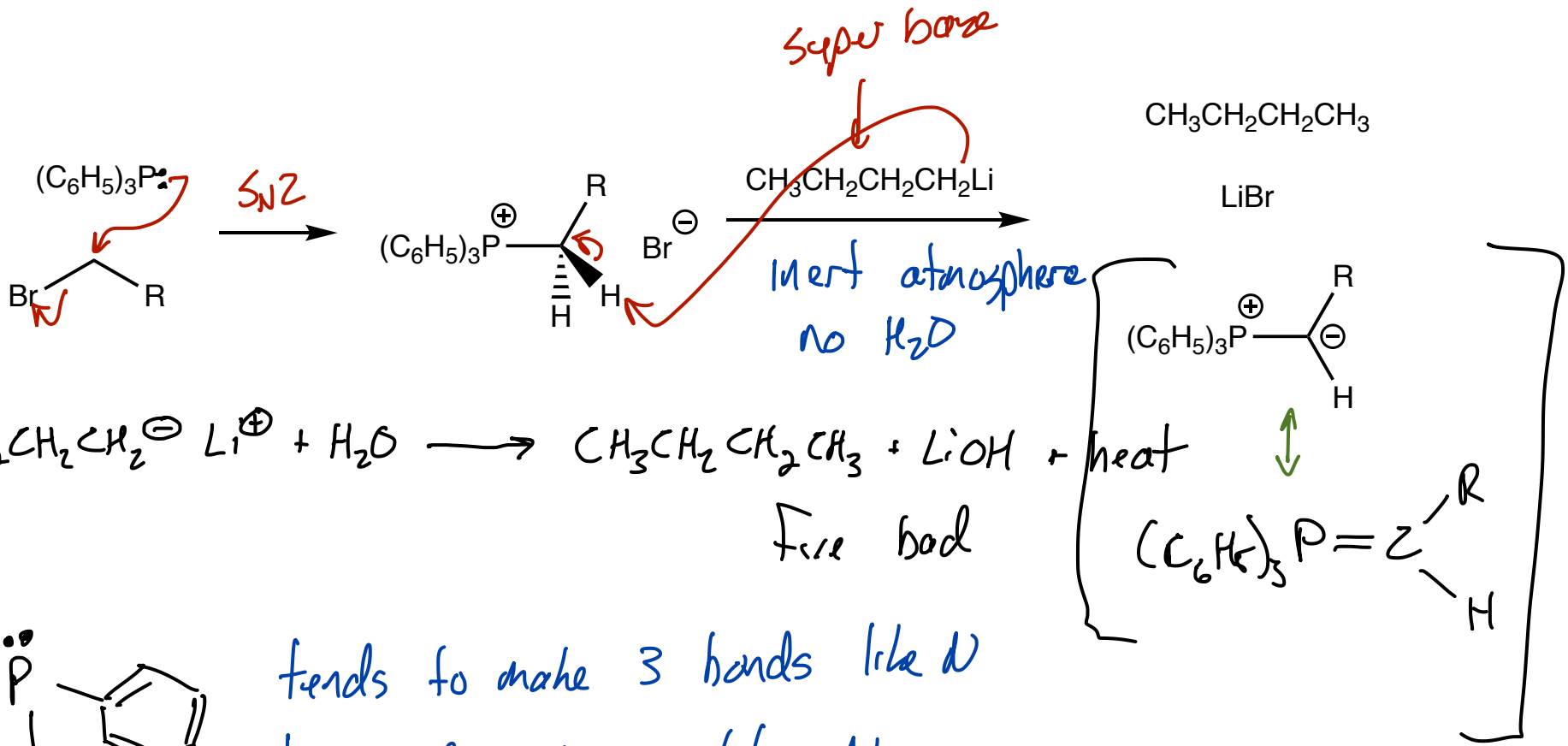
3° amines do not make stable compounds with C=O's

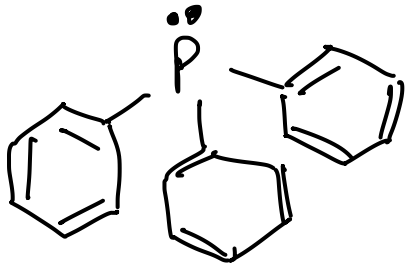


no H to lose!

cannot become an alcohol

cannot expose lp e⁻ to make 2nd. bond





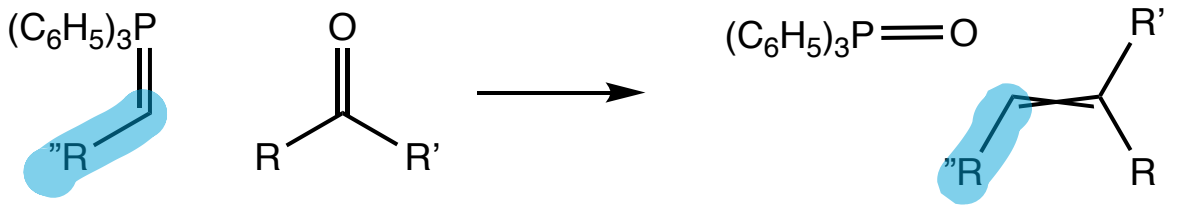
tends to make 3 bonds like N

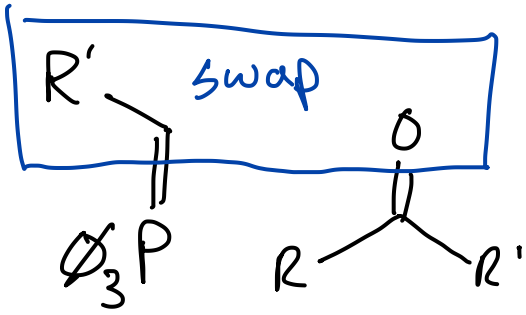
has lp e⁻'s like N

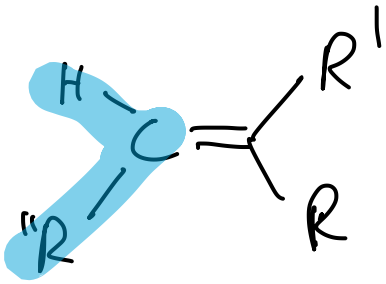
is nucleophilic like N

but is in the 3rd row

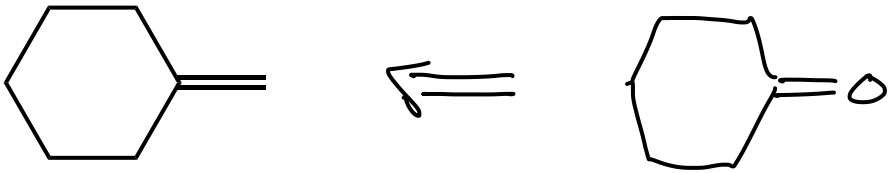
so it can accommodate more e⁻'s


(C6H5)3P
"R
O
R
R'
(C6H5)3P=O
R'
"R
R


R'
swap
O
Ø3P
R
R'


H
C
R'
"R
R

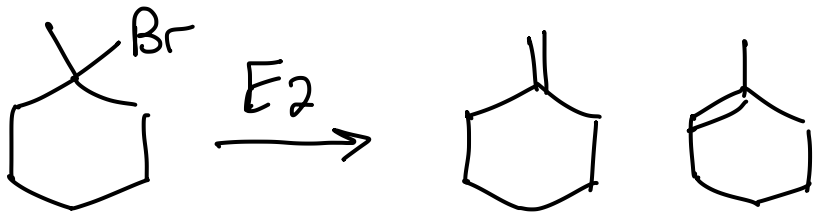
Retrosynthetic analysis: what can I make methylene cyclohexane from?



How can I make dbl?

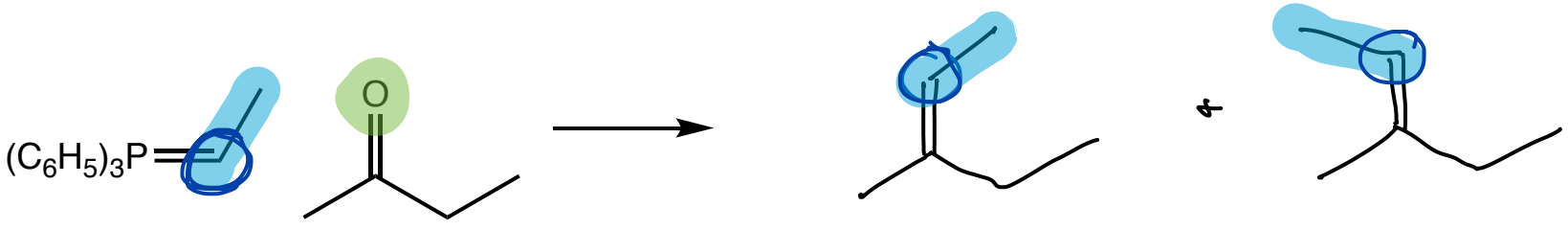
Elimination rxn

Wittig rxn



great for making terminal alkenes

harder to come by


$(C_6H_5)_3P$
O
+