

Q₁ - Q₁₀ discussed

Exercise-1: O-L

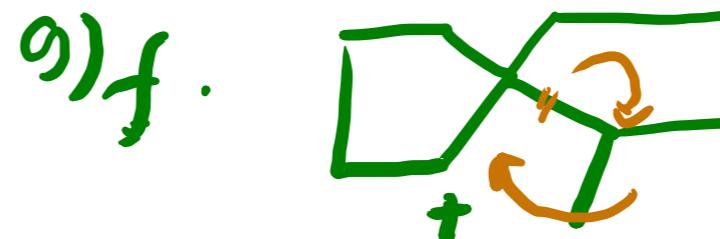


can't be formed as
intermediate.
(Bredt Rule)

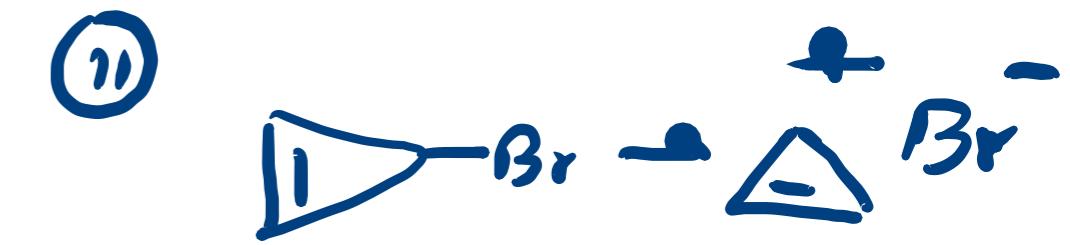


R^+ stability ↑ ; b.d.e ↓

$$\Delta H = \text{less +ve.}$$

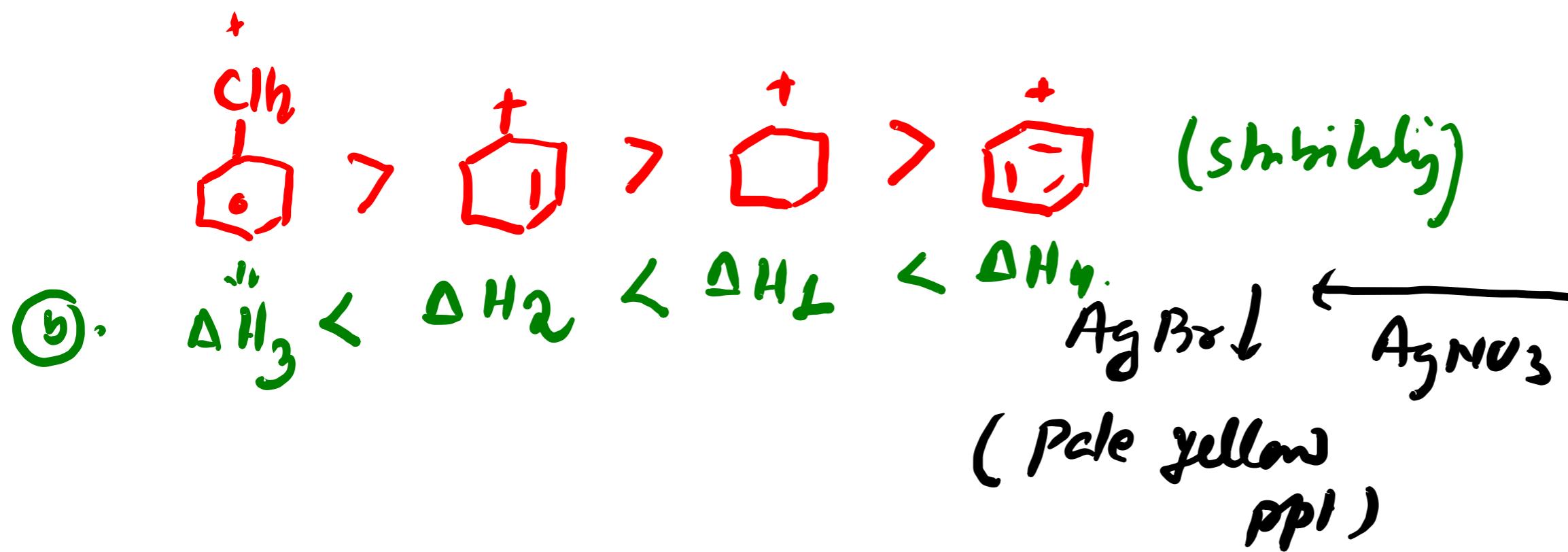


→ yes. It undergoes
ring expansion



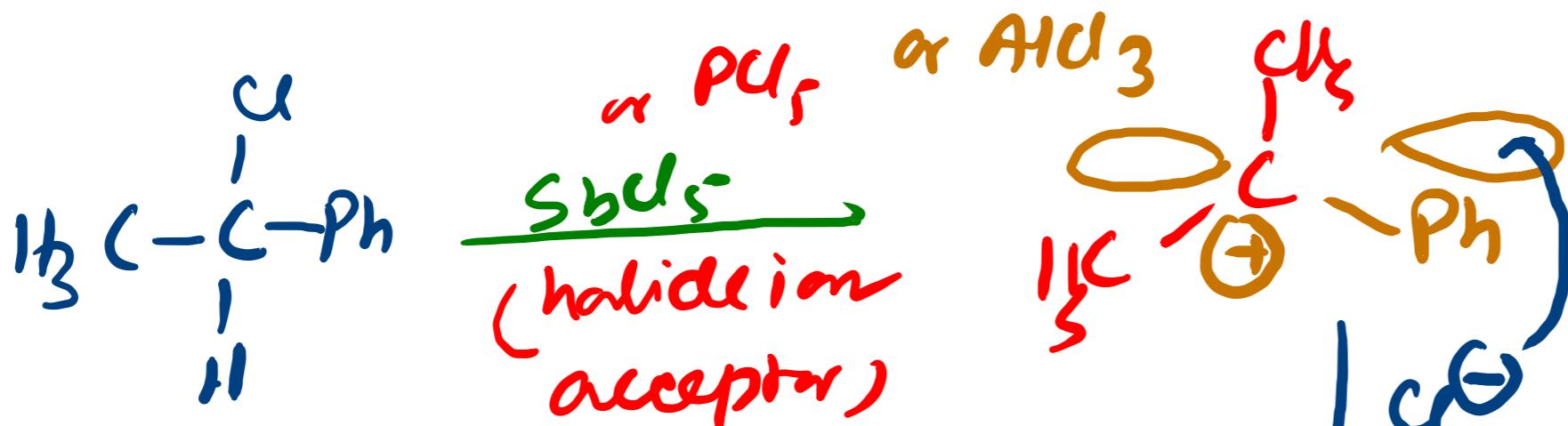
(Ion pair)
(Ionic)

dipole moment
is more.



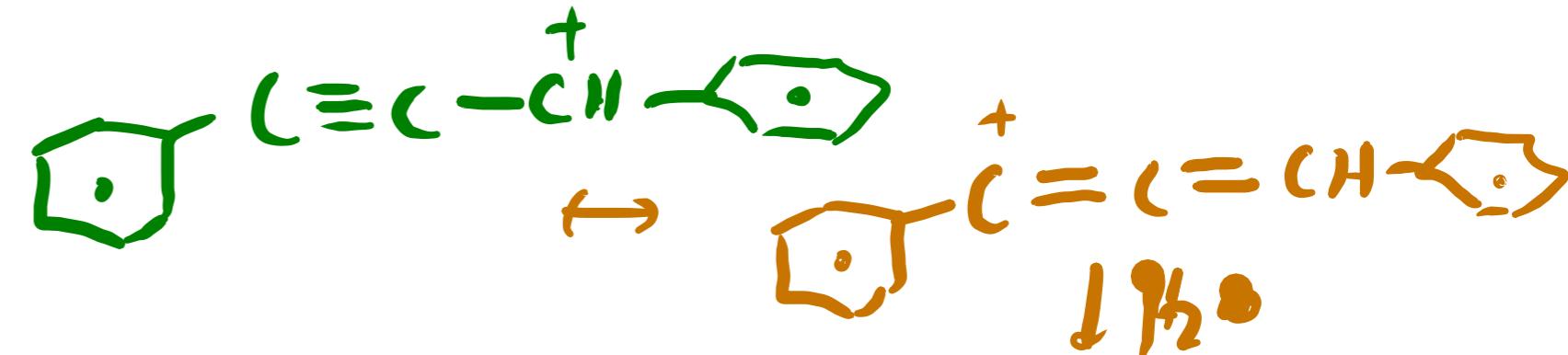
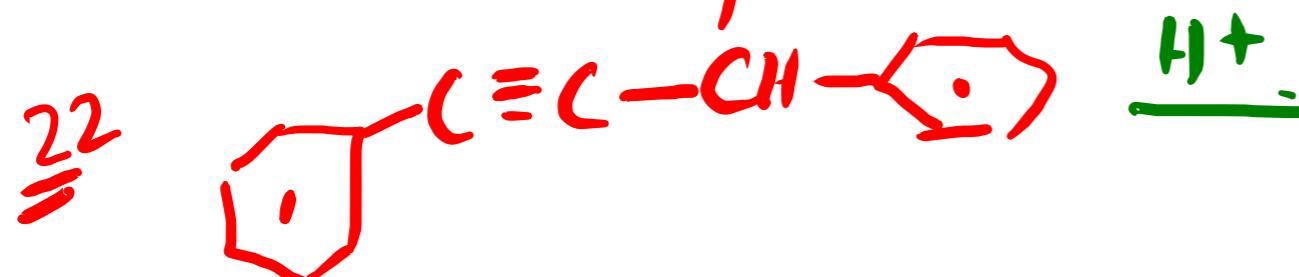
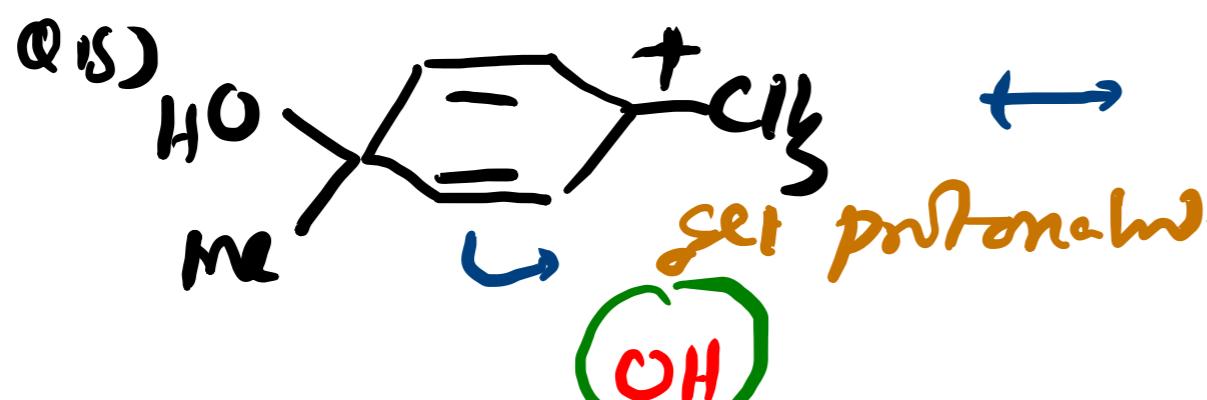
Solubility in $H_2O \uparrow$.

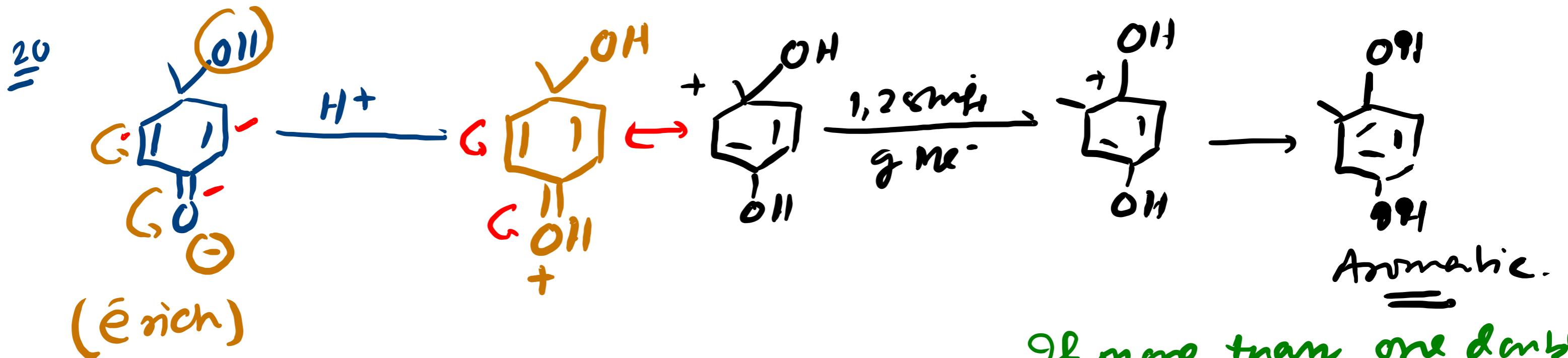
12



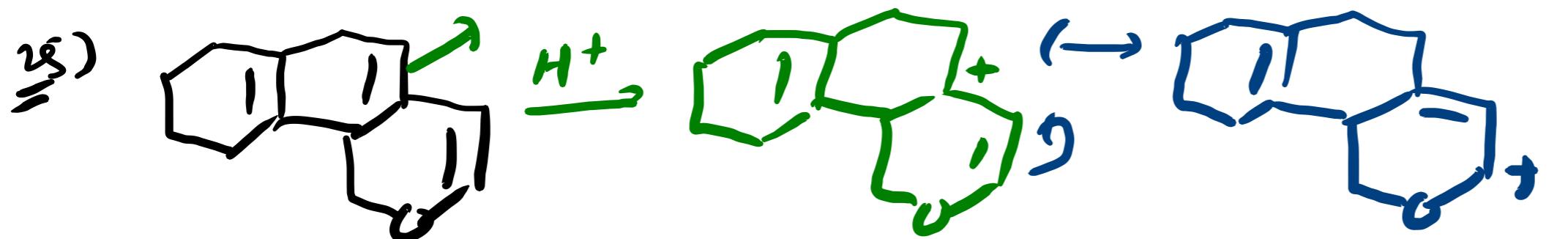
(*t*-chloro-1-phenyl
ethane)

\pm racemic mesoline.

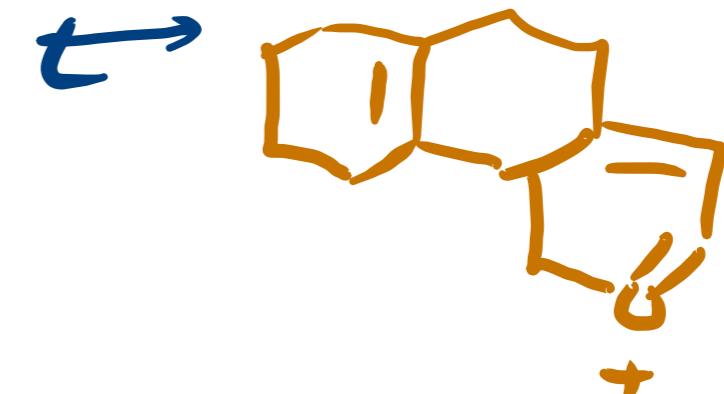




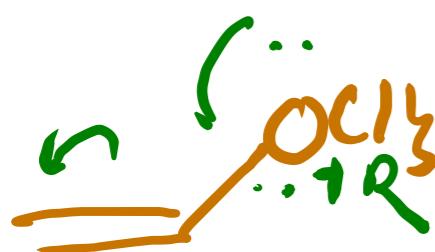
Dienone - Phenol rearrangement.



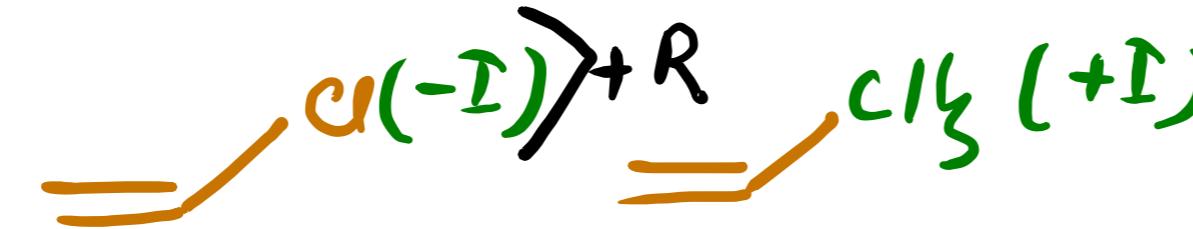
If more than one double bond is present than the double bond reacts so that C+ formed should be more stable.



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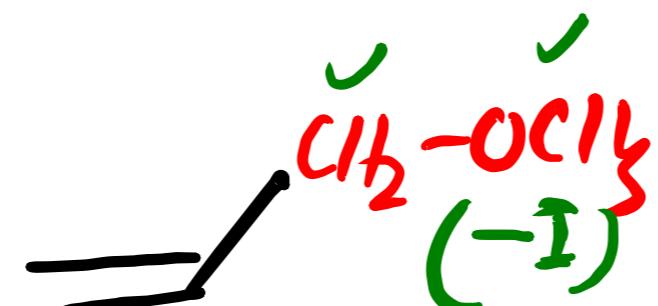
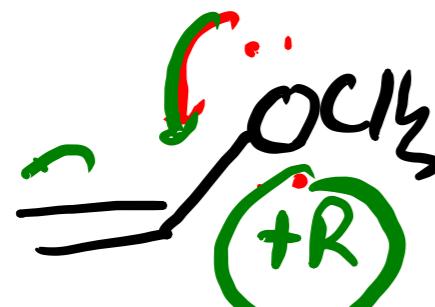
(e density ↑)



1 > 3 > 2

More is the e density of double bond.
reactivity towards electrophile. ↑.

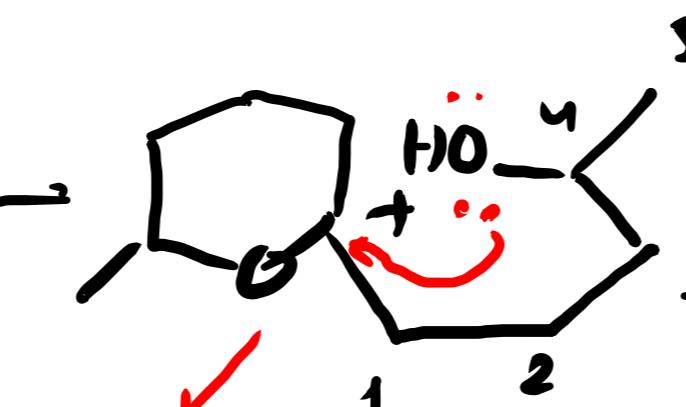
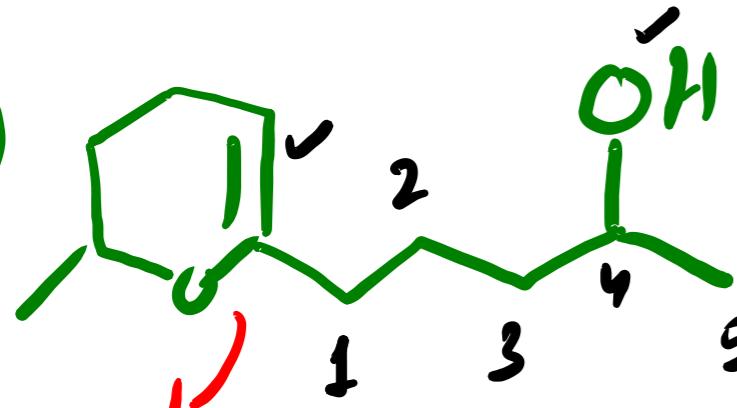
(30)



1 > 3 > 2

e density of double bond decrease.

32)



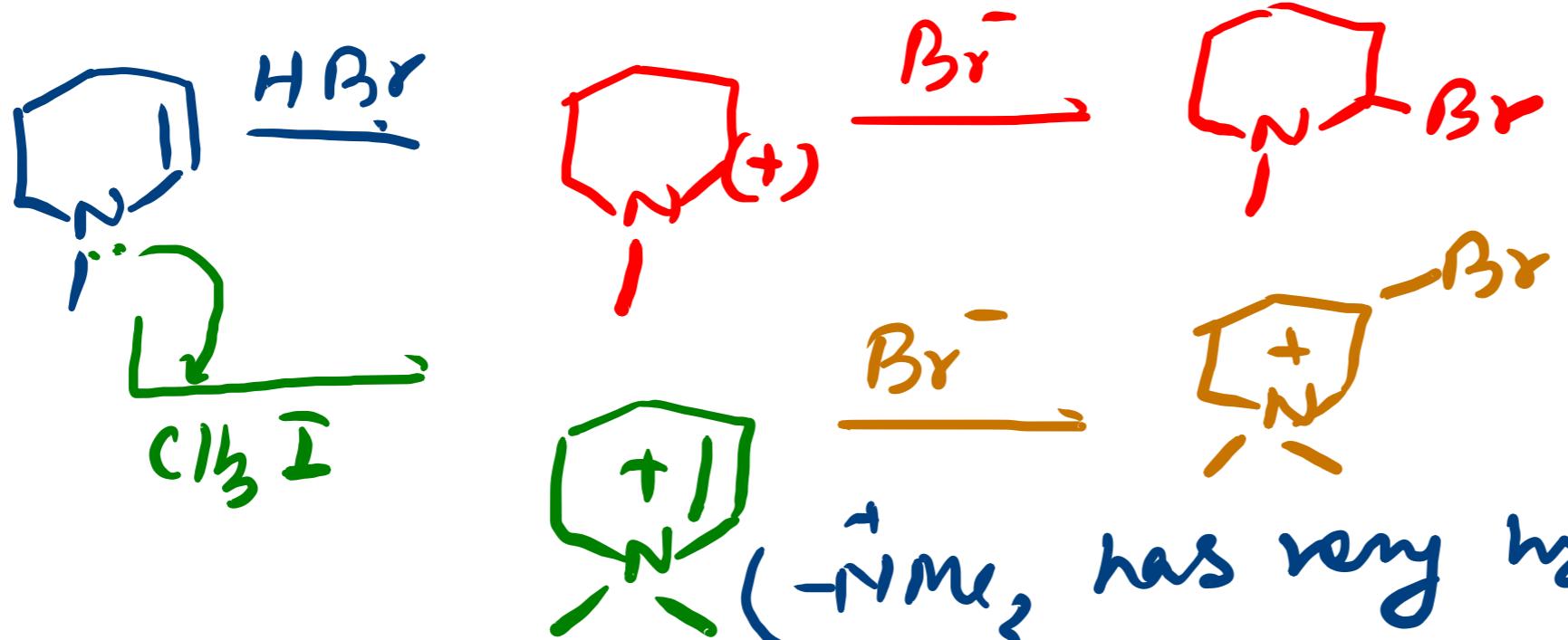
intra molecule
anular attack)



attacks takes place in
very stable
such a way (+ more stable).

intra reaction is
very fast.

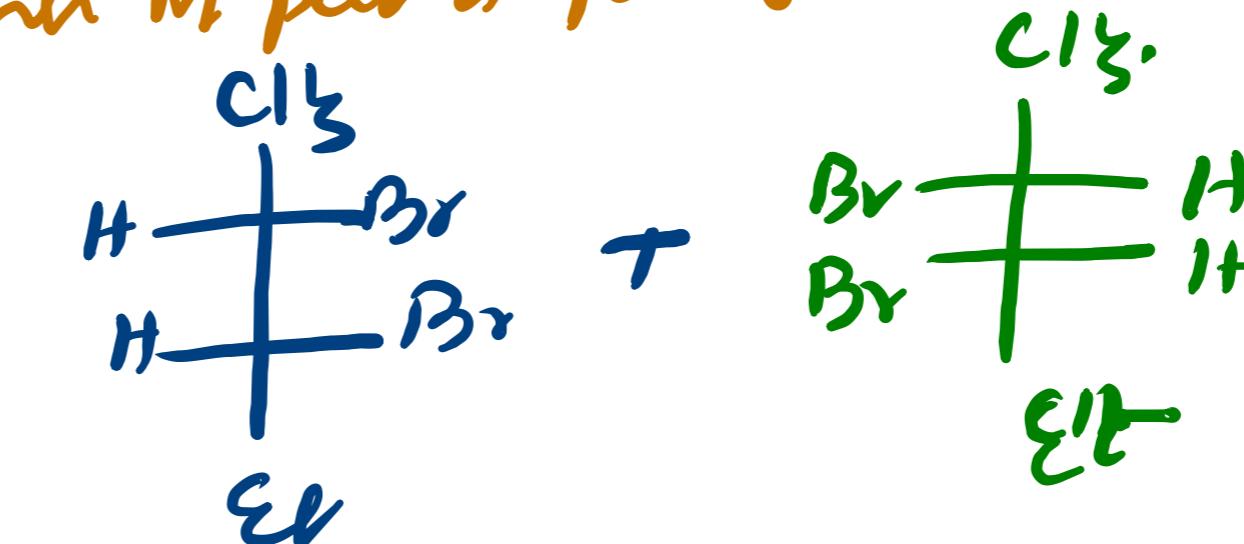
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CONT. TAE

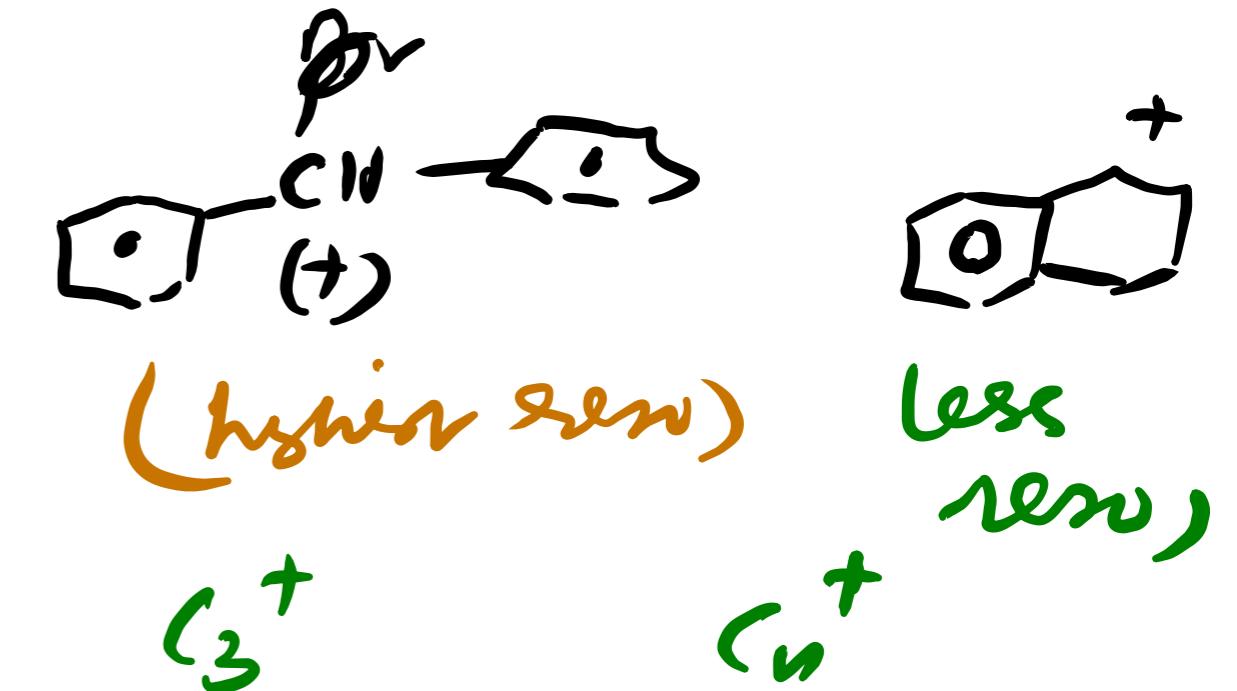
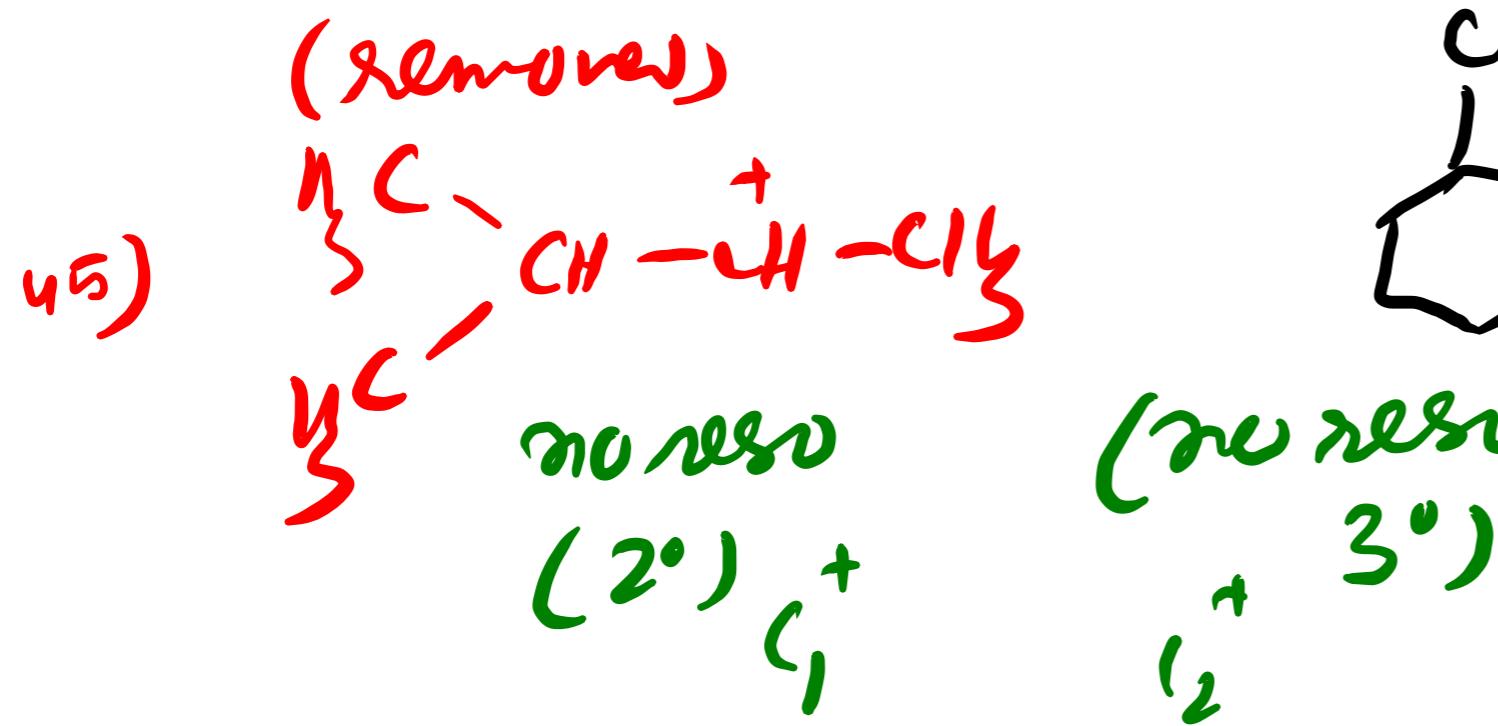
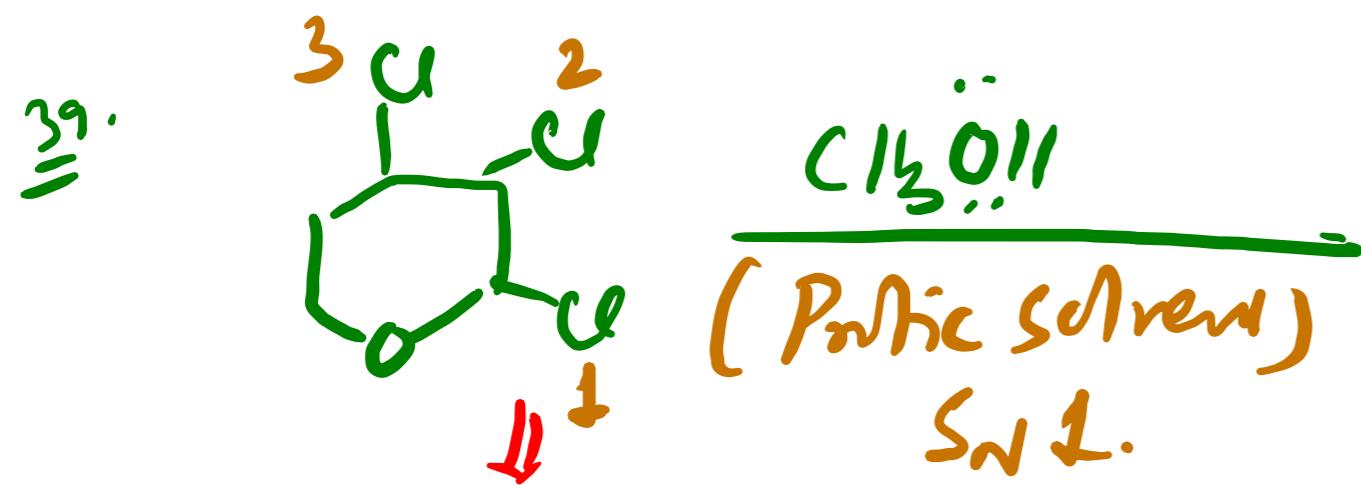
Here anti-M pdd is formed.

Trans cpd.

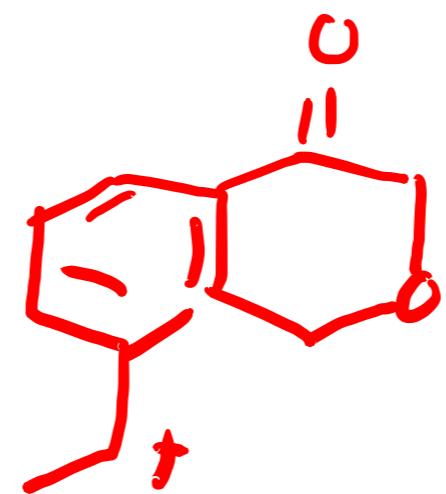
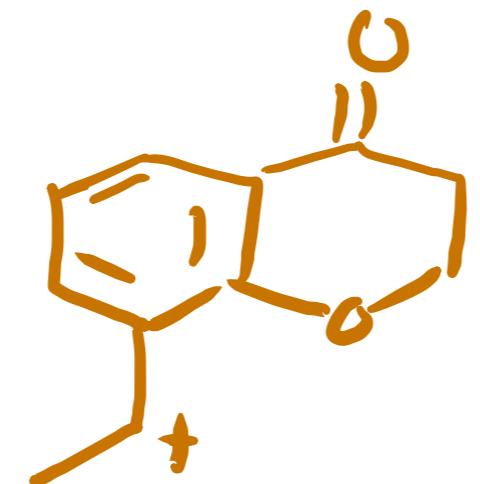
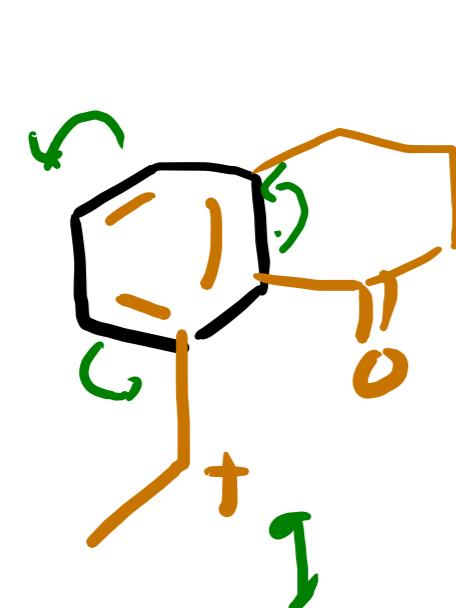
nonsymmetrical alkene.



Resolvable / racemic mixture.
mixtures of eryth.

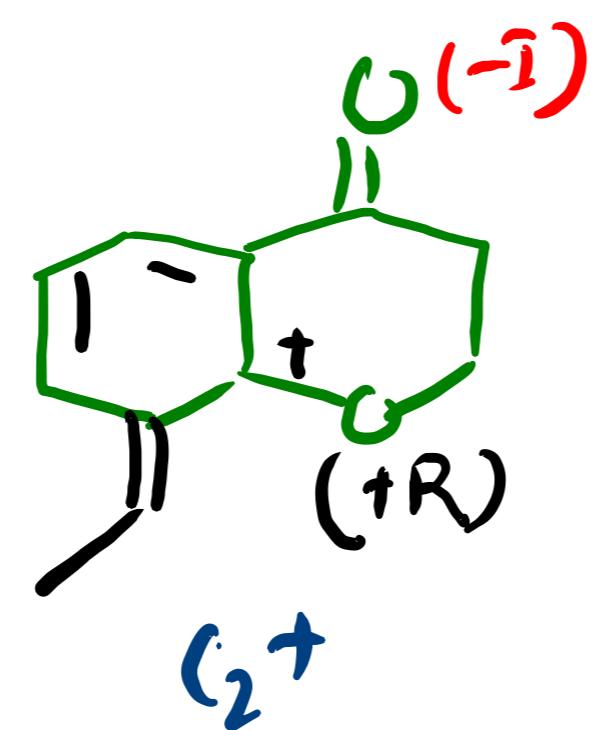
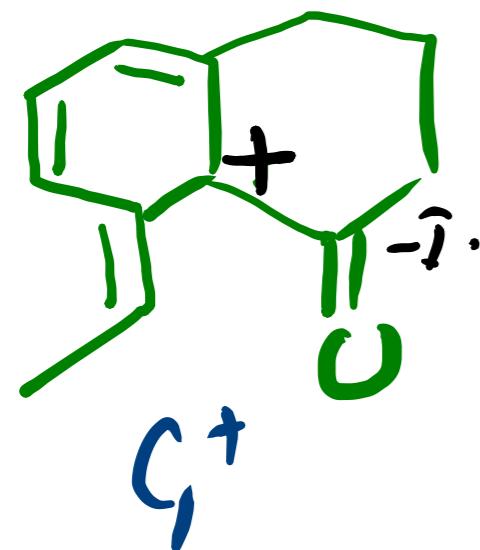


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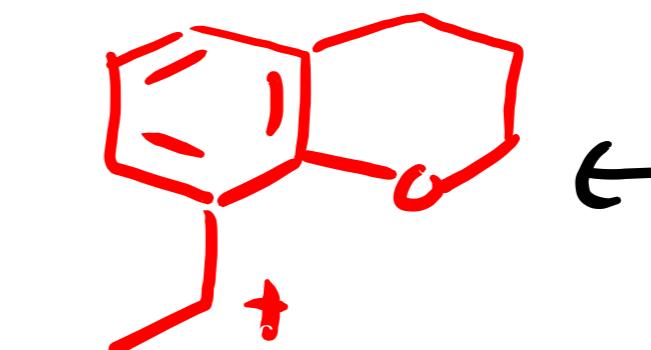


hydrogen
solvent
alcohololyse

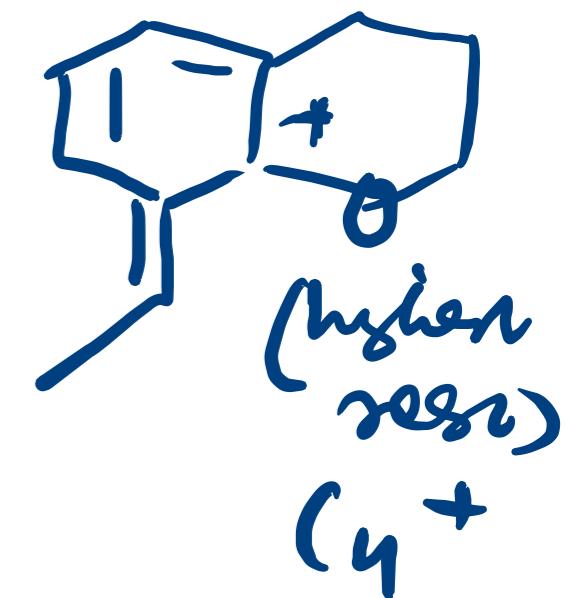
$\text{Sn} \approx 1.$



C_2^+

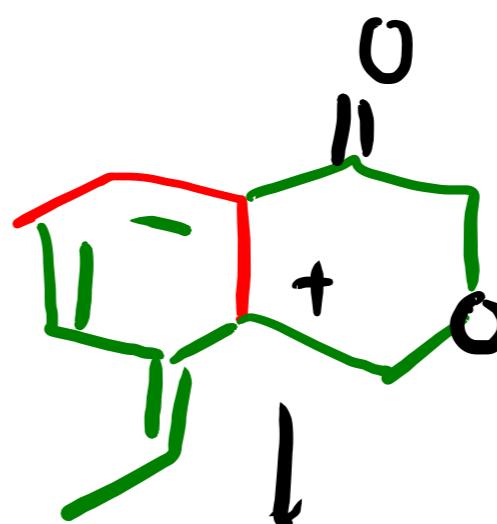


←



(higher
res.)

C_4^+

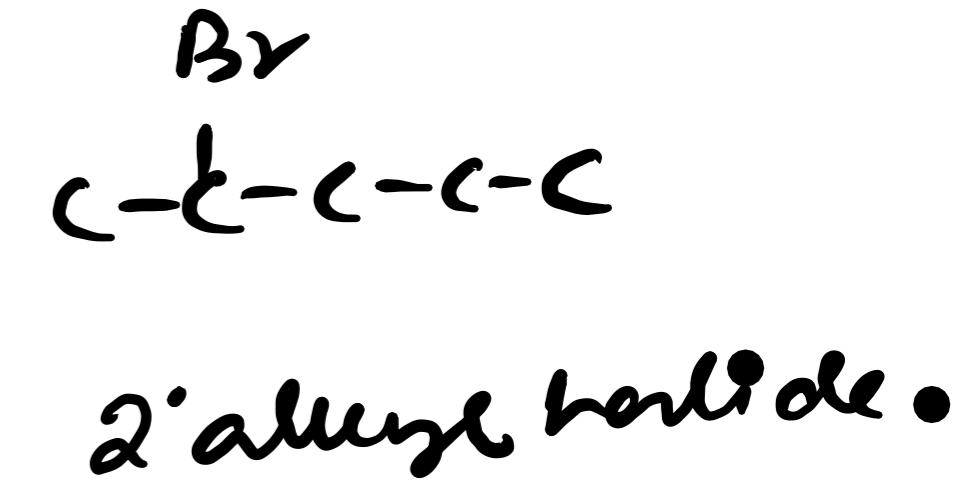
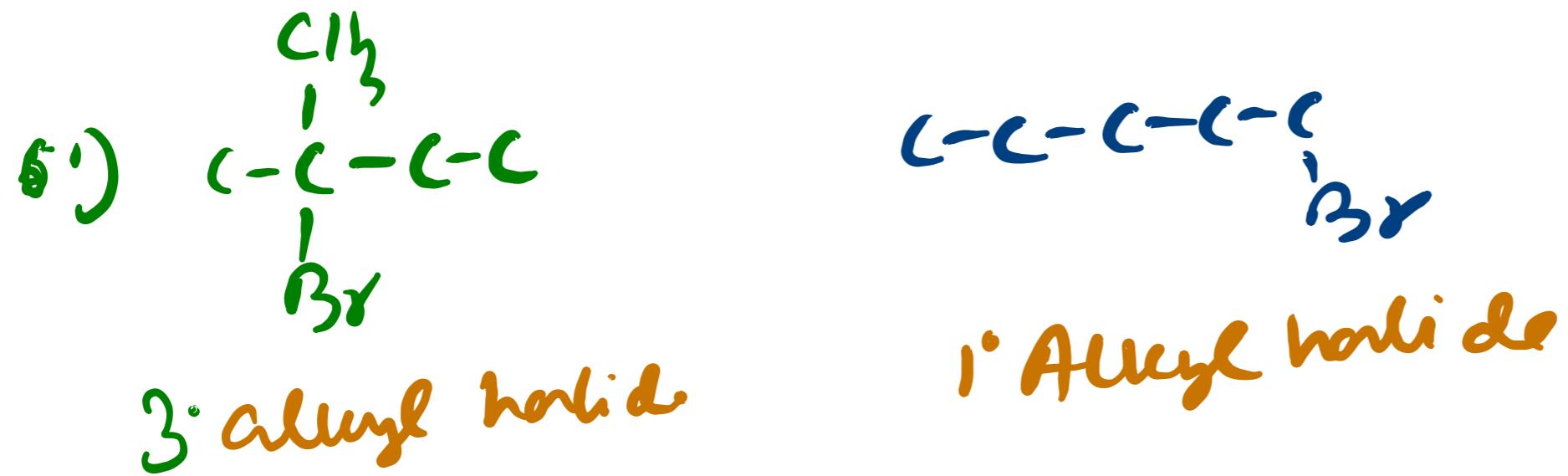
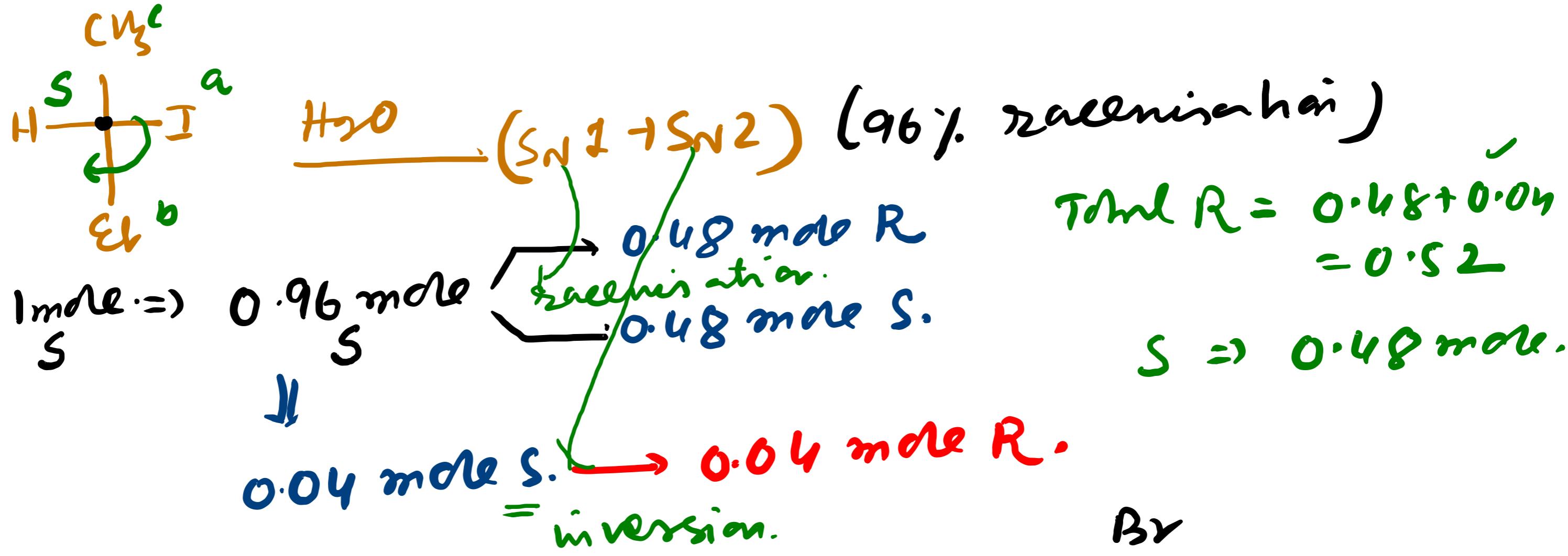


↓
+ Hyper.

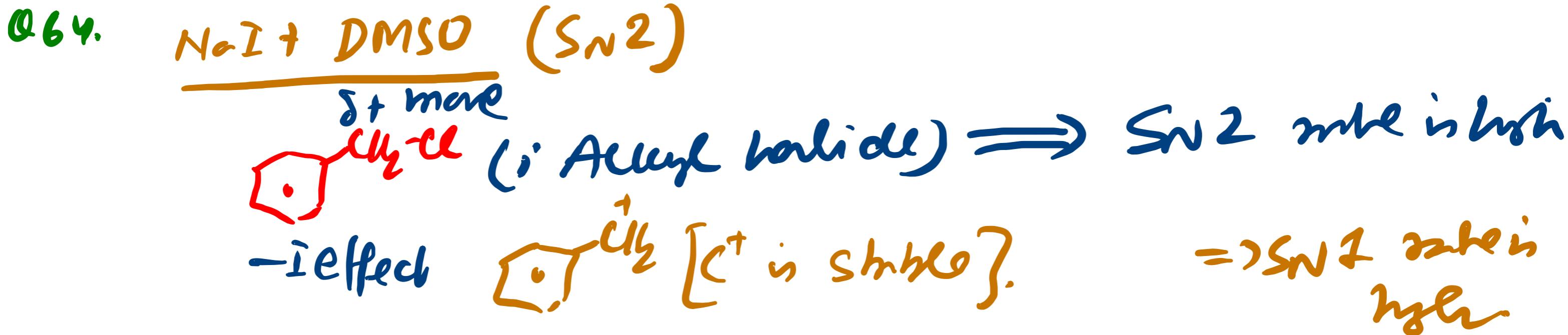
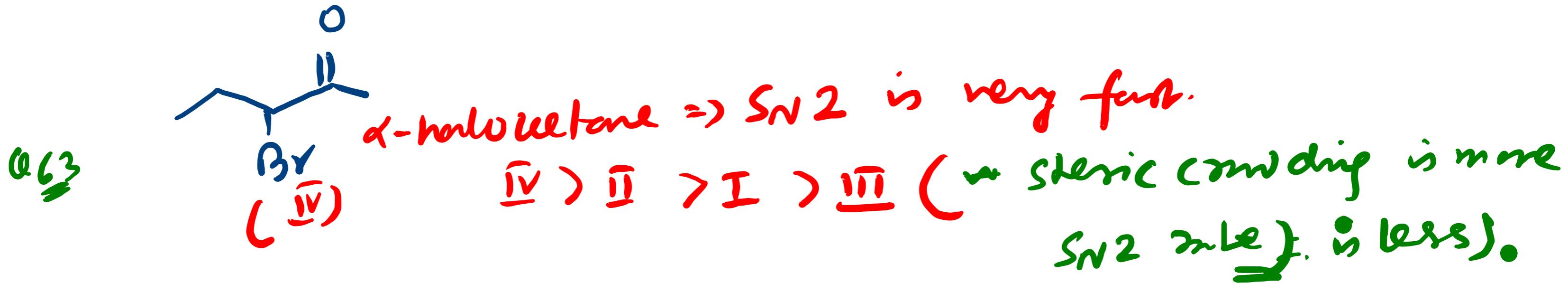
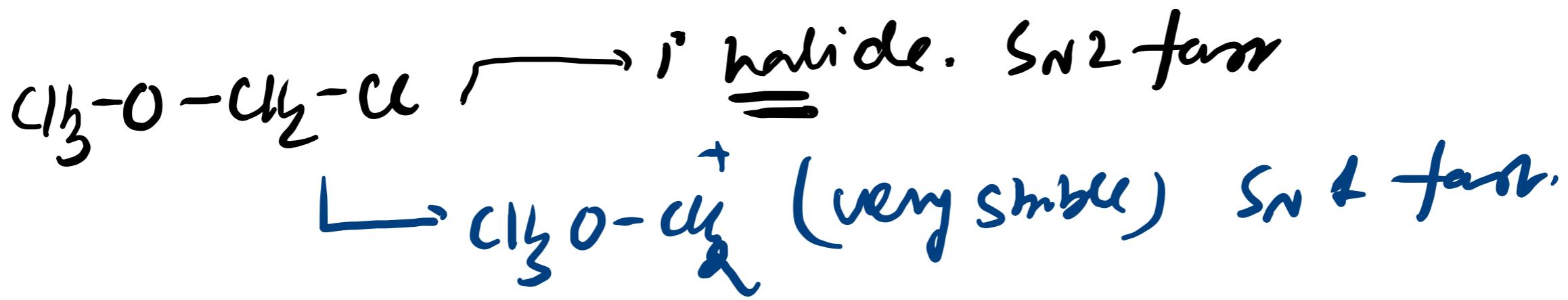
C_3^+

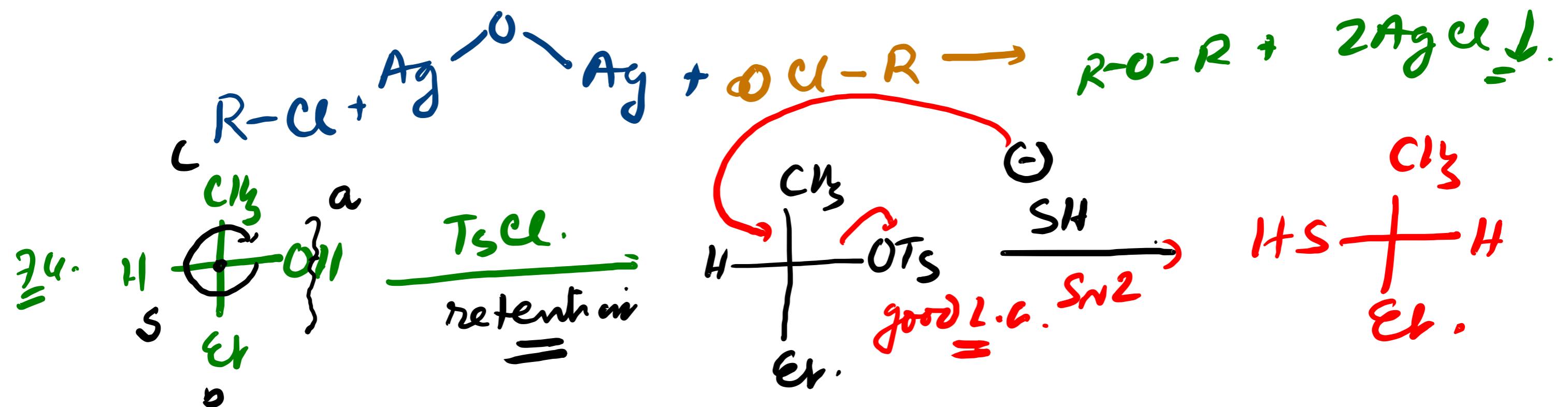
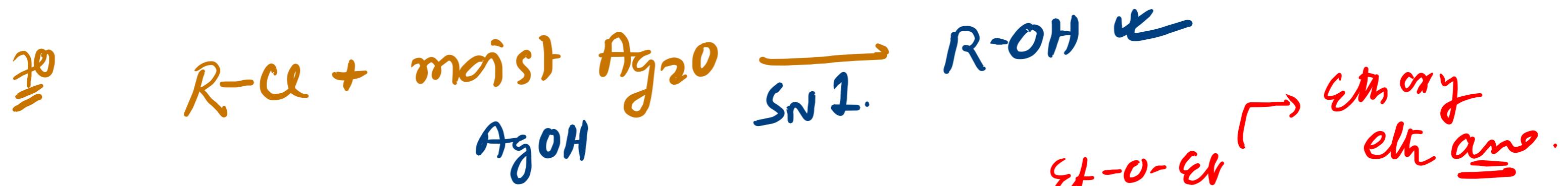
$C_4^+ > C_2^+ > C_3^+ > C_1^+.$

order of reactivity: $4 > 2 > 3 > 1.$ (D) α



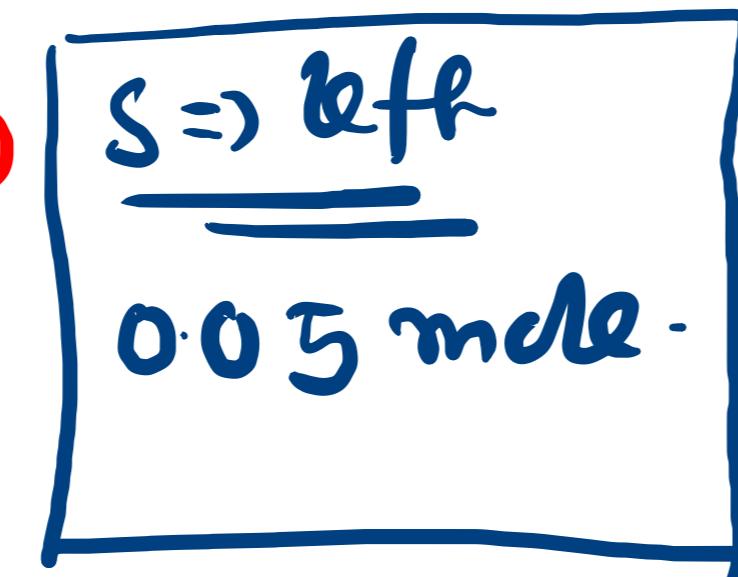
$\therefore \text{S}_{\text{N}}2:$ $\text{II} > \text{III} > \text{I}.$





S-Alcohol.

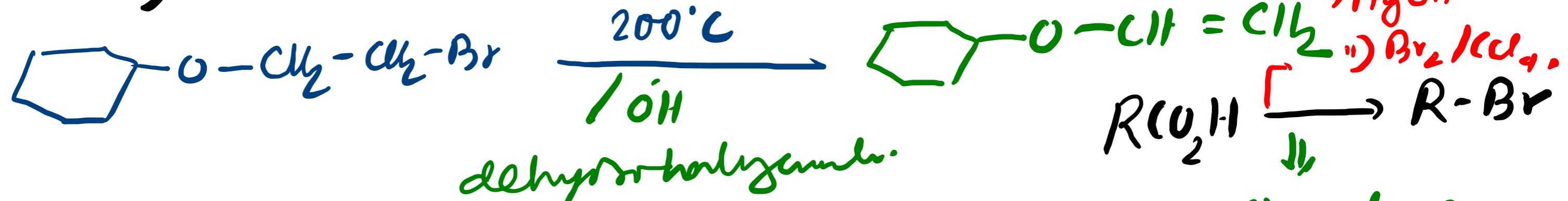
1 mole (90%)



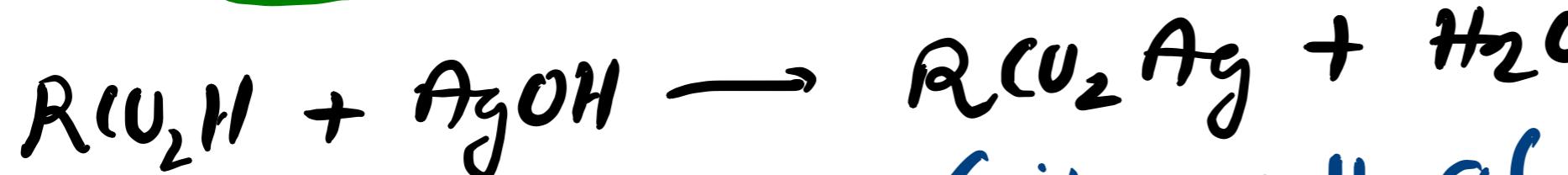
$90\% \text{ S}_{\text{N}}2 \Rightarrow$
 $0.9 \text{ moles S} \Rightarrow 0.9 \text{ moles R}$

$0.1 \text{ moles S} \xrightarrow{\text{S}_{\text{N}}1} \boxed{\begin{array}{l} 0.05 \text{ mole R.} \\ 0.05 \text{ mole S.} \end{array}}$

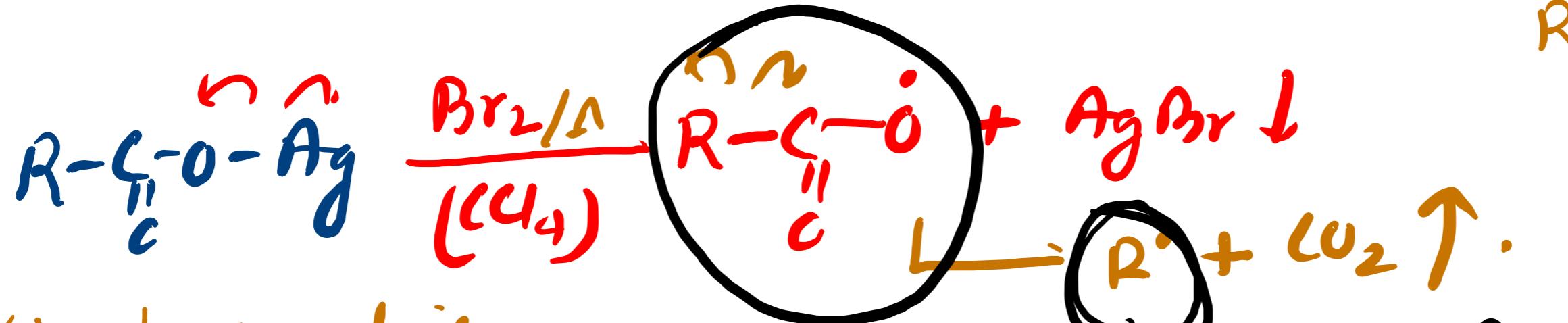
Br[•] I[•] (stable) ; (Unreactive)



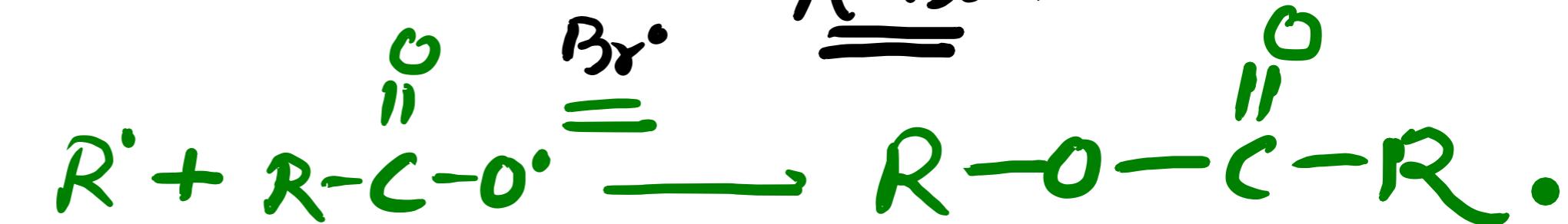
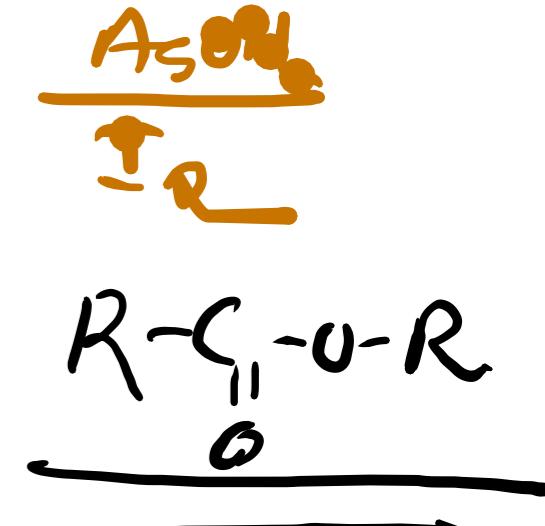
85) Hunsicker Reachi (for IIT- Advance) $\text{CO}_2 \uparrow +$ reachi Step down



(silver salt of carboxylic acid)



High temperature
favours free radical
mechanism.

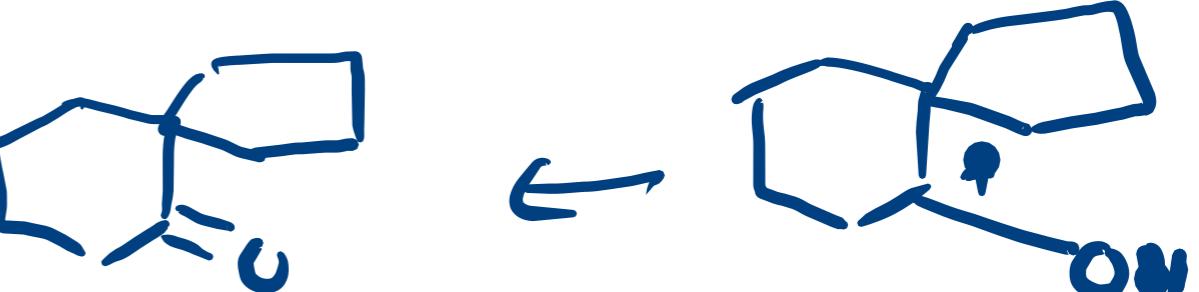
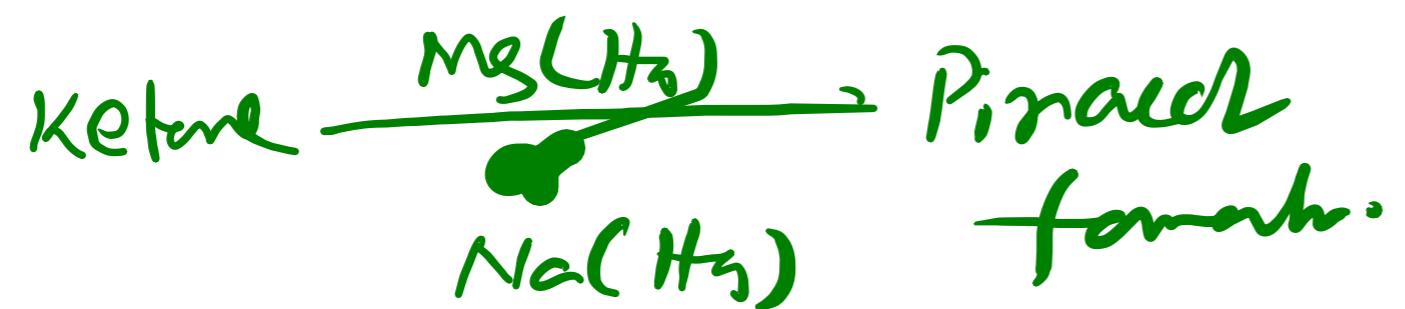
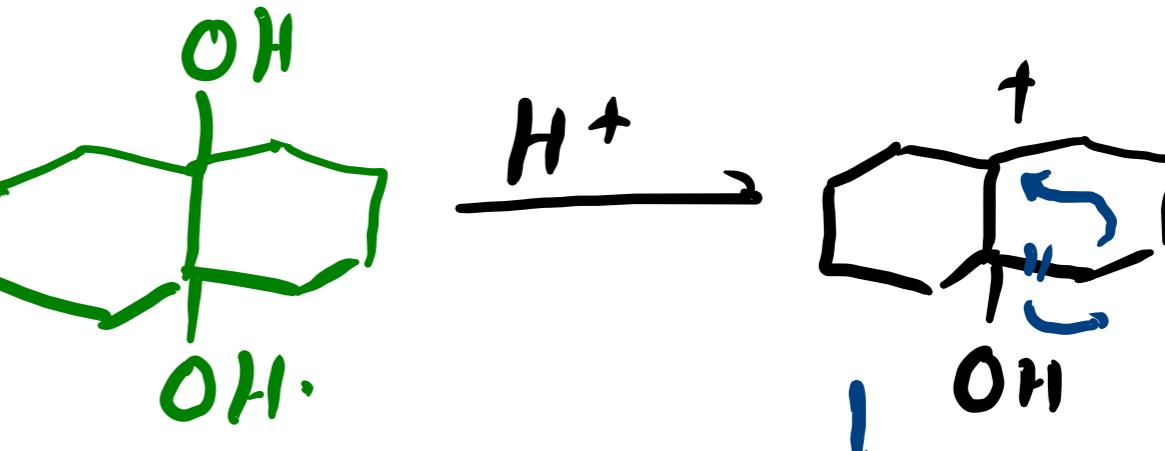
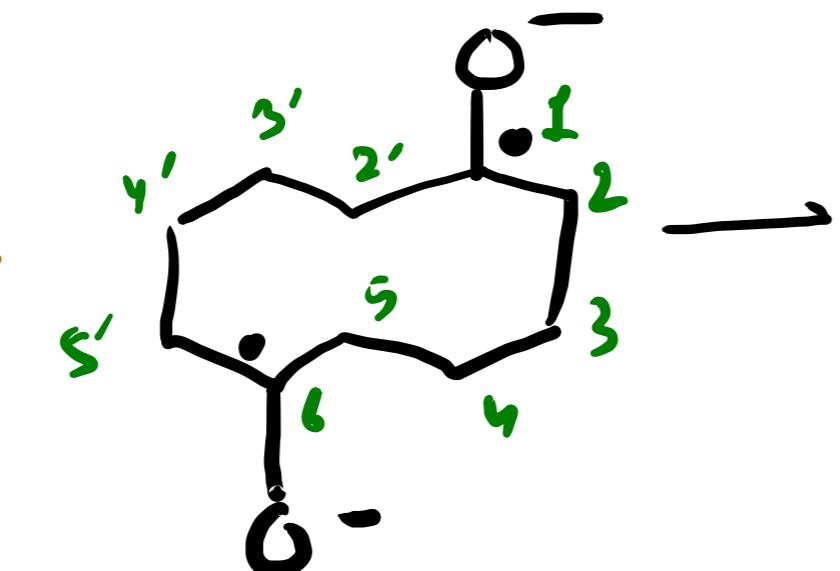
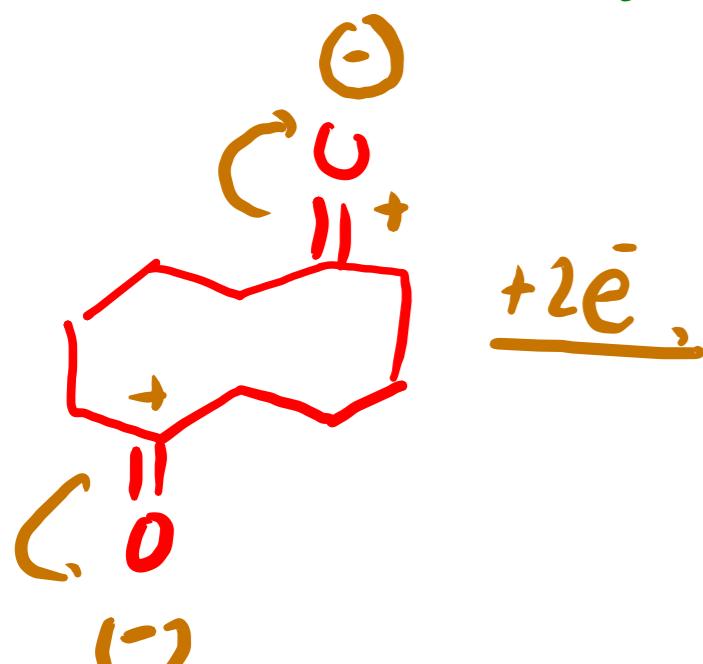
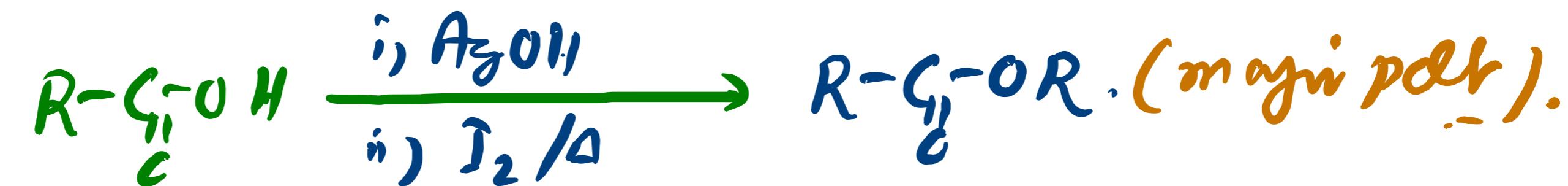


$Mg \rightarrow Mg^{2+} + 2e^-$

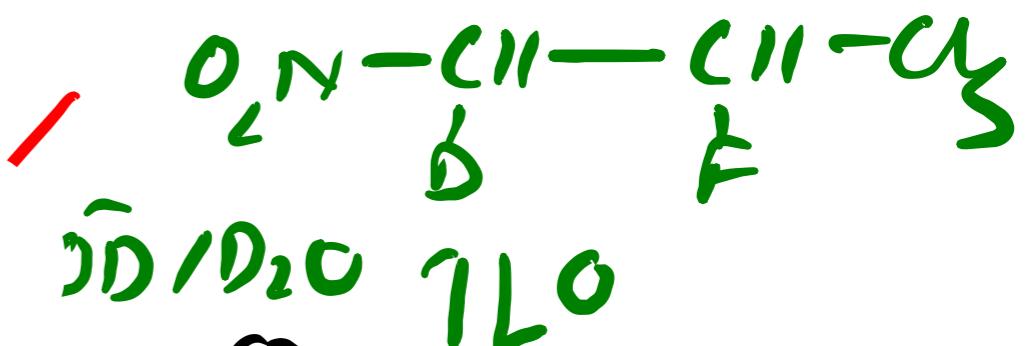
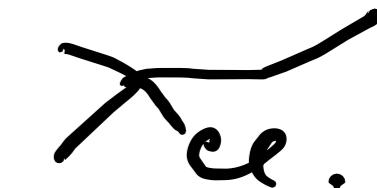
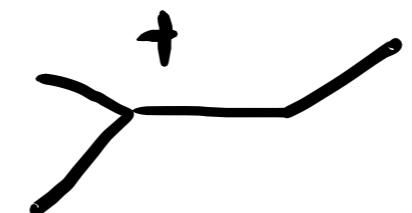
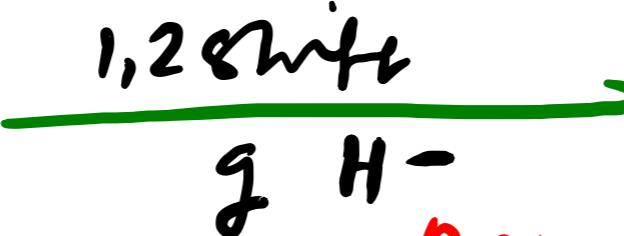
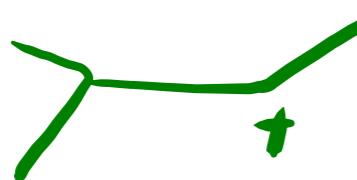
Hunsdicker Reaktion:



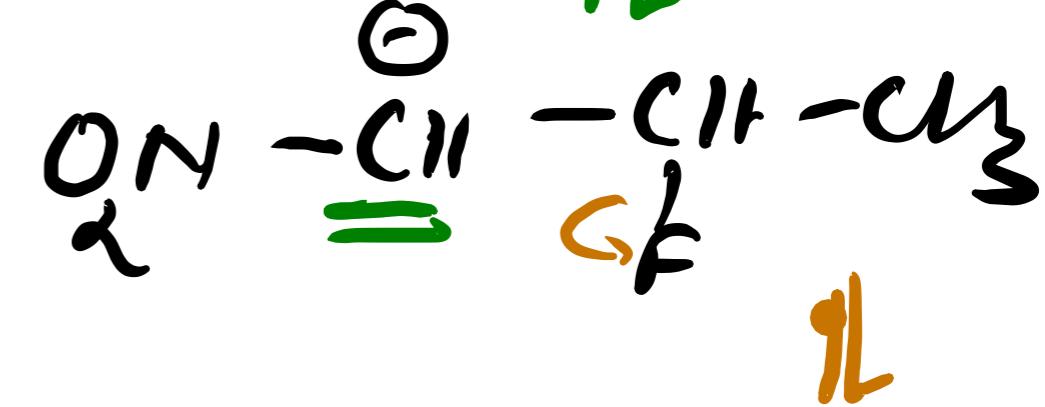
→ Step down because
carbon is
reduced.



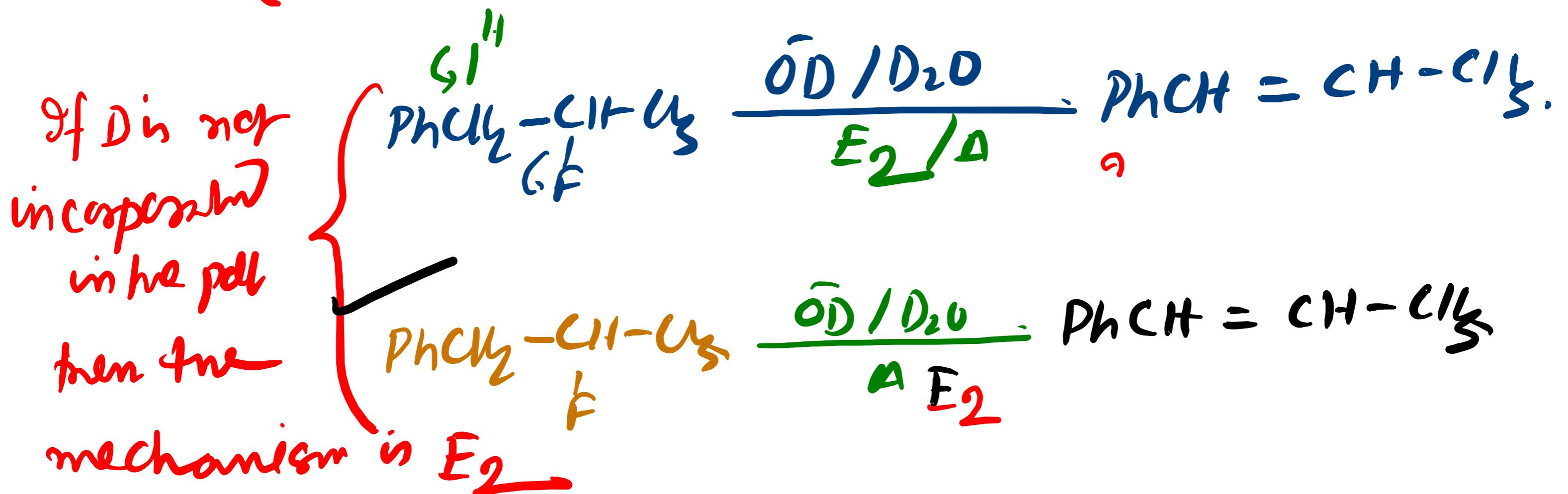
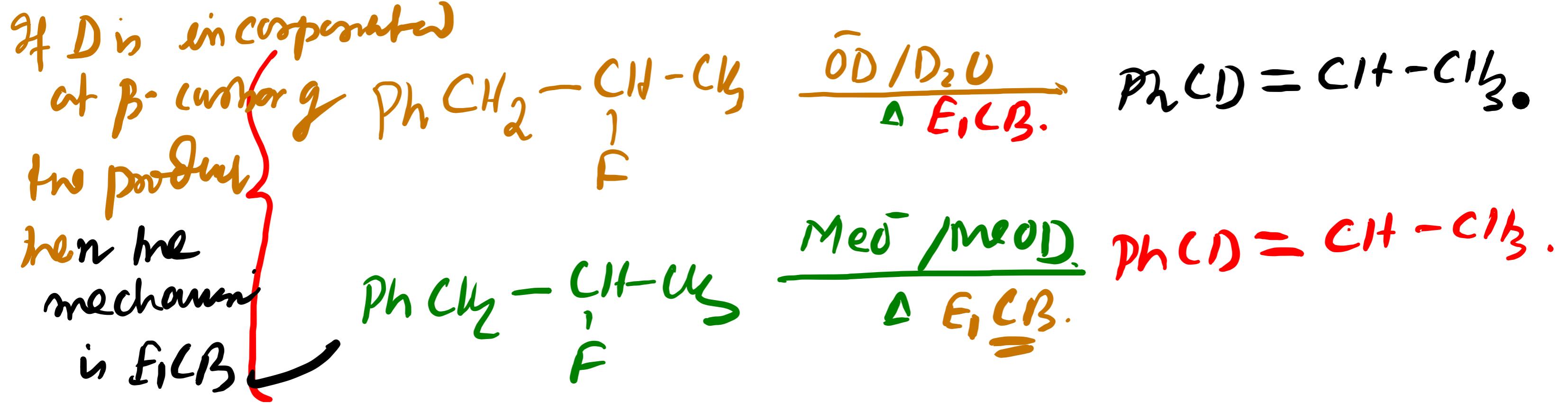
100



E₁CB:



Using $\text{OD}/\text{D}_2\text{O}$, if pdt has \textcircled{D} at β -Position $\text{ON}-\text{CH}=\text{C}\equiv\text{CH}_2$.
then the mechanism is always E₁CB.



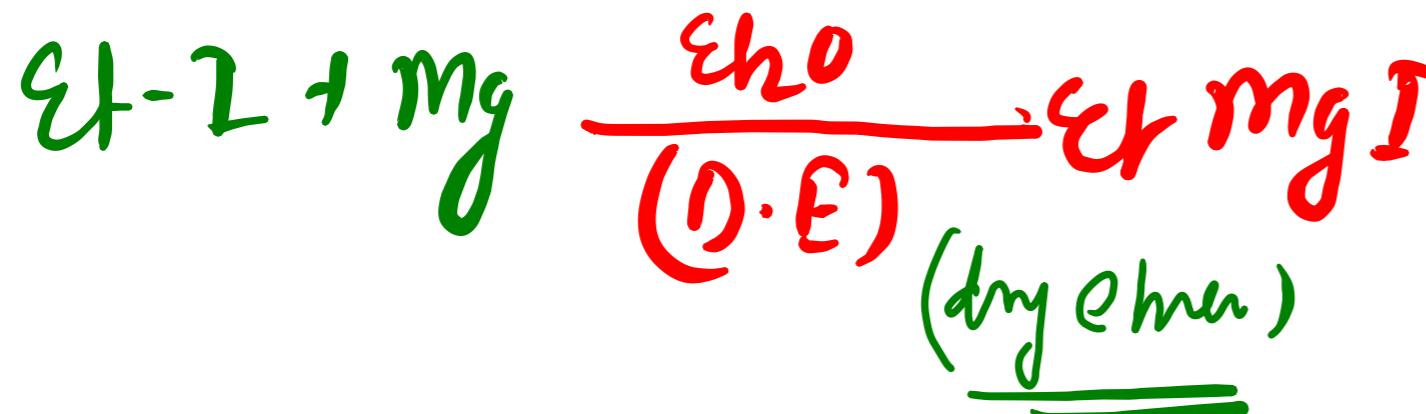
: Grignard Reagent: alkyl magnesium com. halids.

$\text{C}_3\text{H}_5\text{C}-\text{MgCl}$.

c-Methyl Urethane

organometallic cpd.

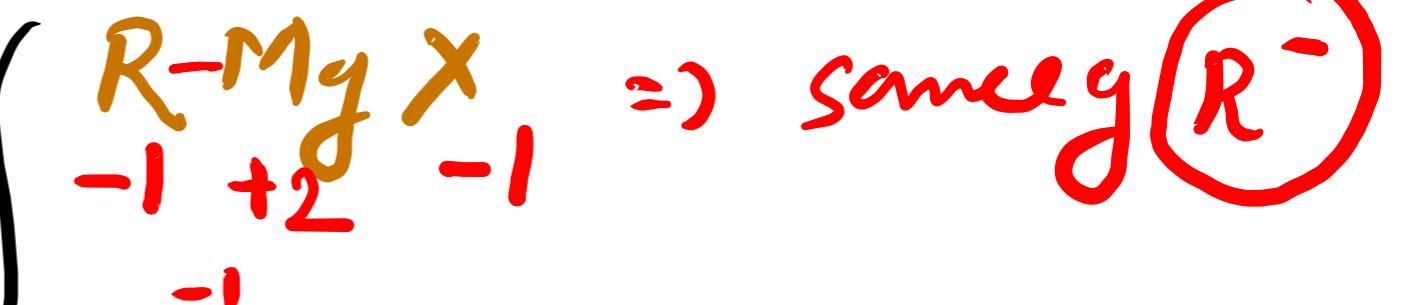
sourceg carbanion.



Sources

R-

All
are
the



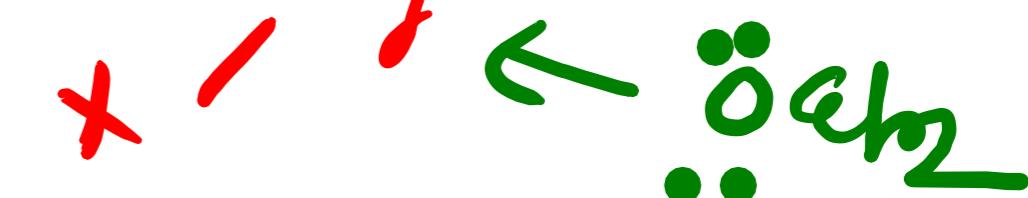
R-di (alkyl dihalide)

-1 R_2Cd . (diakylcadmium)

-1 R_2Zn .

-1 +1 +1

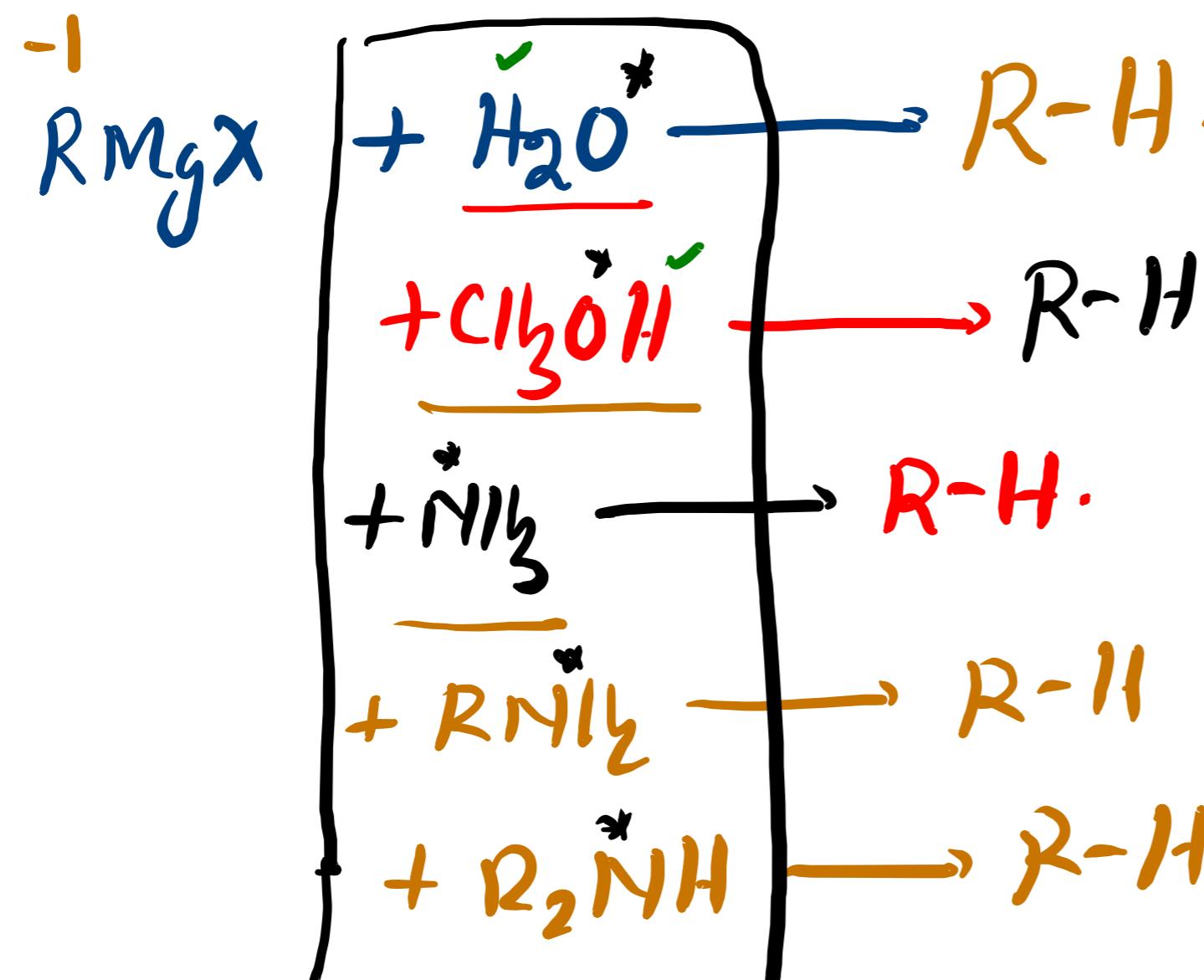
-1, R_2CuLi . (Gilman's reagent)



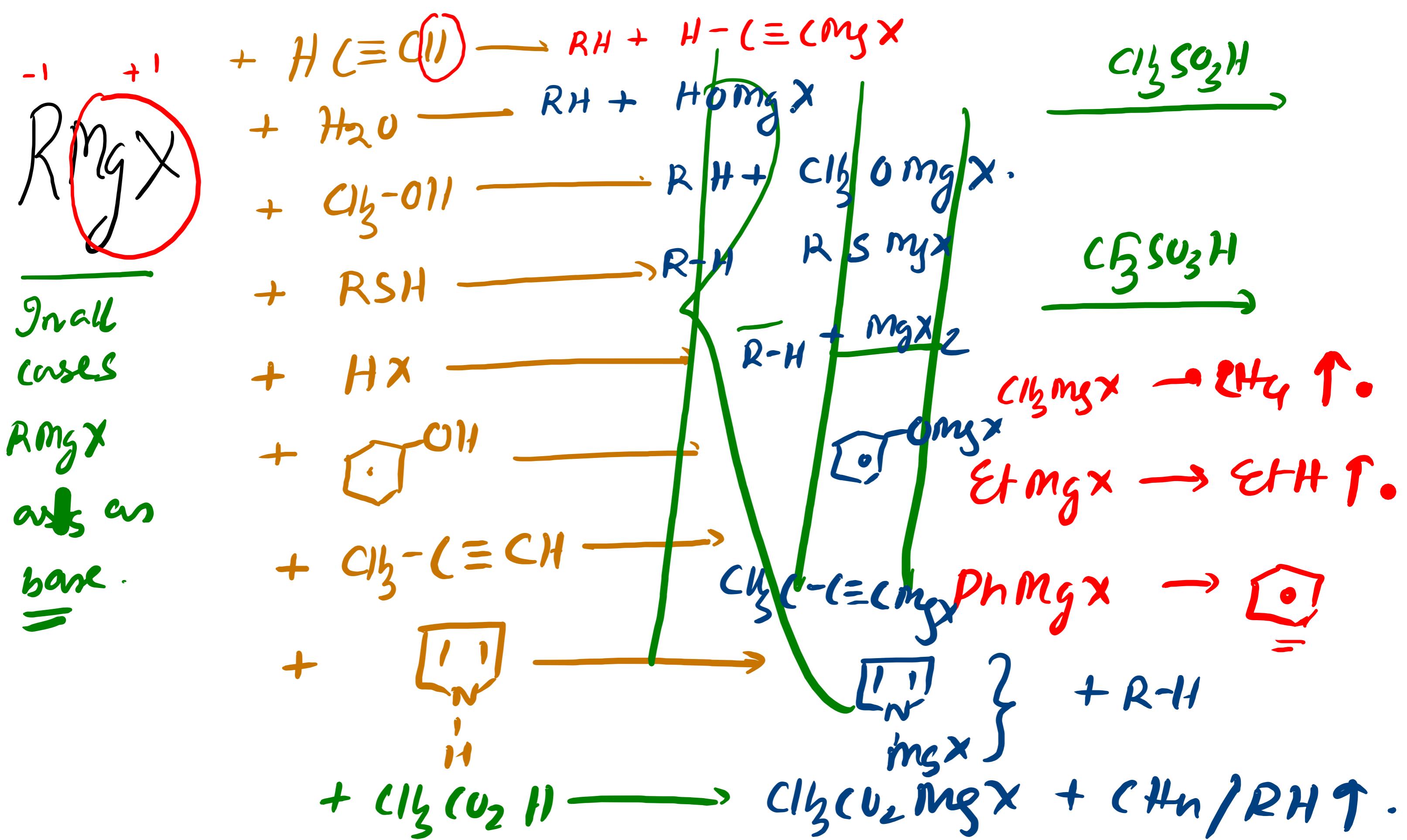
RMgX (extremely reactive) [Any organic cpd can be prepared from Grignard reagent].

same of RO^- \rightarrow Base. (Shy) Nucleophile (Shy). Yield g pdt is high.

As RMgX is very reactive it can take up H^+ to form cpds.

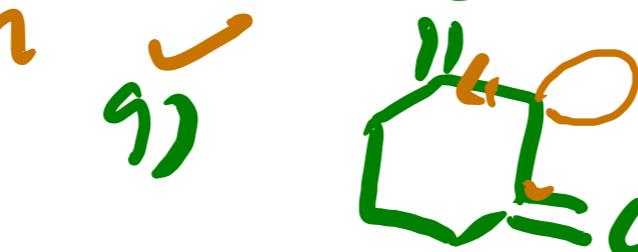
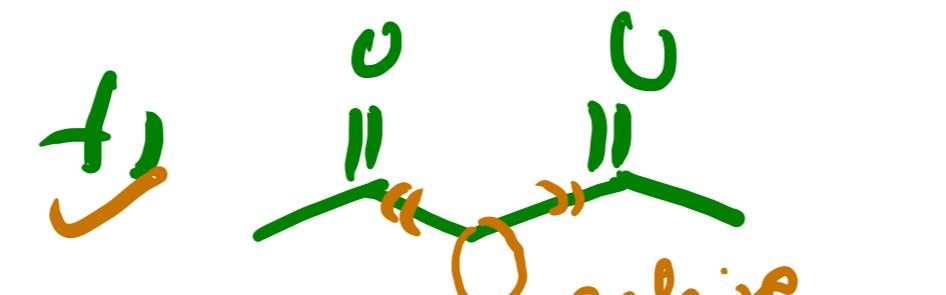
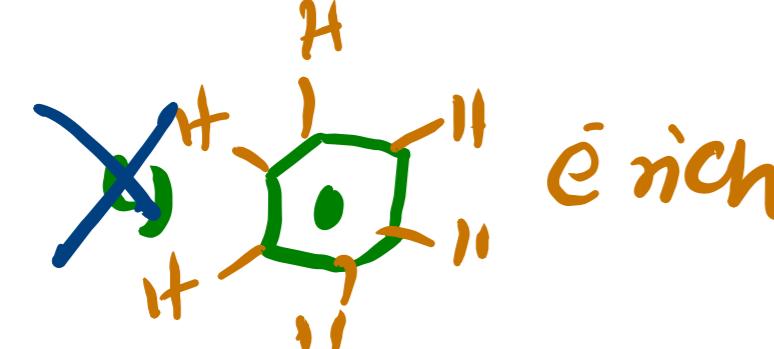
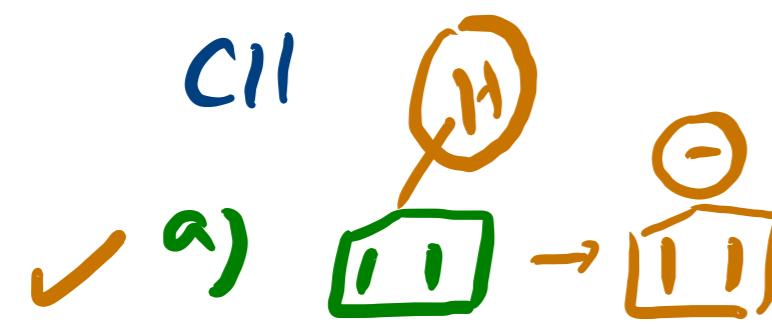


[If H combined with O^{sp} / N^{sp} / X^{sp} / S^{sp} / C^{sp} then it takes up H^+]

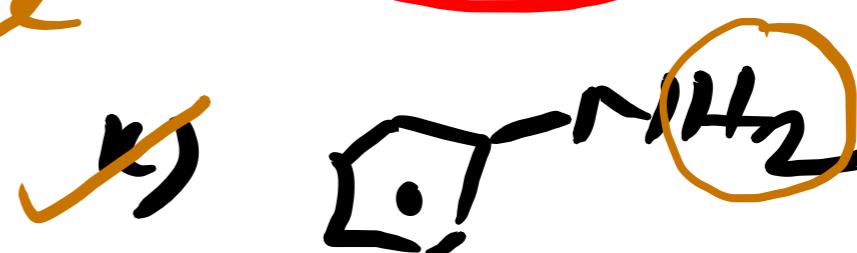
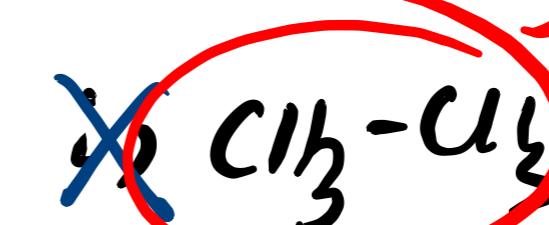


: Integer based:

How many compounds reacts with LiAlD_4 (methyl magnesium chloride) to give CH_4 gas.



Nonterminal
or internal alkyne.

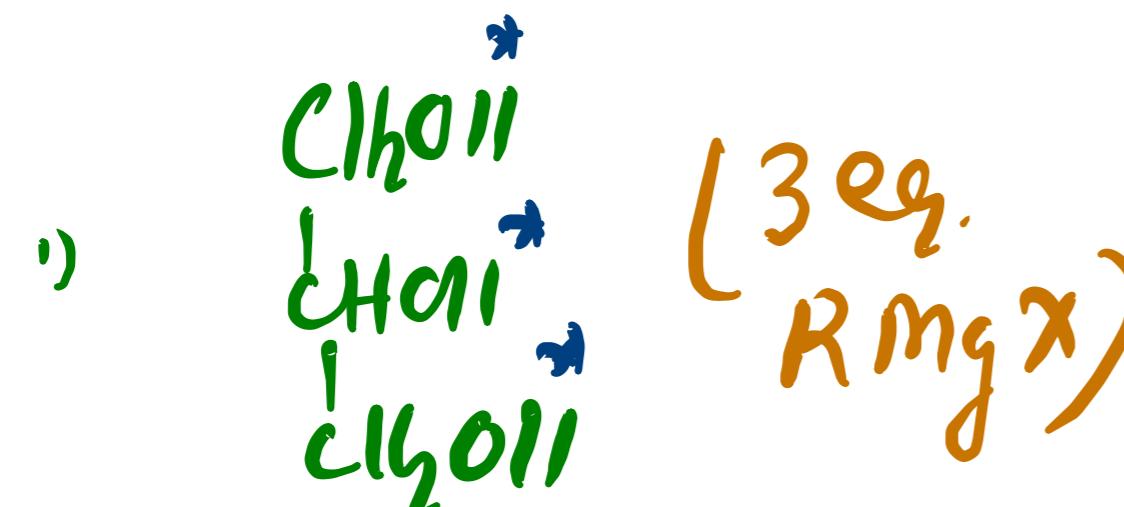


active
methylenes





Ethyline glycol.

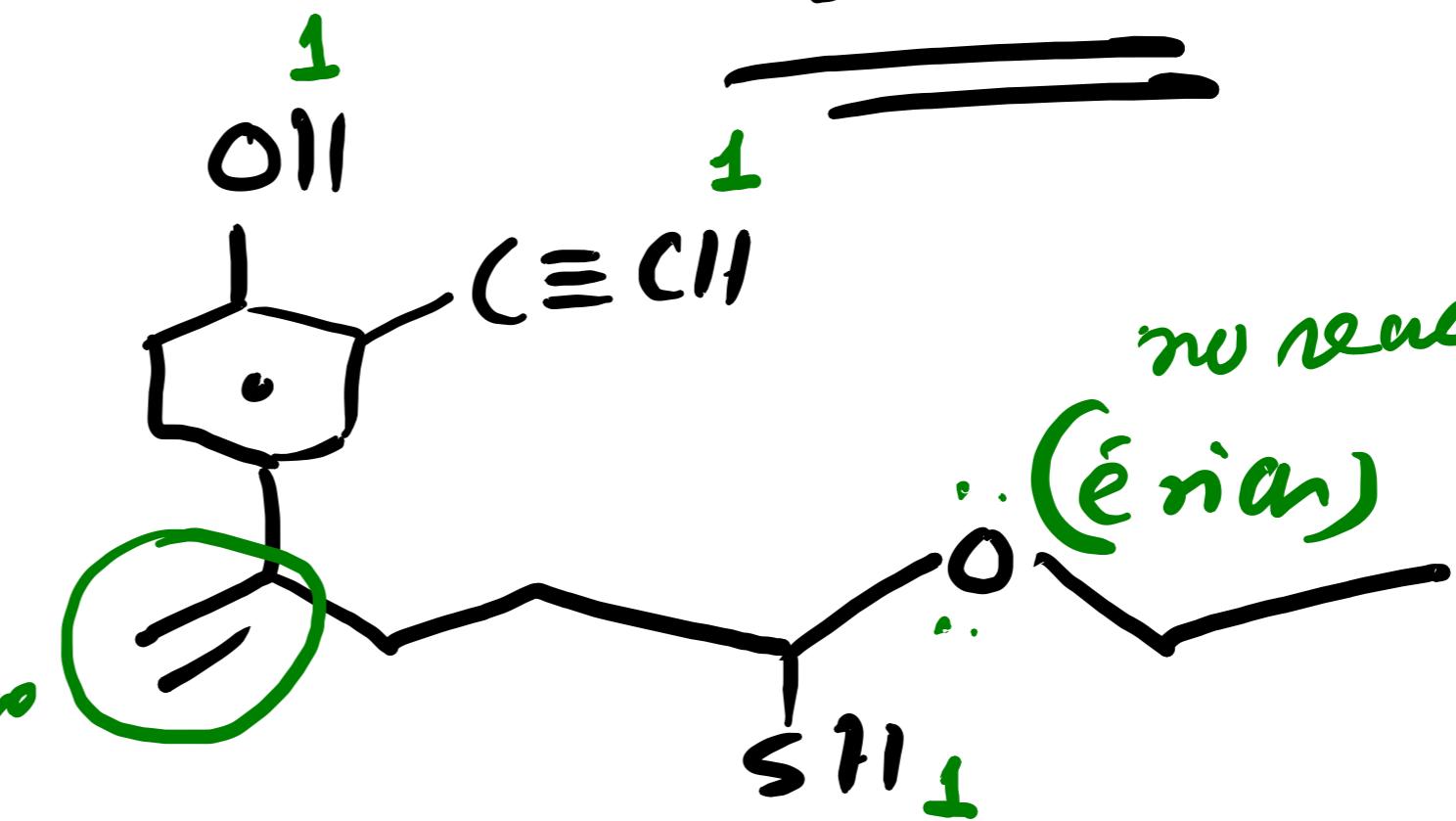
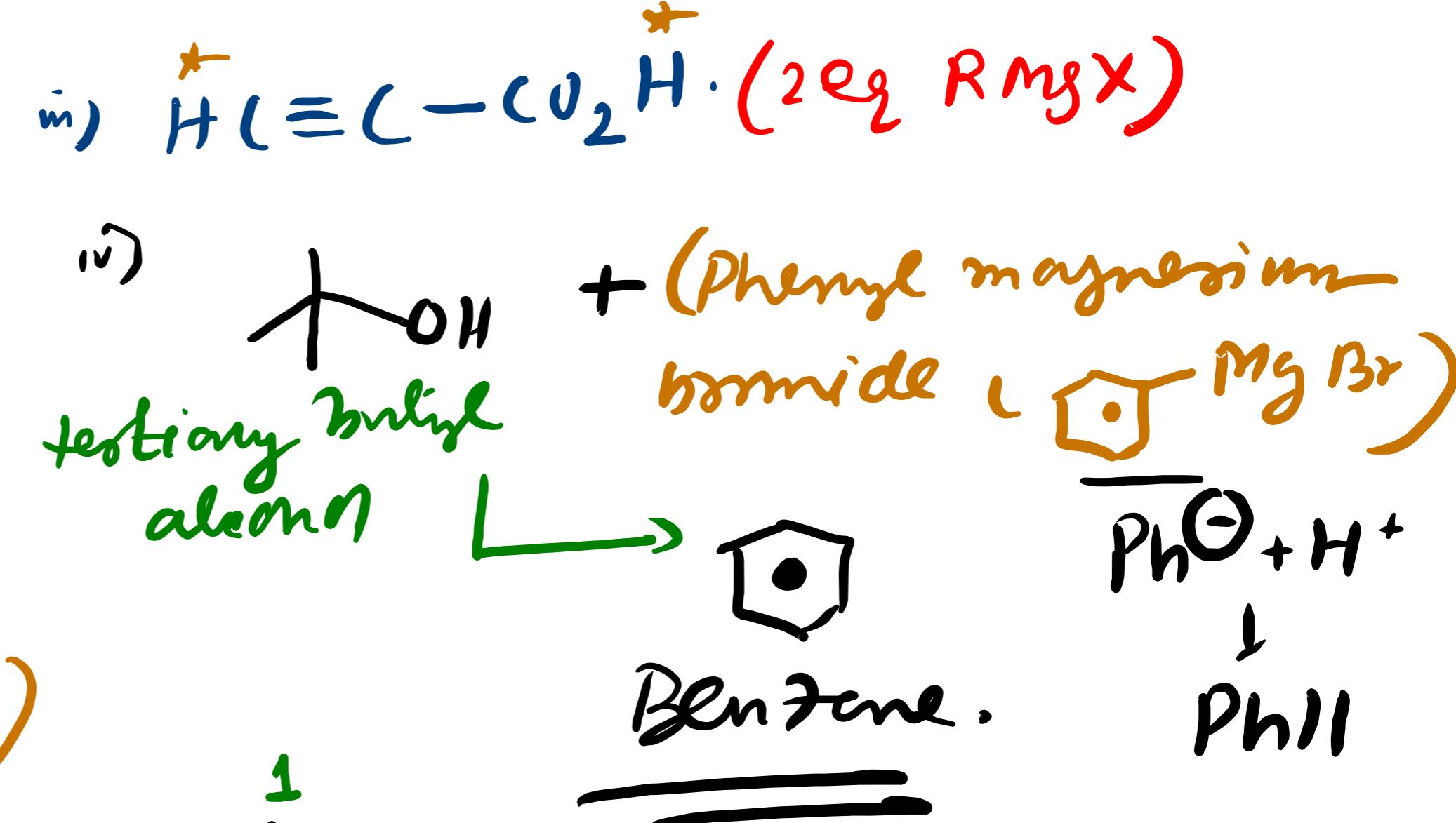


glycerol.

Next week ~~for class~~



éther
no reaction



no reaction with
 RMgX .