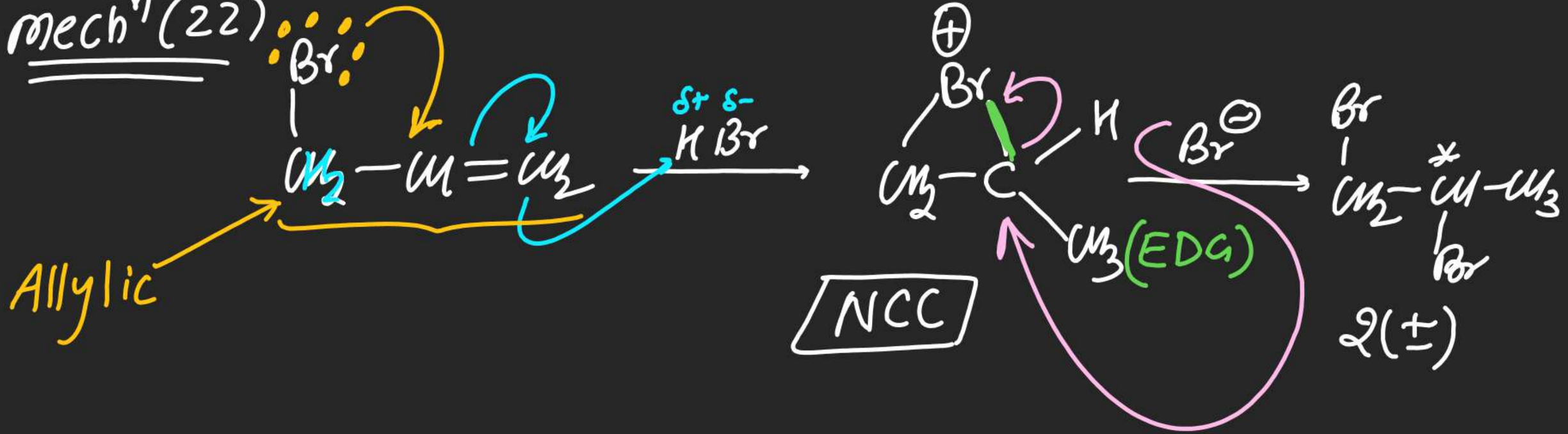
Nishant Jindal



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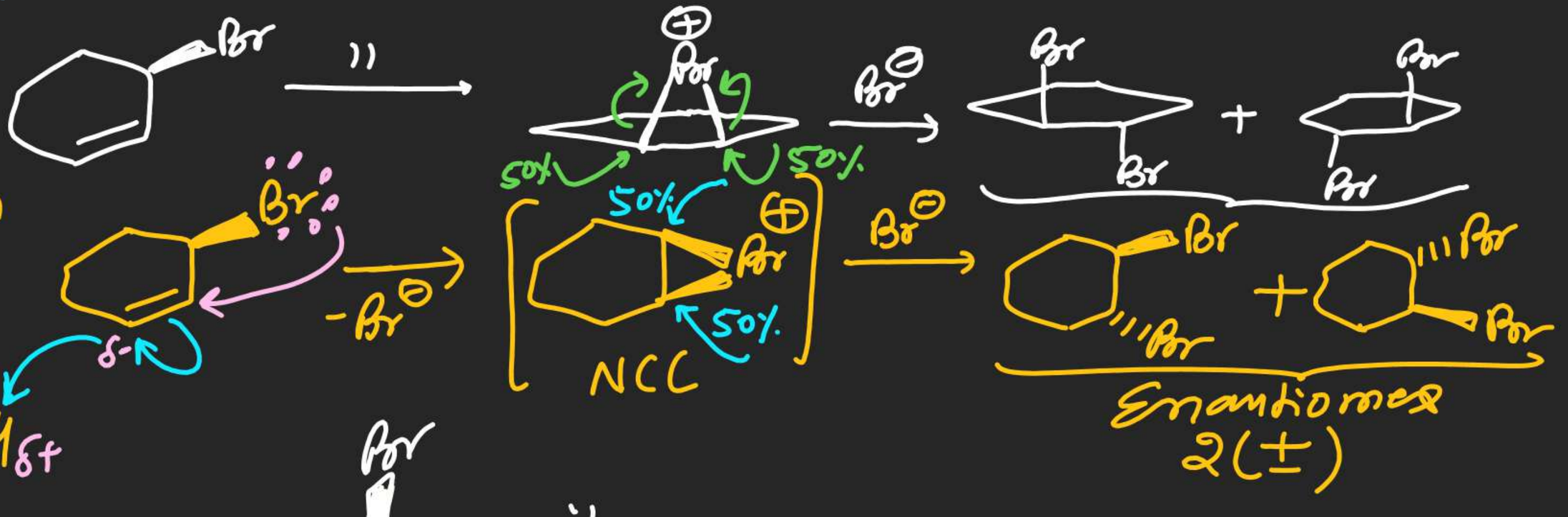
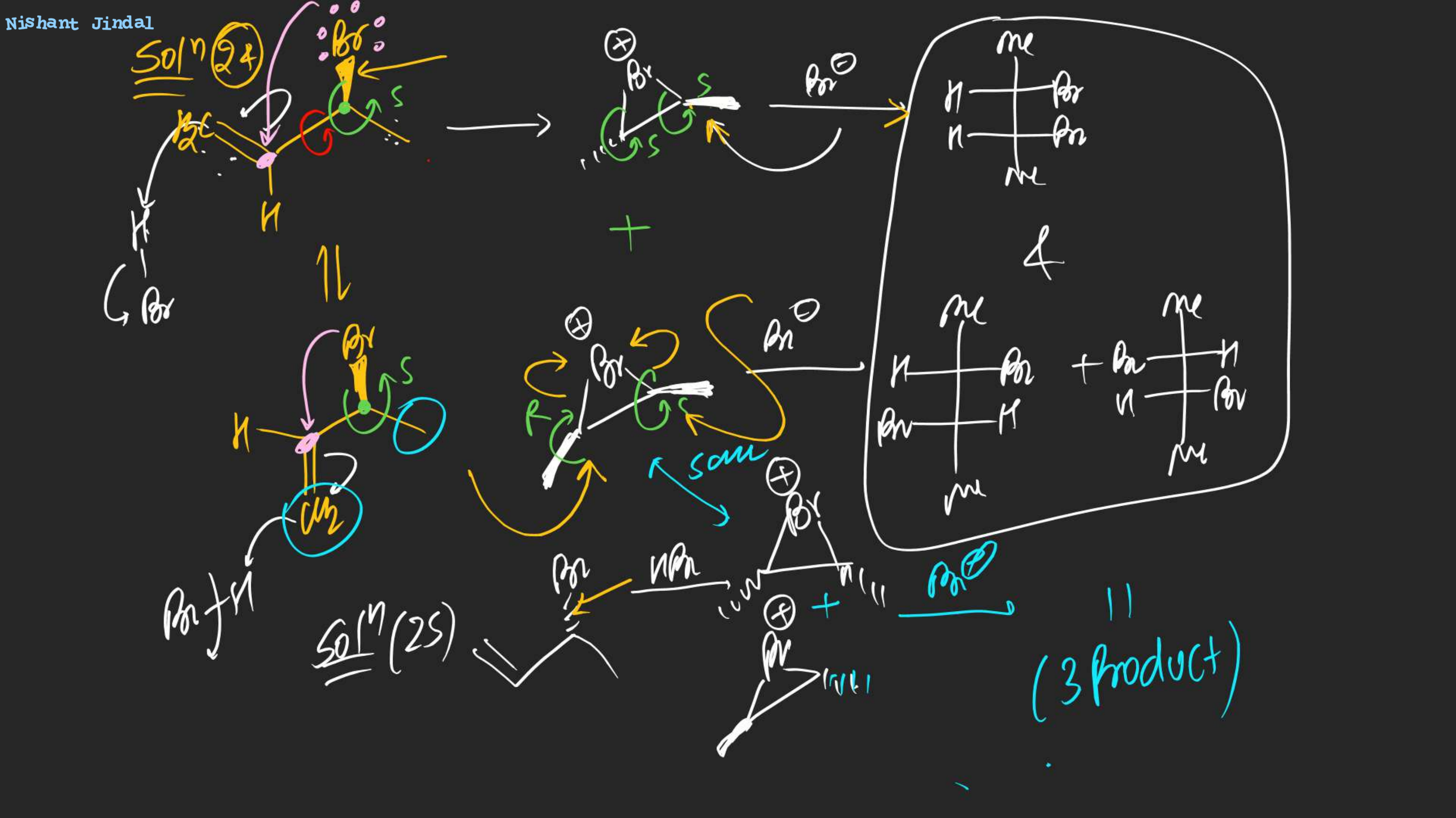
(23)



(24)

(25)



KCP & TCP

⇒ KCP = Kinetically Controlled Product
= Product which is quickly formed
= Product which formed by low E_a

⇒ TCP = Thermodynamically Controlled Product
= most stable product

Note (i) KCP & TCP Both maybe same
(ii) At low Temp Rxn is irreversible

$$A^{\oplus} + B^{\ominus} \longrightarrow A-B$$

(iii) At high Temp (at which A–B gets dissociated)
Rxn is Reversible in nature

$$A^{\oplus} + B^{\ominus} \rightleftharpoons A-B$$

(iv) At low Temp ⇒ KCP is major Product
(Rxn is irreversible) because there is no sufficient amount of Enery to Cross high Energy Barrier.

(v) At high Temp:⇒ TCP is major Product
(Rxn is Reversible) because. - - - - - - - - -

(vi) If no Temperature is given then TCP is major Product.
(vii) 1,2 Product is always KCP due to Probability factor.

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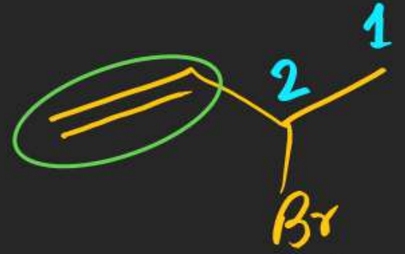
(30) 

+ HBr (1eq) ⟶ 

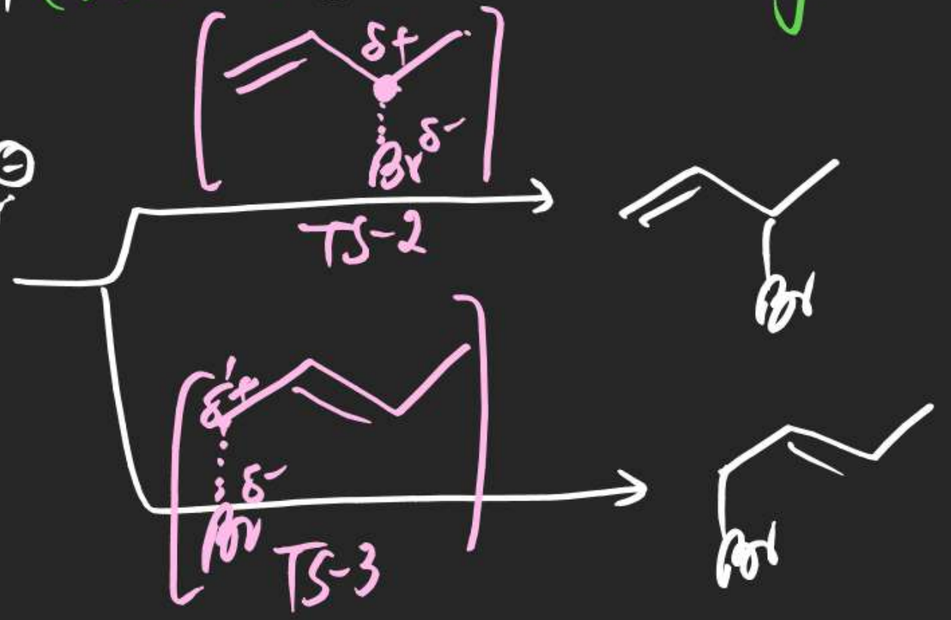
+ 

(*) 1,2 Product (*) 1,4 Product

(*) less Stable product (*) More stable product

(*) KCP (*) Minor (*) TCP (*) Major

mechⁿ

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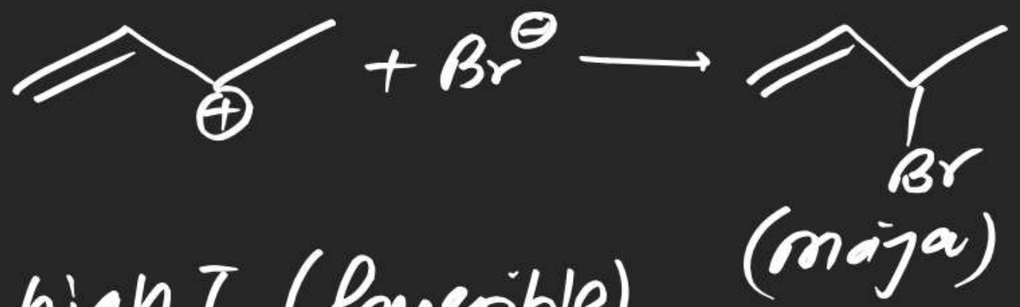
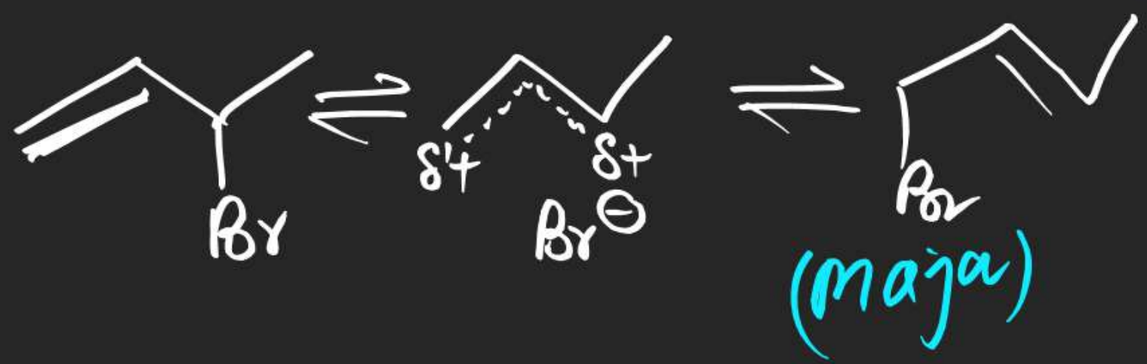
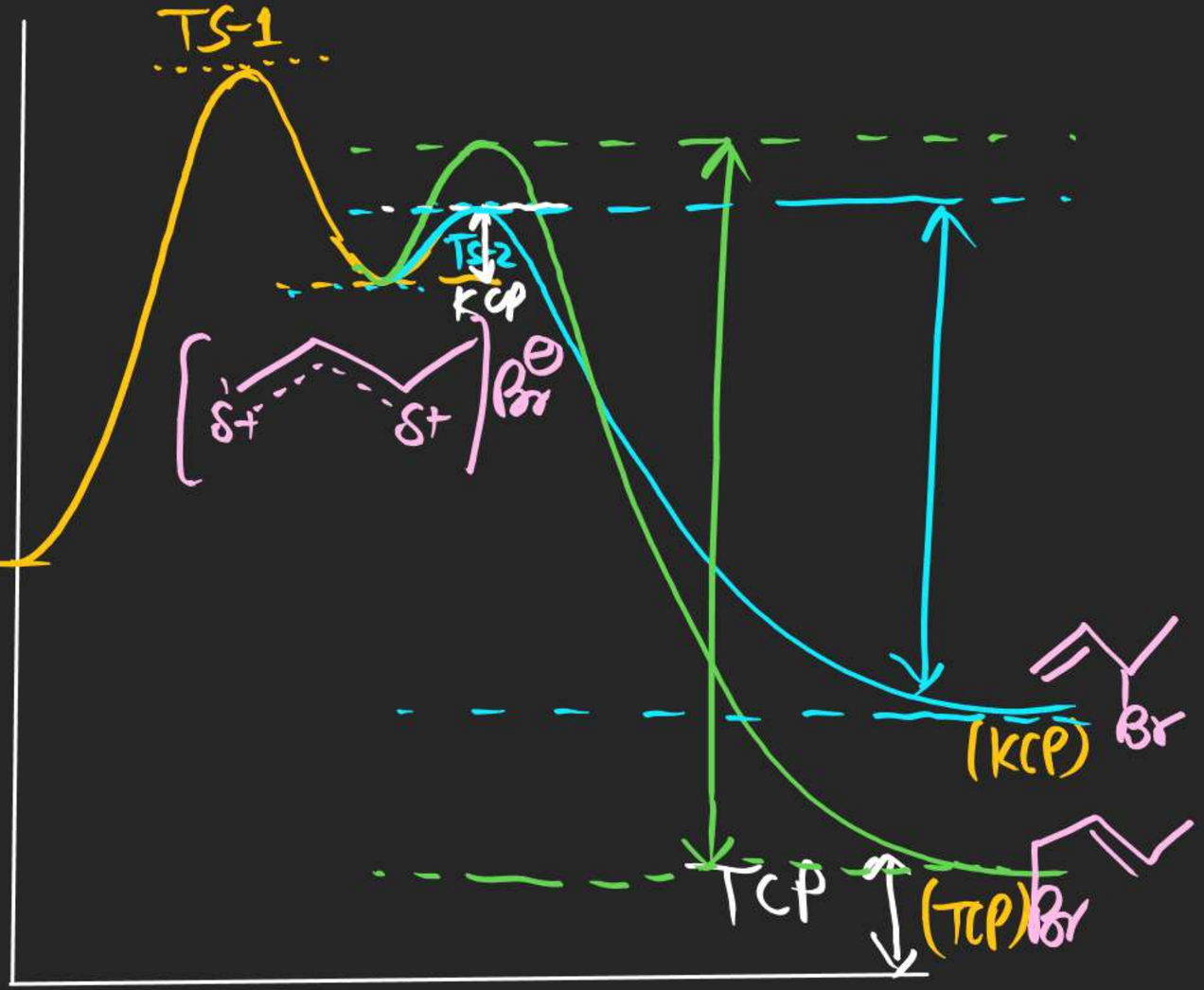
At low T (irreversible)



At high T (Reversible)





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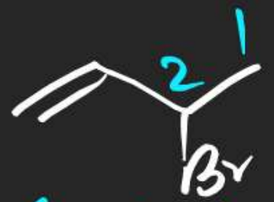
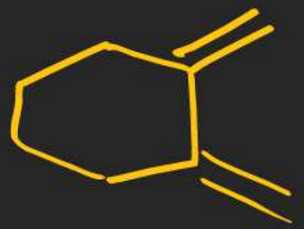
(31)  + HBr (1eq) $\xrightarrow{-80^\circ C}$  (major) +  (minor)

(32)  + HBr (1eq) $\xrightarrow{35^\circ C}$  (minor) +  (major)

(33)  + HBr (1eq) $\xrightarrow{-80^\circ C}$

(34) ⟩⟩ + ⟩⟩ $\xrightarrow{+80^\circ C}$

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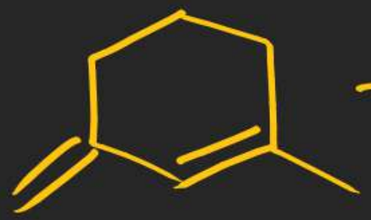
(35)  + HBr (1eq) ⟶

(36)  + ⟶

(37)  + ⟶

(38)  + ⟶

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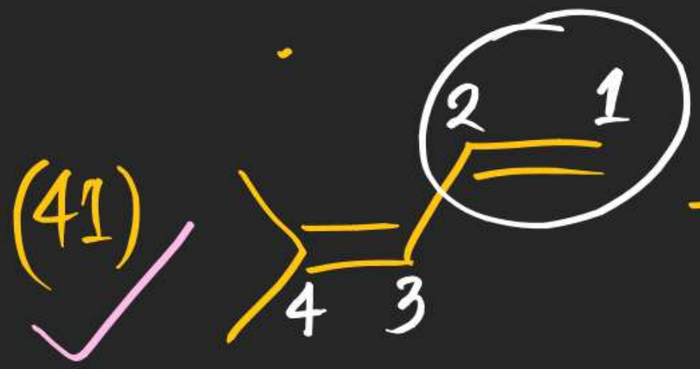
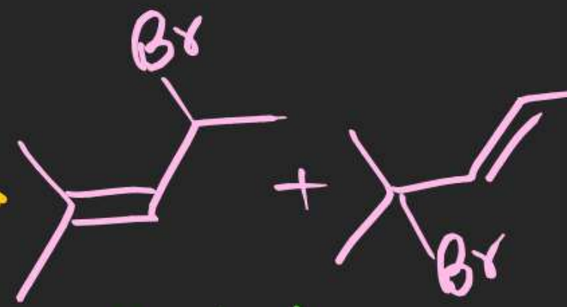
(39)  + HBr (1eq) ⟶

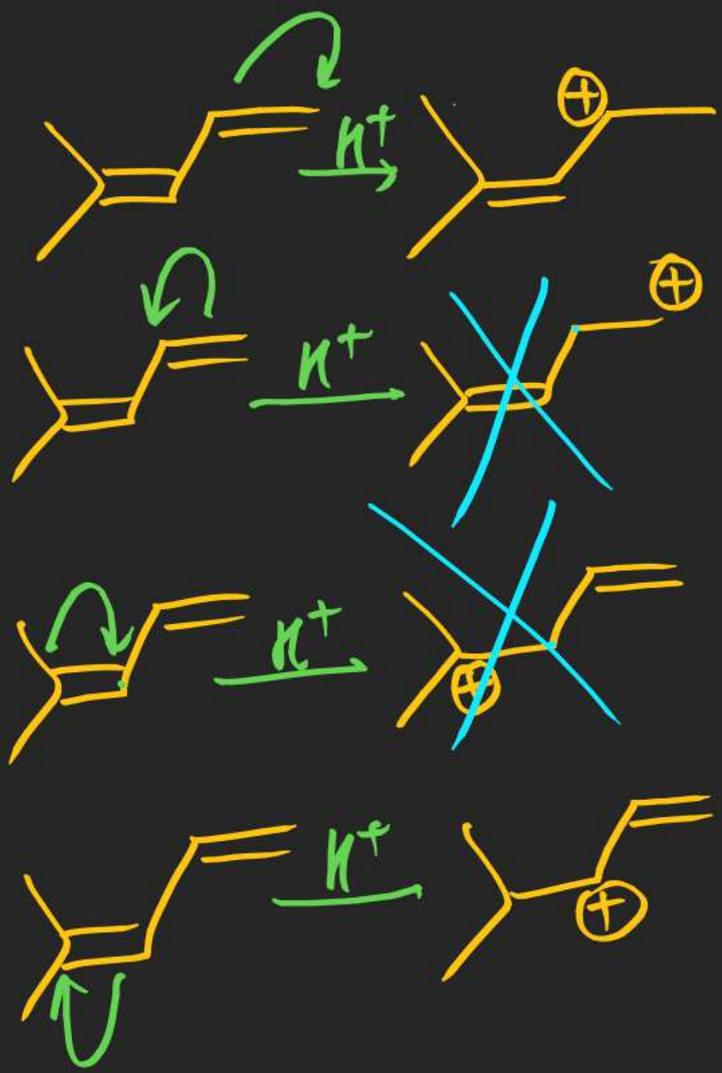
(40)  + HBr (1eq) ⟶

(41)  + HBr (1eq) ⟶ 

(✗) 1,2 Product

(✓) KCP

(✓) TCP (more stable) (Major)



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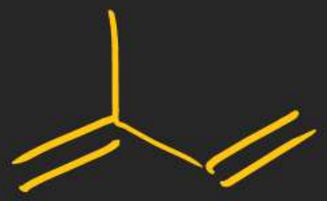
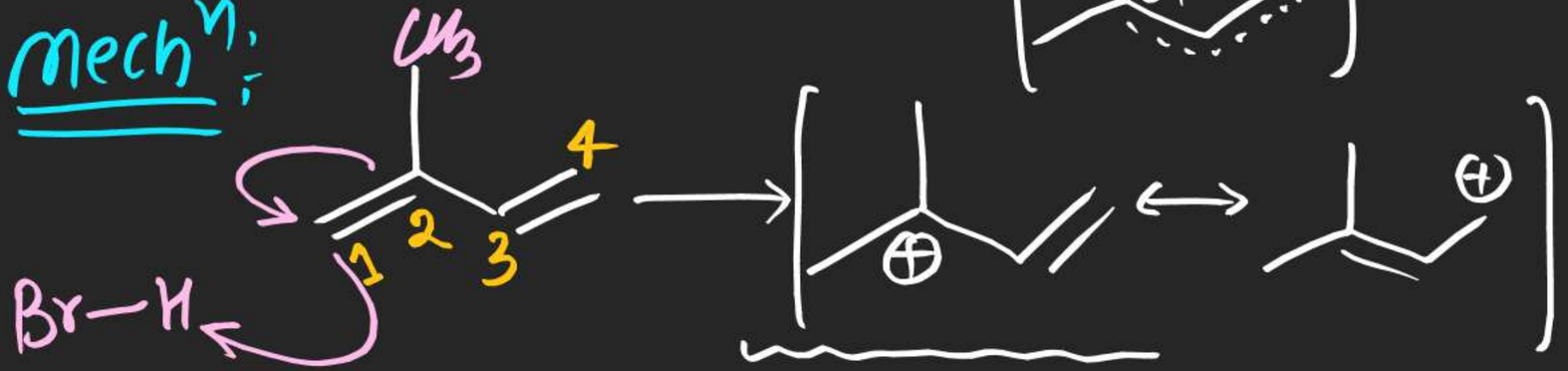
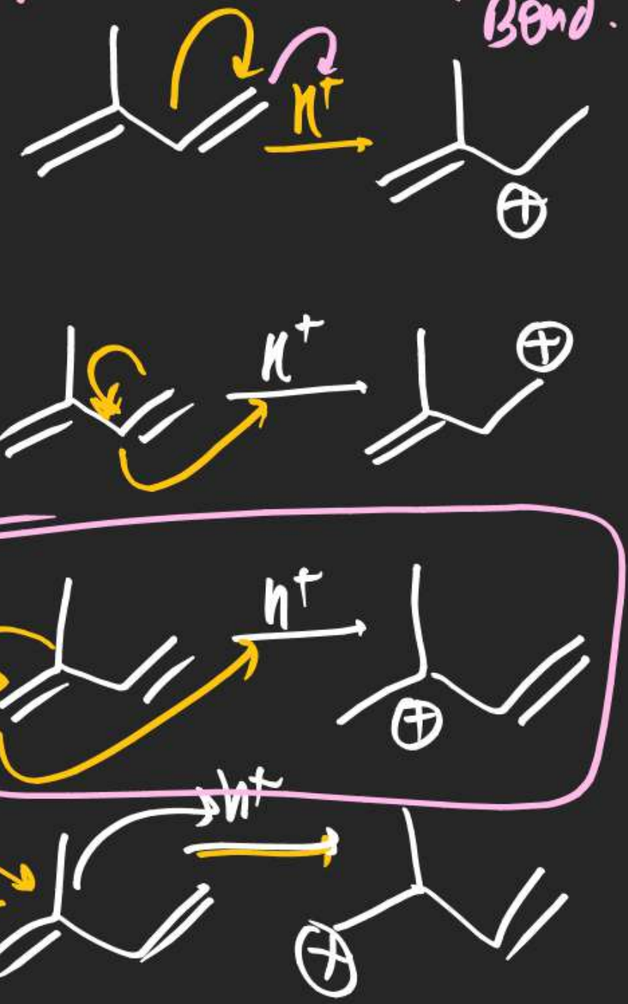
(42)  + HBr (1eq) ⟶

Mechⁿ:



Rough work To find out highly polarised Bond.



HW

BB

Theory copy

isomerism

Ex-Jee main