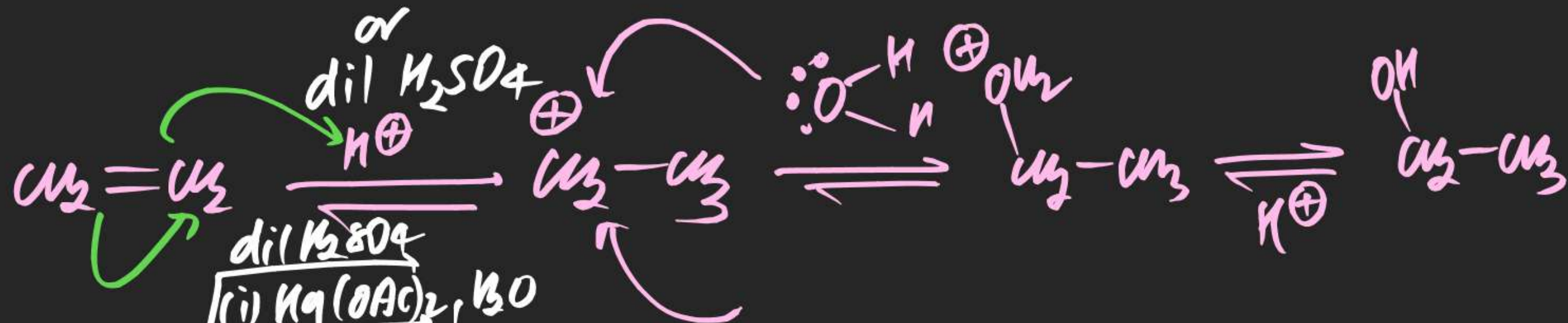


(#) Addition of  $\text{H}_2\text{O}$  / hydration of alkene  
 Reaction of alkene with dil  $\text{H}_2\text{SO}_4$

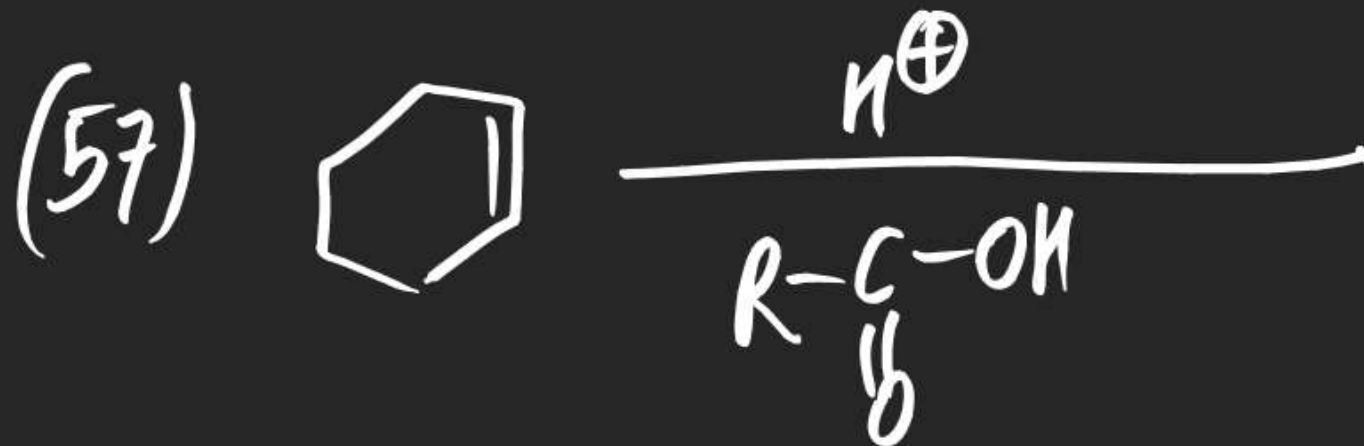
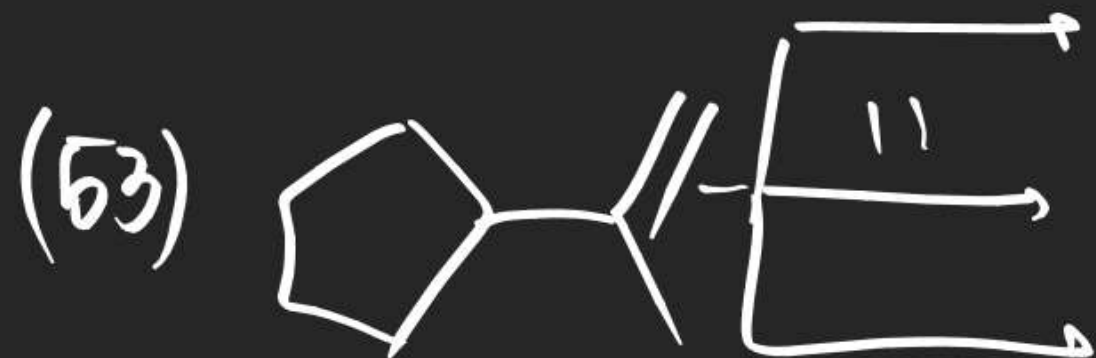
$\Rightarrow$  On reaction of alkene with dil  $\text{H}_2\text{SO}_4$   
 Alcohol is obtained as a product.



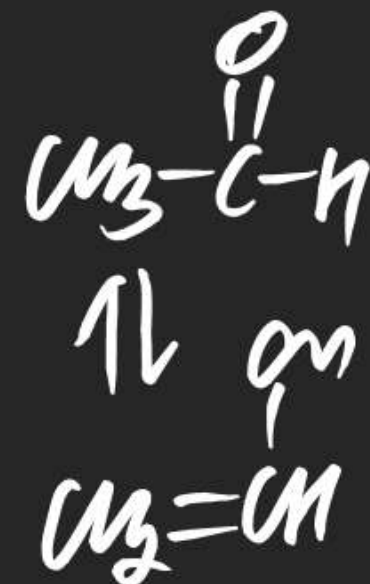
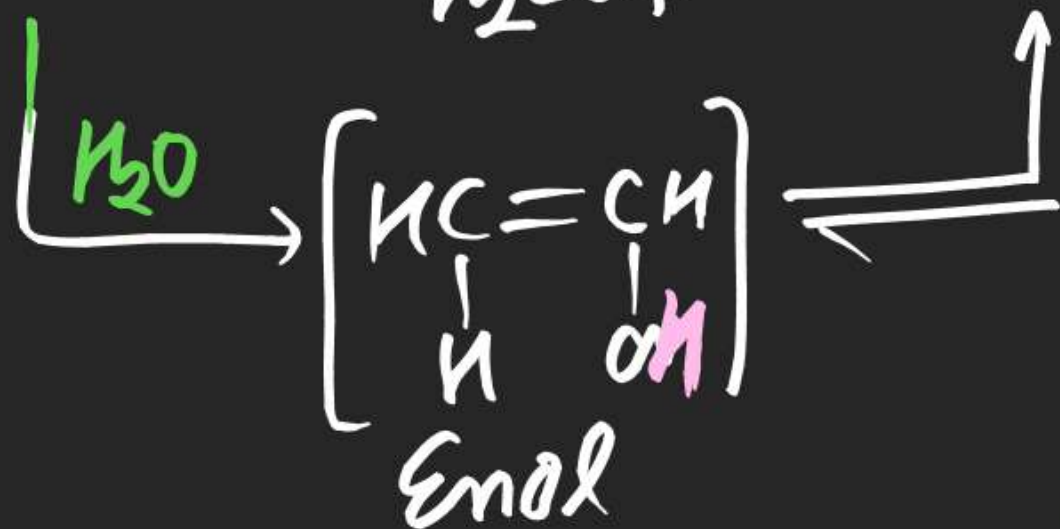
mech<sup>n</sup>:



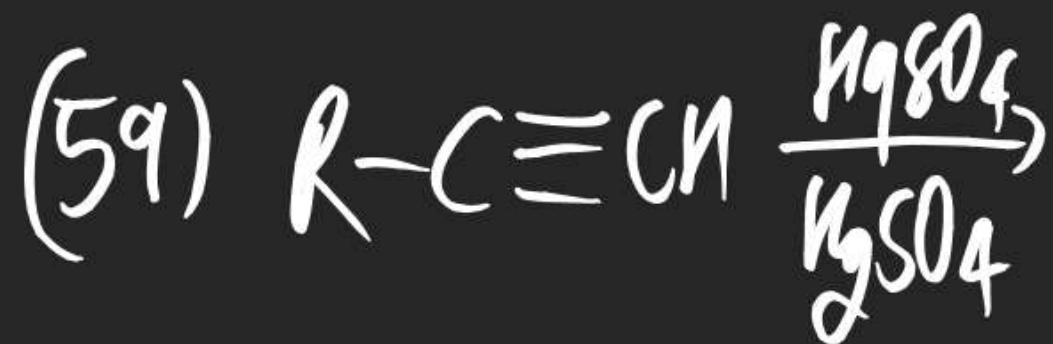
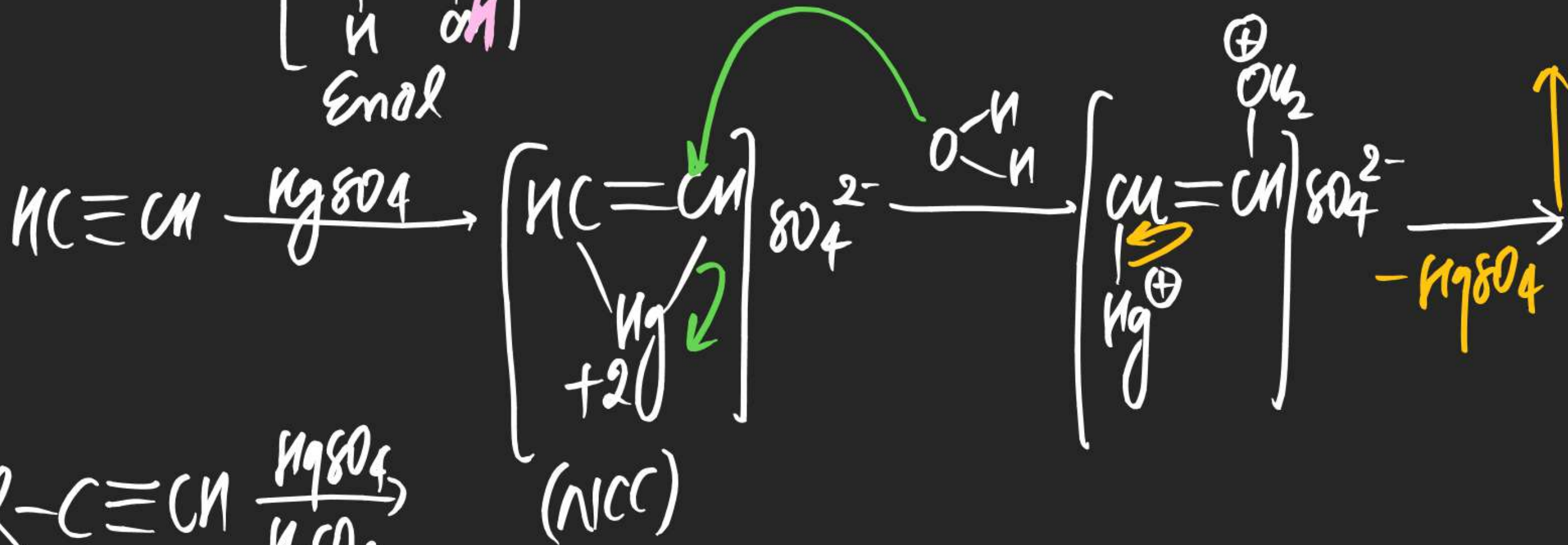




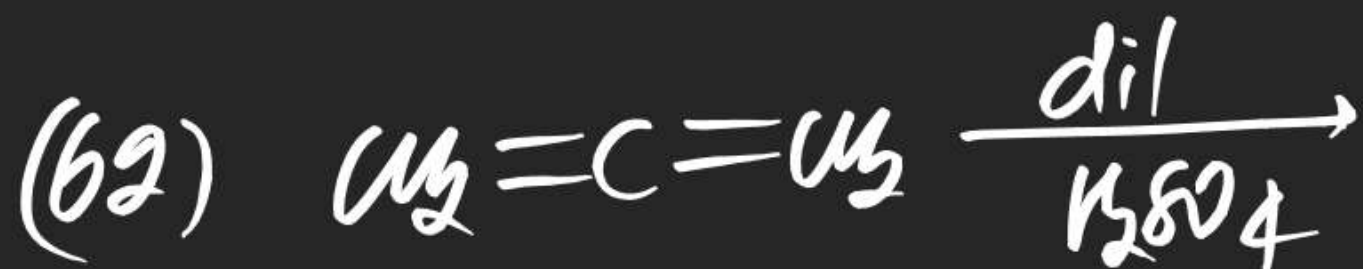
# Kuchrov's Reaction:-



mech<sup>n</sup>



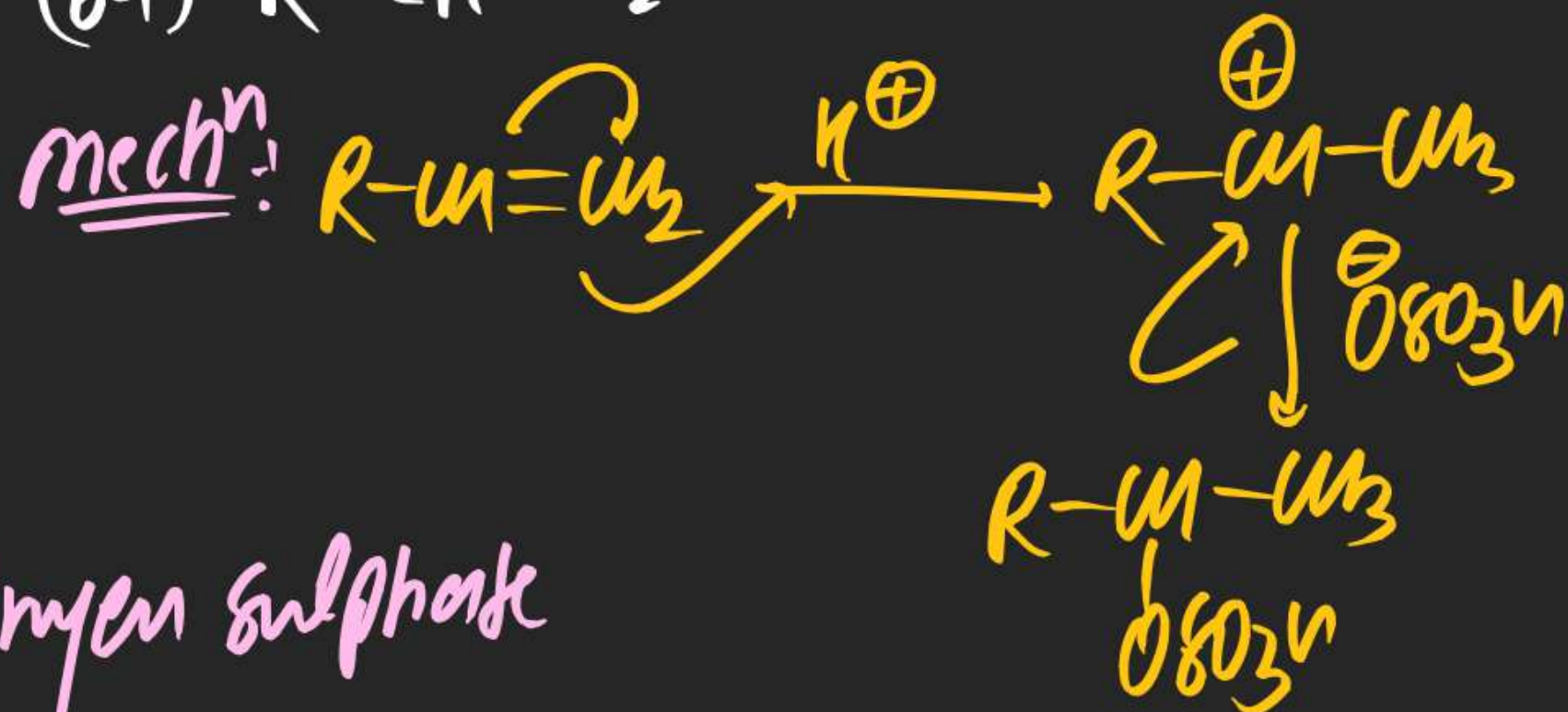




(#) Addition of Conc. H<sub>2</sub>SO<sub>4</sub>:

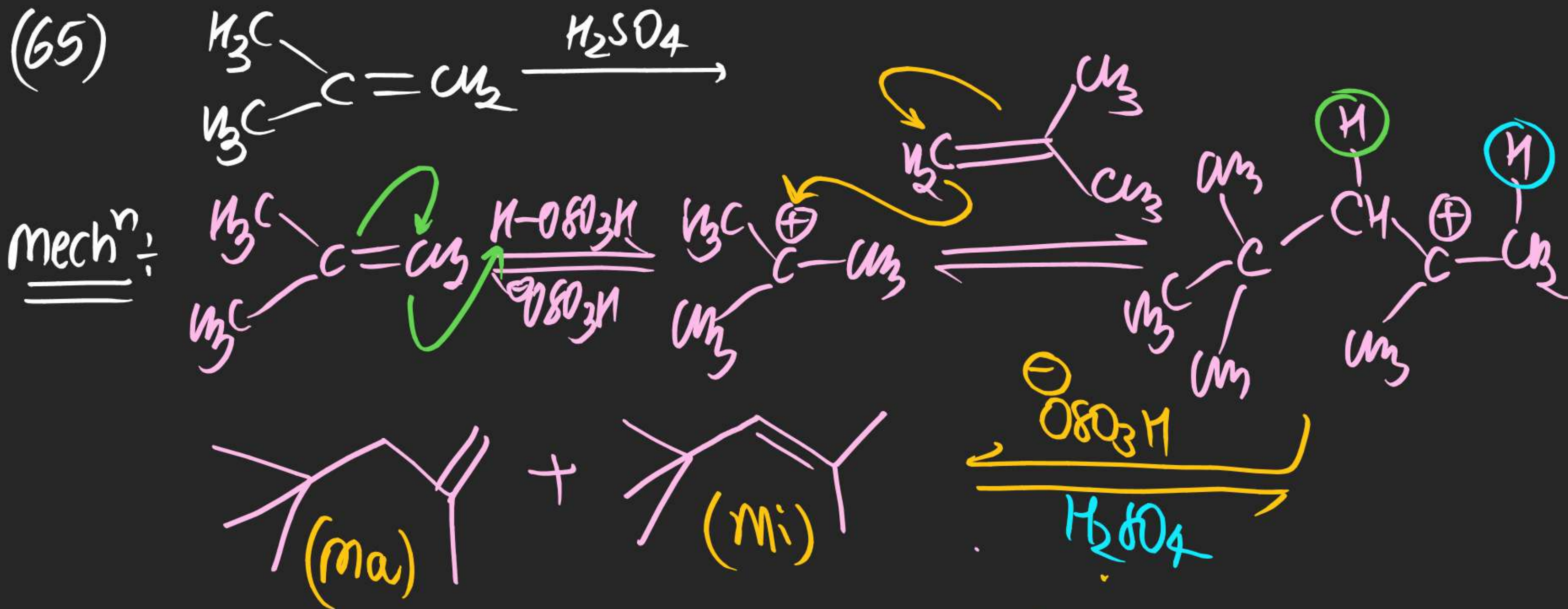
⇒ On add<sup>n</sup> of H<sub>2</sub>SO<sub>4</sub>, alkyl hydrogen sulphate

is obtained, if alkene type is CH<sub>2</sub>=CH<sub>2</sub>, R-CH=CH<sub>2</sub> - - -

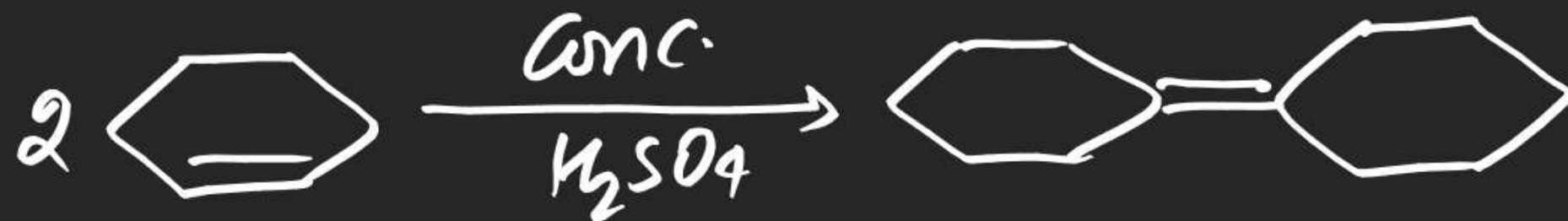




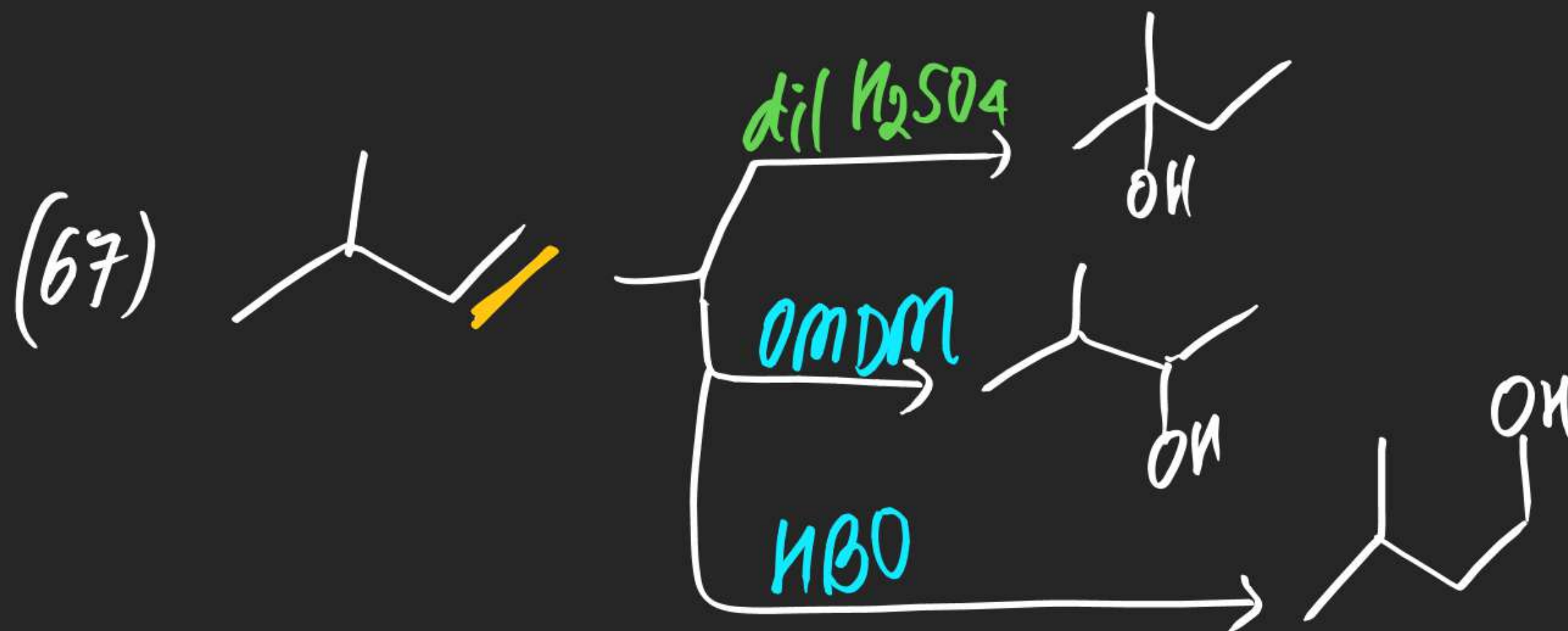
⇒ Alkene gets dimerized with conc.  $\text{H}_2\text{SO}_4$   
 if alkene type is  $\left[ \begin{array}{c} \text{R} \backslash \\ \text{C} = \text{CH}_2 \\ \text{R} / \end{array} , \begin{array}{c} \text{R} \backslash \\ \text{C} = \text{CH} \text{R}' \\ \text{R}' / \end{array} \dots \right]$



## (66) Prapose mechanism



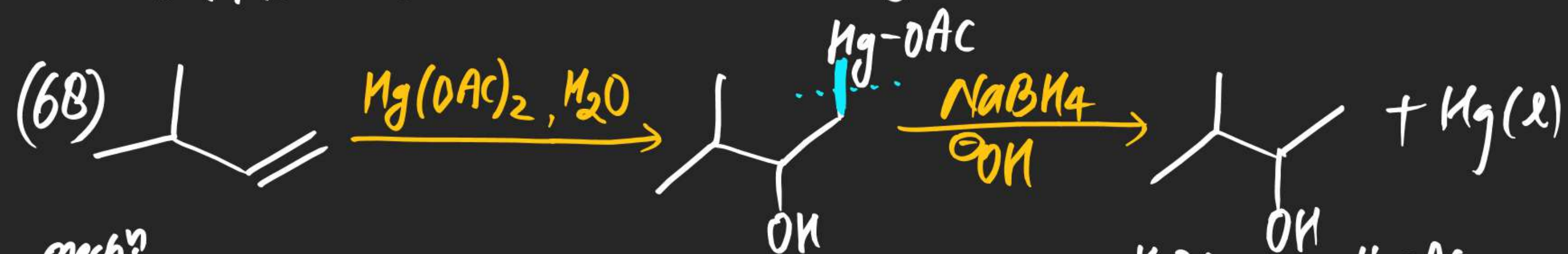
mechanism:-



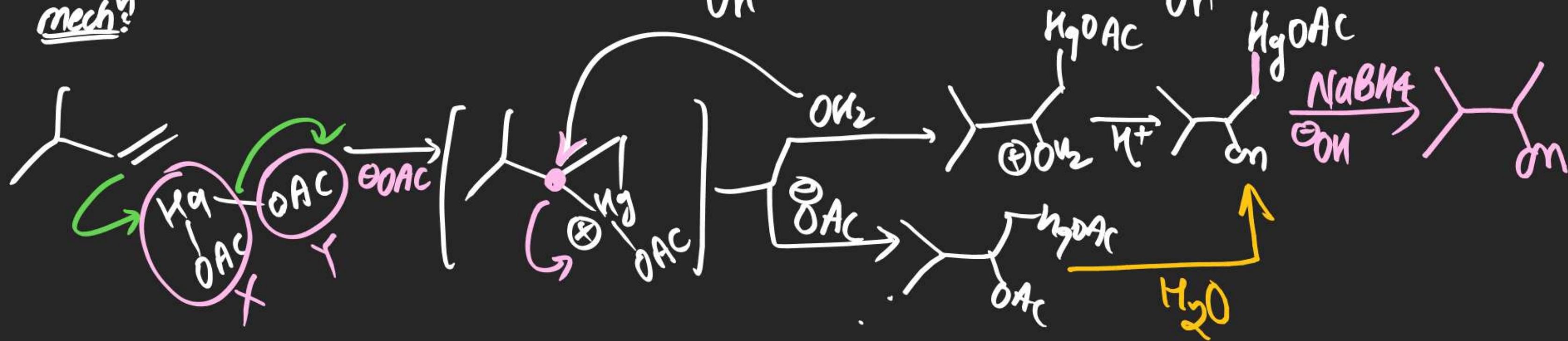


# (#) Oxo-Mercuration De-Mercuration (OMDM)

⇒ In this Reaction alkene is treated with  $\text{Hg}(\text{OAc})_2, \text{H}_2\text{O}$ , which on Reaction with  $\text{NaBH}_4$ , on gives a Alcohol as a Product.



mech<sup>n</sup>





Note (i) NCC intermediate

(ii) No Rearrangement possible

(iii) OM is Anti phenomenon.

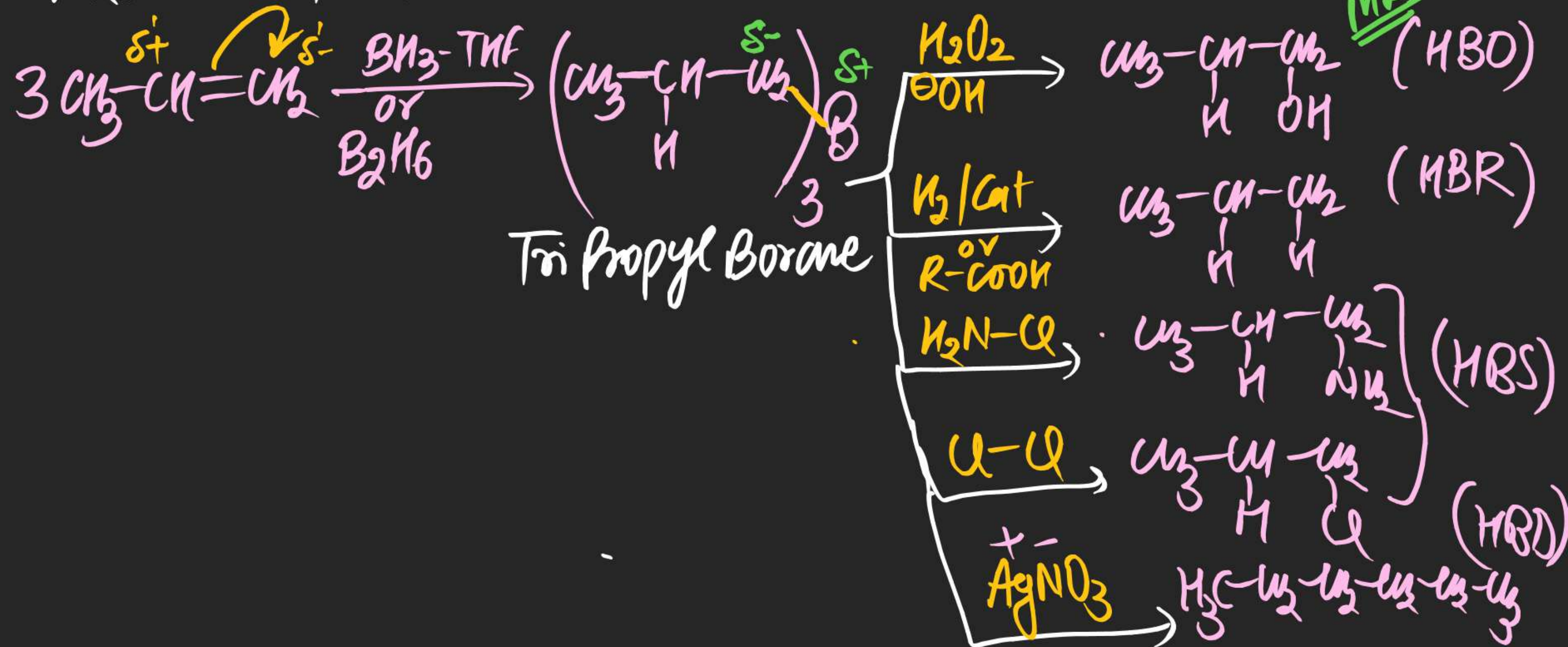
(iv) Product of OM/DM can also be obtained by assuming  $H_2O$  add<sup>n</sup> on given alkene in marconicoff's add<sup>n</sup>.

(v) Ether is obtained as a product if R-OH is taken in place of  $H_2O$ .



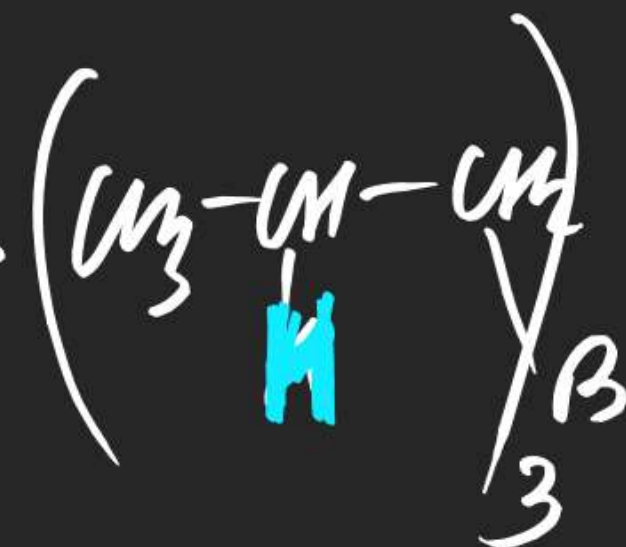
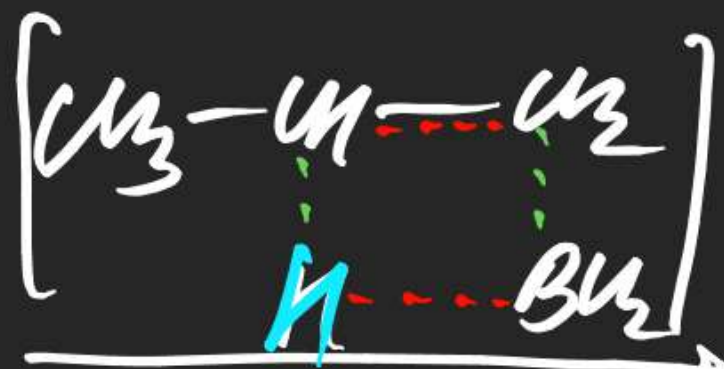
# (#) Hydro-Boration (HB)

⇒ Reaction of alkene with Borane / Di Borane is known as HydroBoration

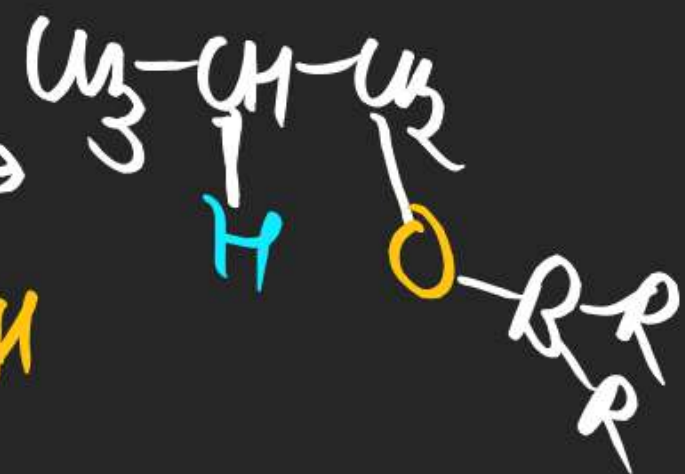
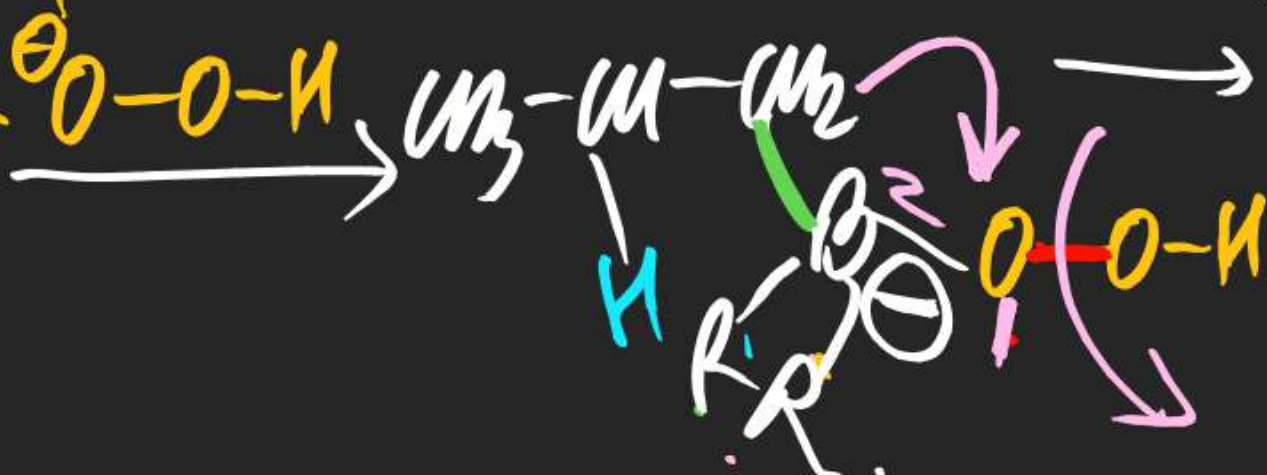
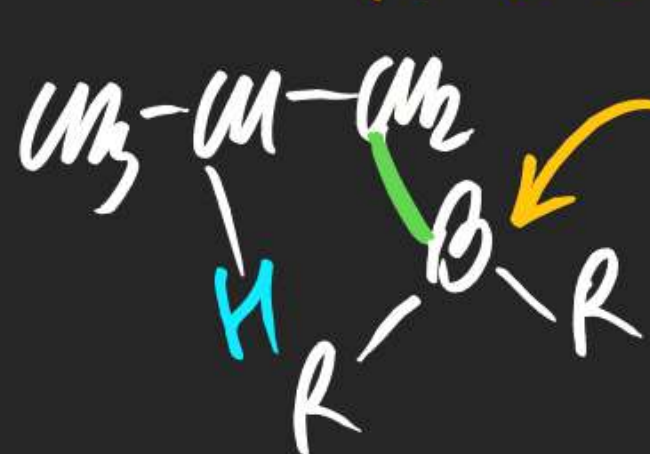


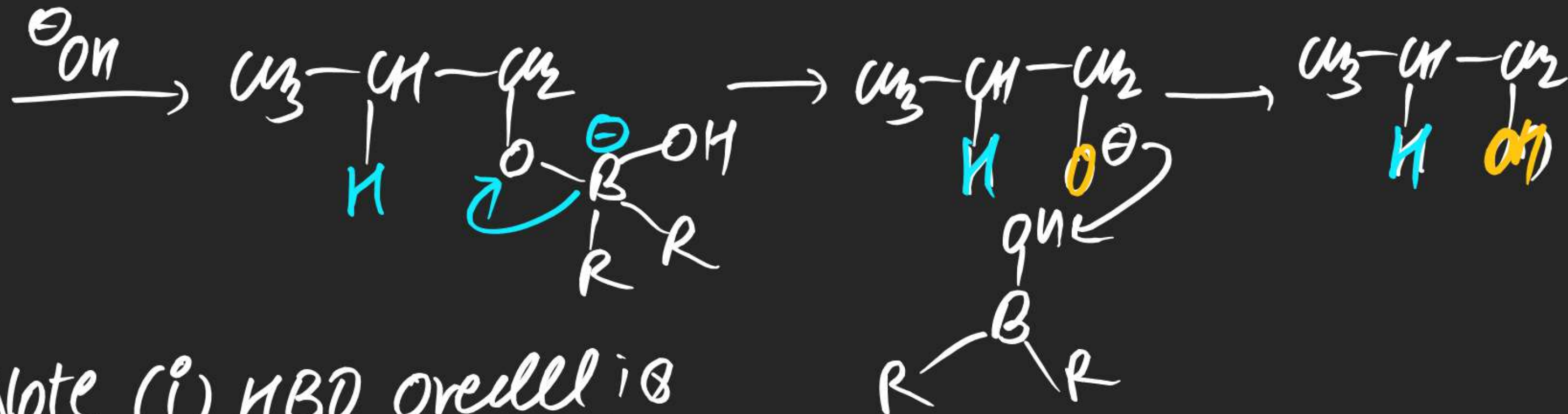


mech<sup>n</sup> (HydroBoration)



mech<sup>n</sup> (Oxidation):





Note (i) HBD overall is syn add<sup>n</sup> phenomenon

(ii) No Carbocation Intermediate

(iii) No Rearrangement possible

(iv) Product of HBD can be obtained by assuming  $H_2O$  add<sup>n</sup>



or given alkene in Anti Markenikov's method.

