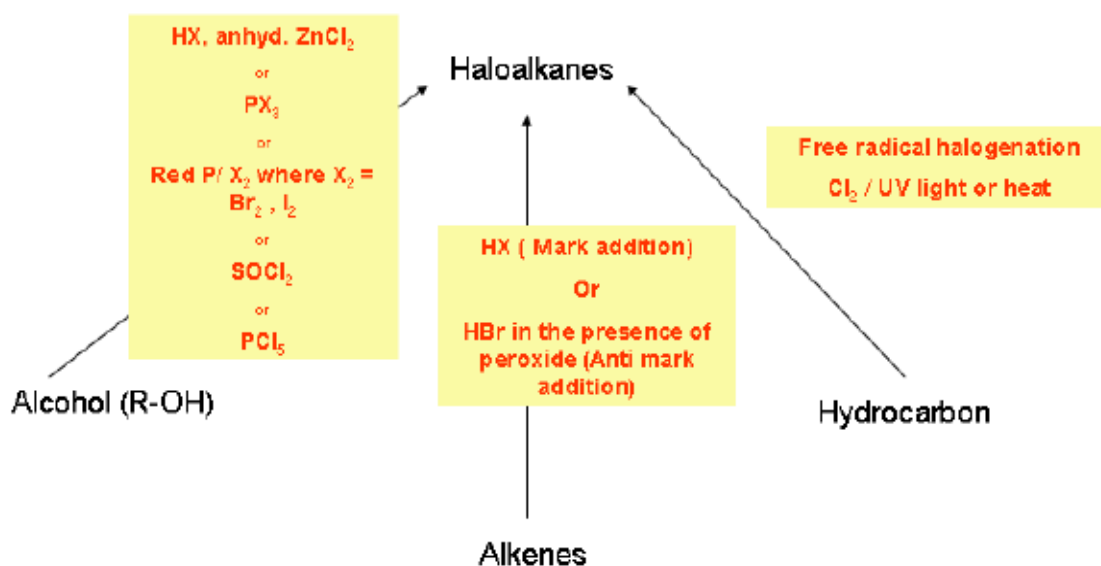
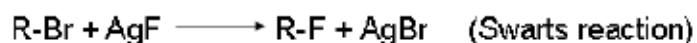


## Mind map

### Preparation of Haloalkanes



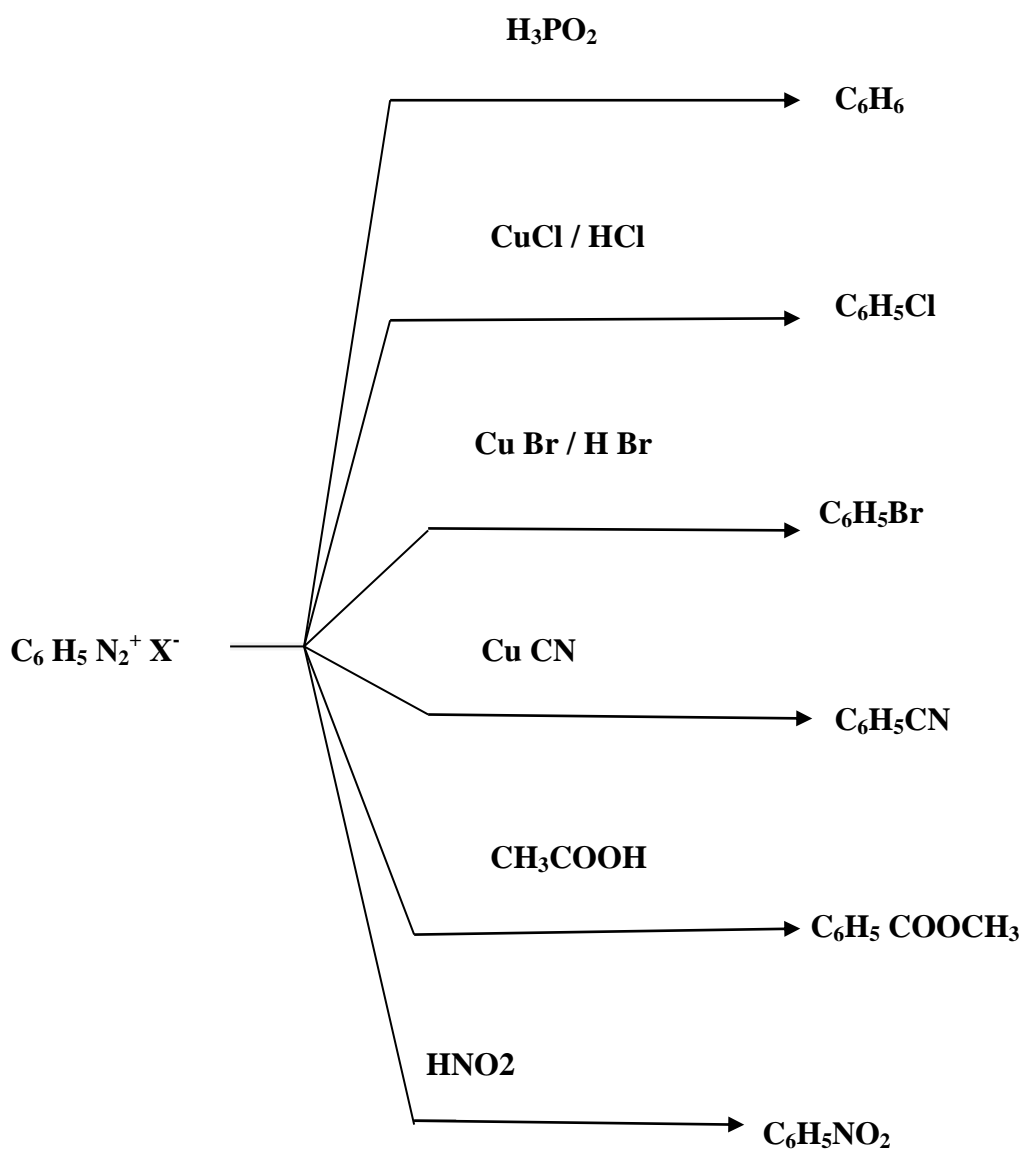
Halogen exchange method:



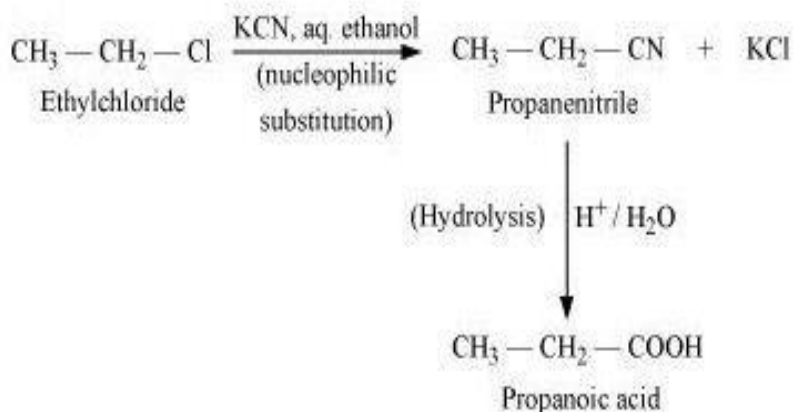
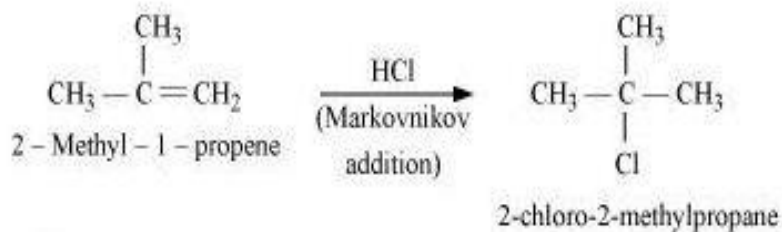
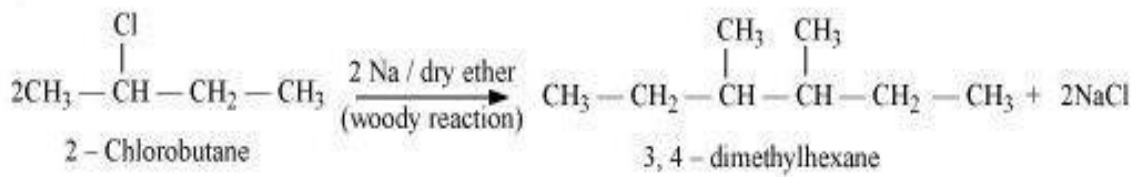
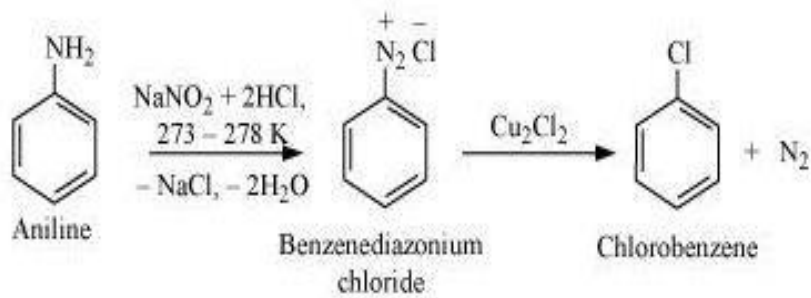
(i) **Nucleophilic Substitution reactions:-**

S No.	Reagent	Nucleophile	Products	Class of products
1.	NaOH, KOH, AgOH	-OH	R - OH	Alcohols
2.	R' - ONa	-OR'	R' - O - R	Ethers
3.	NaCN, KCN AgCN	- CN - NC	R - CN R - NC	Cyanides(Nitriles) Iso-cyanides
4.	KNO <sub>2</sub> AgNO <sub>2</sub>	- O - N = O - NO <sub>2</sub>	R - O - N = O R - NO <sub>2</sub>	Alkyl nitrite Nitroalkanes
5.	R'COOAg	- OOCR'	R - OOR'	Esters
6.	NH <sub>3</sub>	- NH <sub>2</sub>	R - NH <sub>2</sub>	Amines
7.	LiAlH <sub>4</sub>	- H	R - H	Alkanes

Preparation of haloarenes & other aromatic compounds from Diazonium salts



## SOME CONVERSIONS

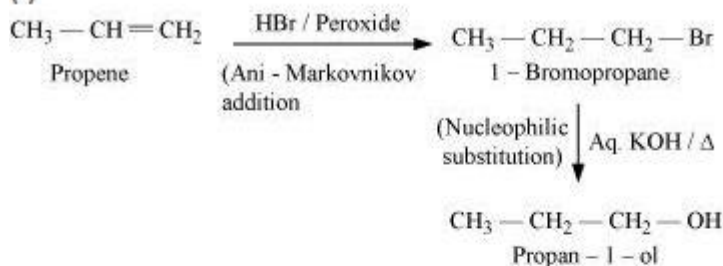


## SOME IMPORTANT CONVERSIONS

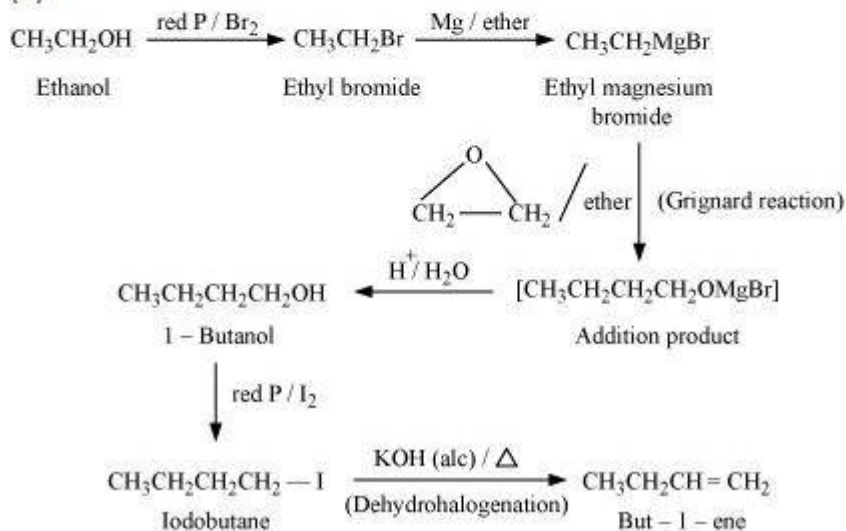
(I) PROPENE to PROPAN-1-OL

(II) ETHANOL to BUT-1-ENE

(i)



(ii)



## Naming Reactions

### **Wurtz-Fittig reaction**

A mixture of an alkyl halide and aryl halide gives an alkylarene when treated with sodium in dry ether and is called Wurtz-Fittig reaction.

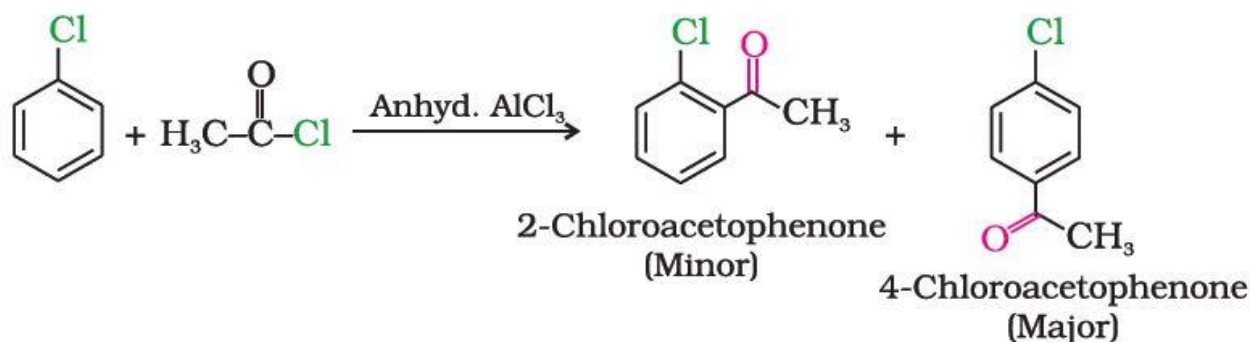
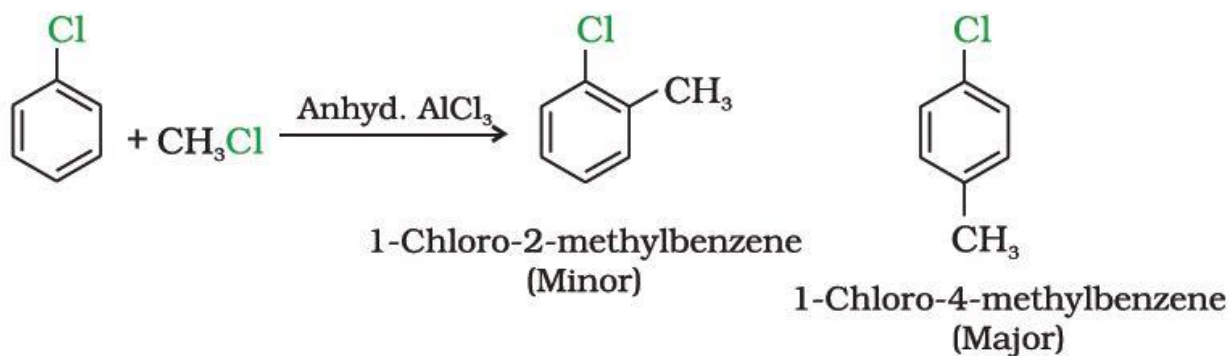


### **Fittig reaction**

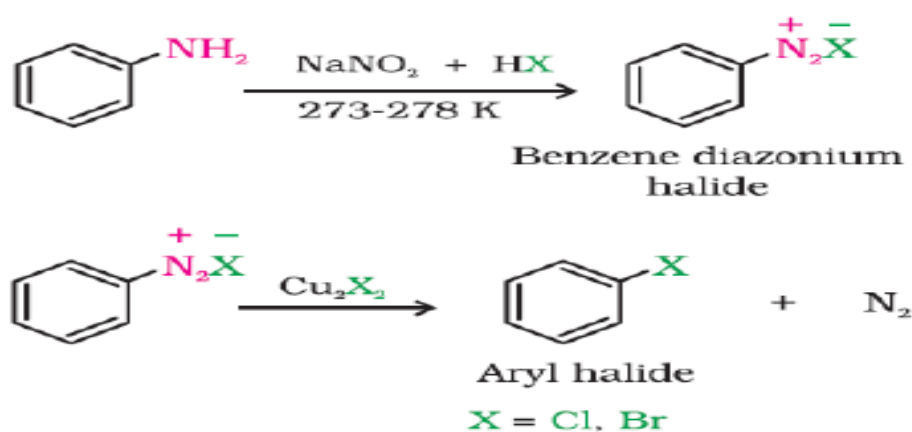
Aryl halides also give analogous compounds when treated with sodium in dry ether, in which two aryl groups are joined together. It is called Fittig reaction.



(iv) Friedel-Crafts reaction



SANDMAYER REACTION



GATTERMANN REACTION

