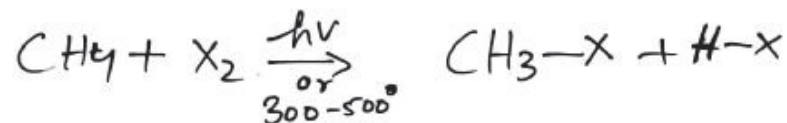


* Compare Rate of Rxn b/w

$\text{R-I} > \text{R-Br} > \text{R-Cl} > \text{R-F}$

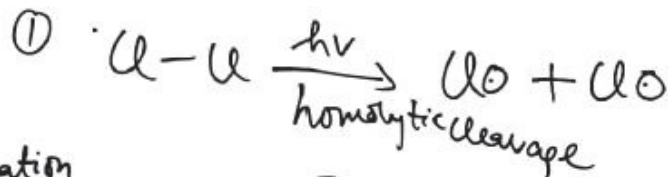
Halogenation of alkane



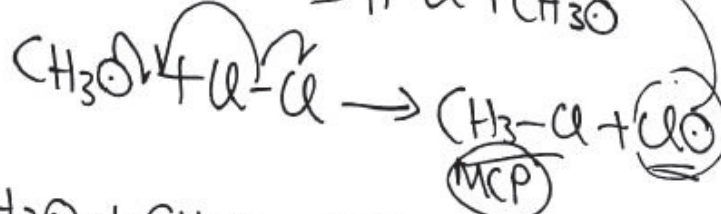
Substitution

F.R Mechanism / Chain Rxn

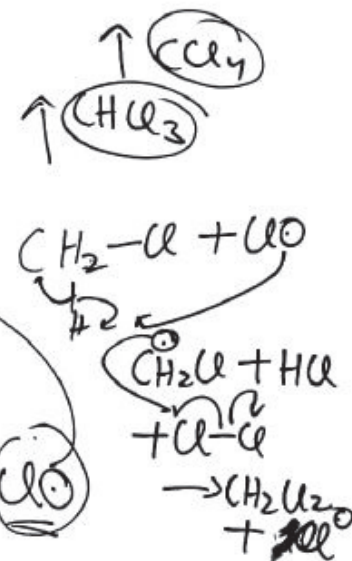
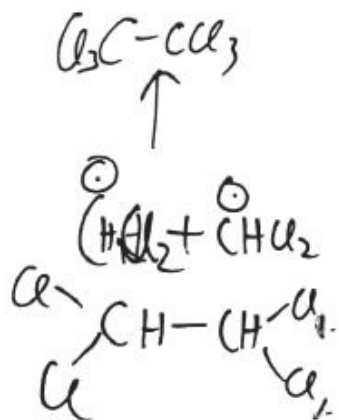
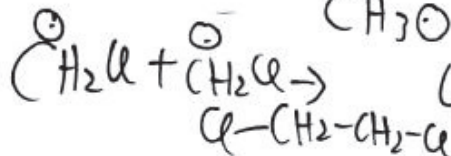
Initiation



Propogation



Termination



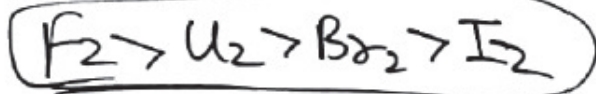
Halogenation of alkane

Characteristic

* MCP, TCP, DCP, Tetra Chlorinated products are obtained

* To maximise MCP yield alkane is taken in excess

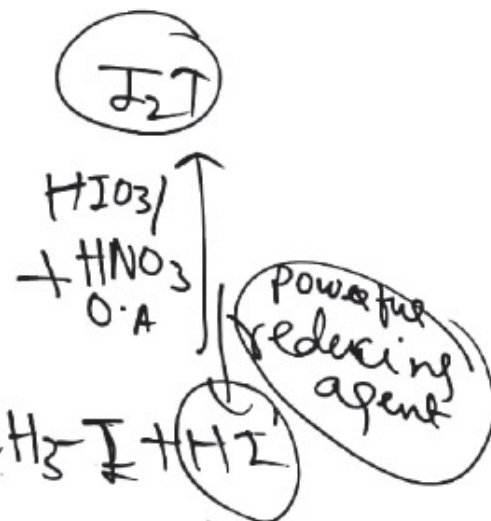
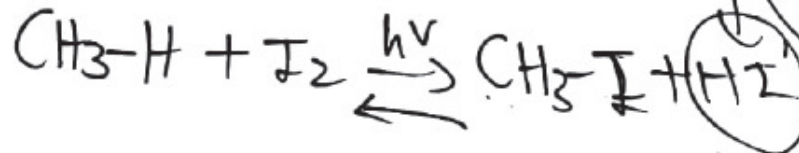
* Rate of Rxn



* R·OR $3^\circ > 2^\circ > 1^\circ$ Alkyl halides

* F·R substitution Rxn

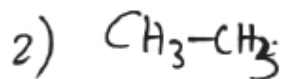
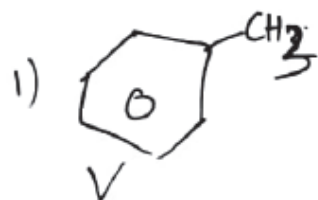
* Iodination is very slow & reversible



Halogenation of alkane

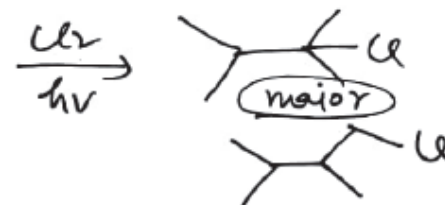
Practical MCP

R.O.R

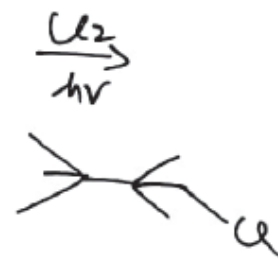
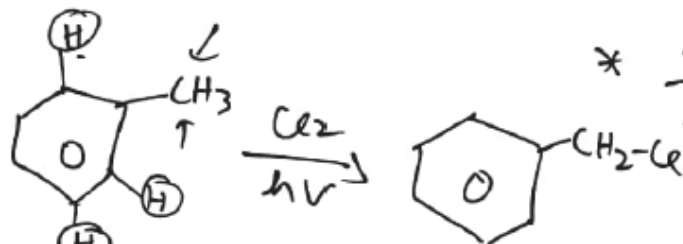


R.O.R towards Halogenation

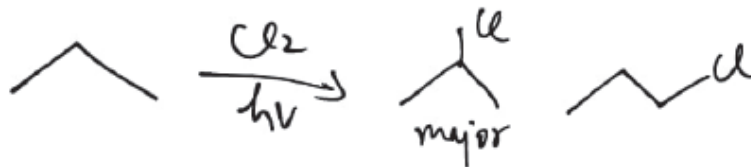
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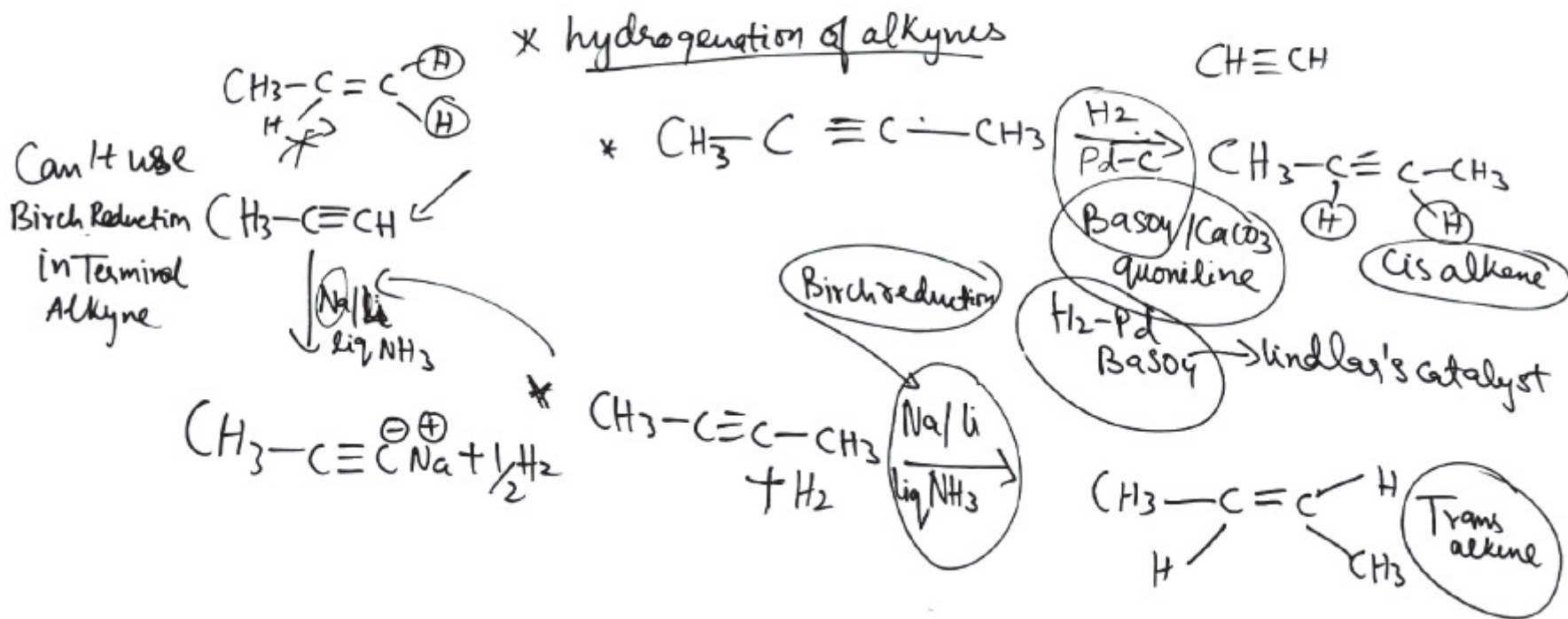


*



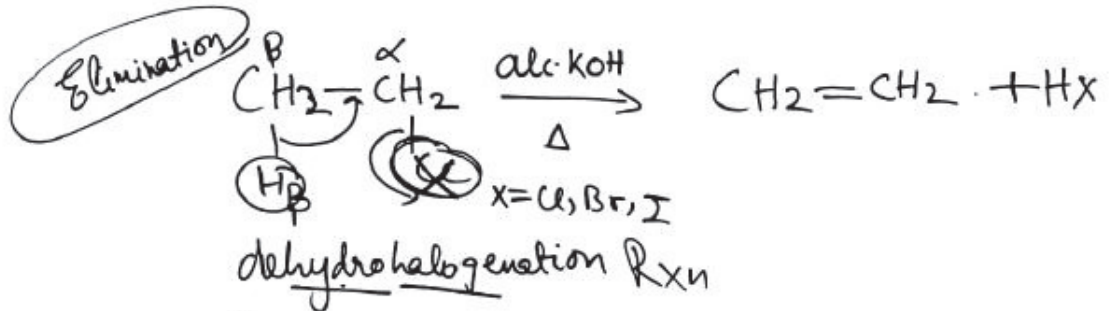
Alkenes

Preparation



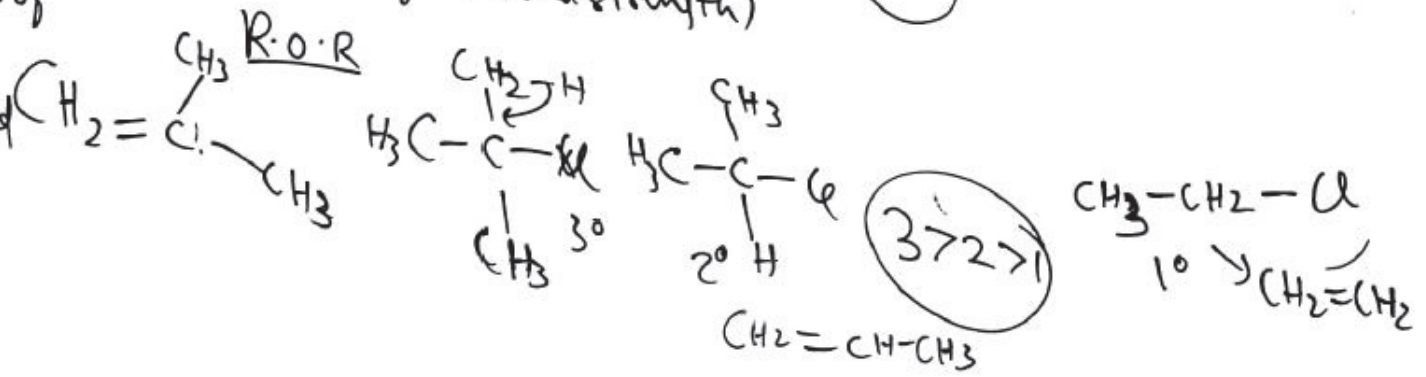
Alkenes

2) From Alkyl halide



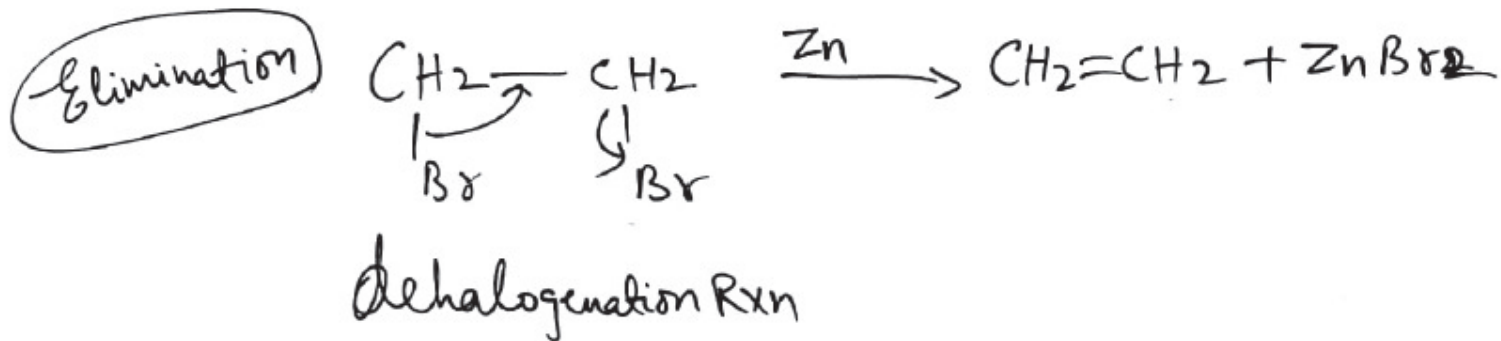
R.O.R
 (on the basis of C-X bond strength) $\text{R-I} > \text{R-Br} > \text{R-Cl} > \text{R-F}$

on the basis of stability of alkene formed



Alkenes

* From vicinal dihalide



* From dehydration of Alcohol in acidic medium

