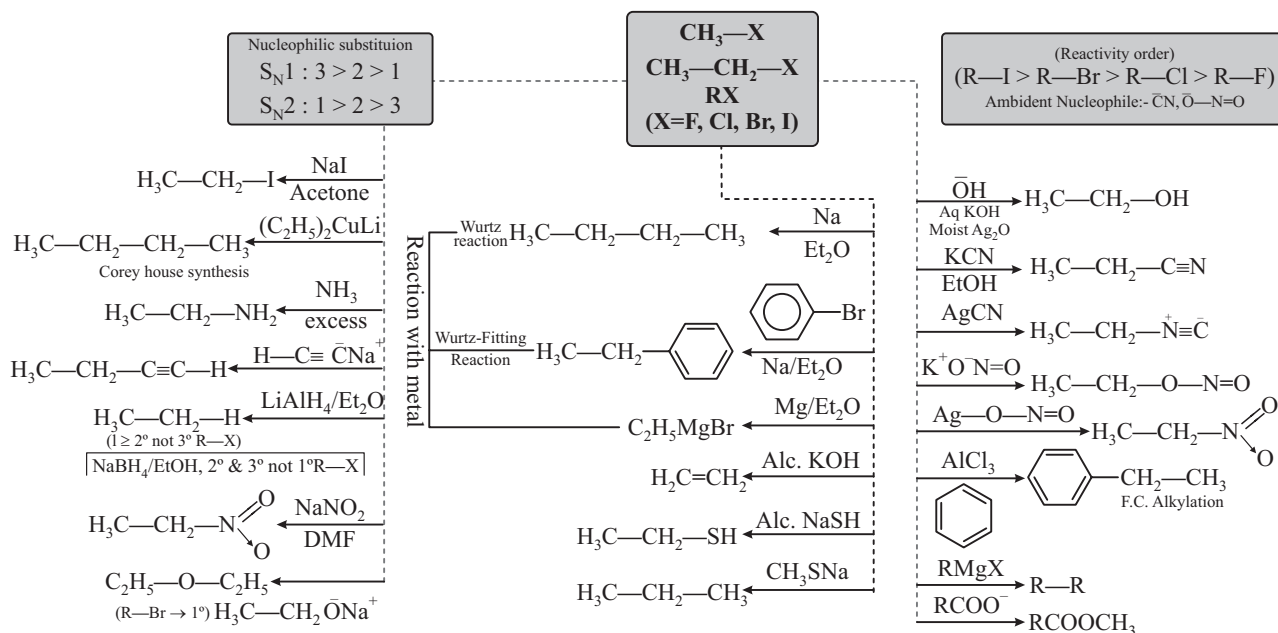
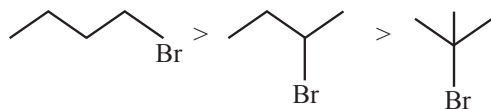


## Chemical Reactions of Alkyl Halides



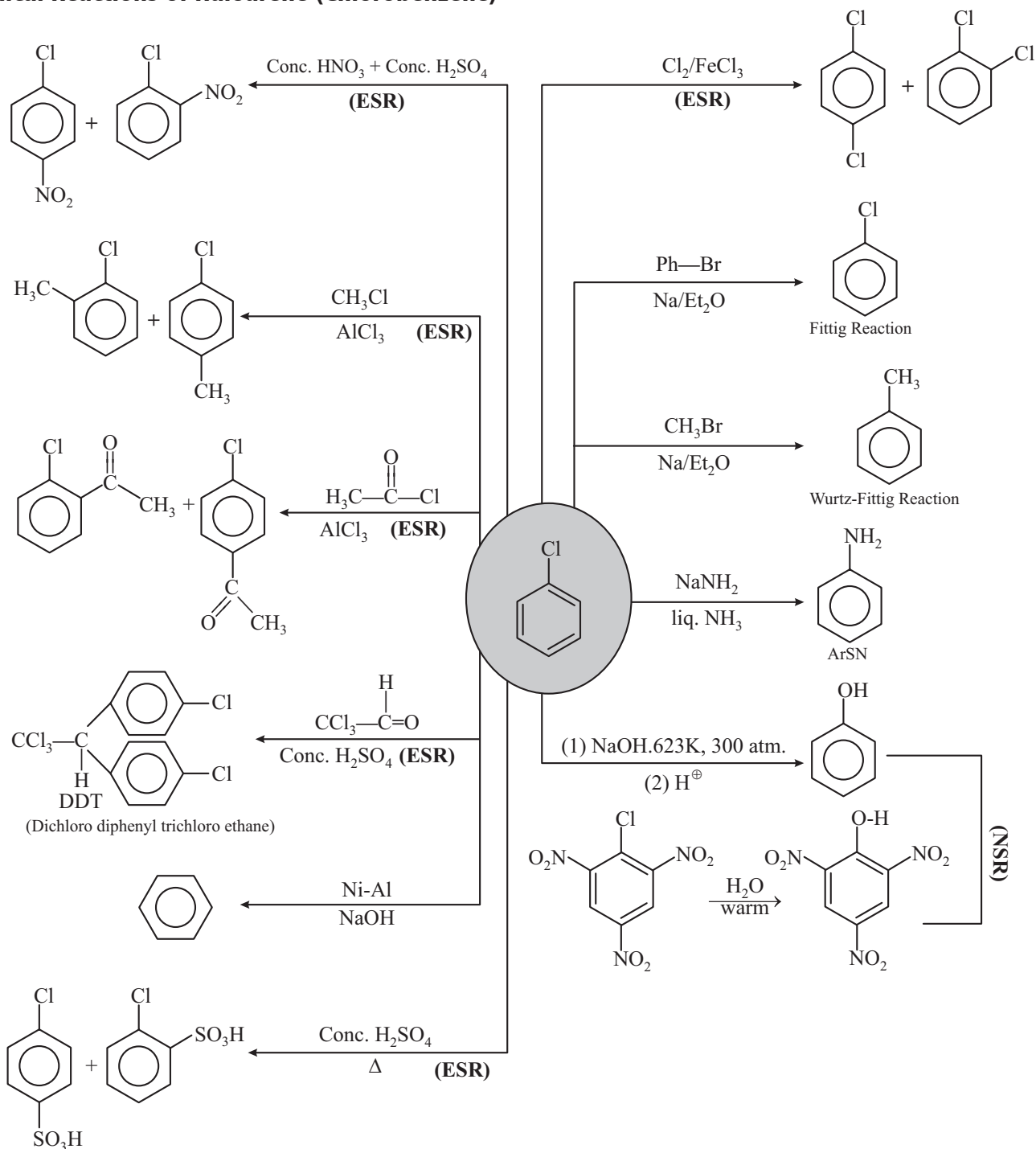
## Physical Properties of Alkyl Halides

- Dipole moment:  $\text{CH}_3\text{—Cl} > \text{CH}_3\text{—F} > \text{CH}_3\text{—Br} > \text{CH}_3\text{—I}$
- Bond enthalpies:  $\text{CH}_3\text{—F} > \text{CH}_3\text{—Cl} > \text{CH}_3\text{—Br} > \text{CH}_3\text{—I}$
- Boiling point:  $\text{R—I} > \text{R—Br} > \text{R—Cl} > \text{R—F}$

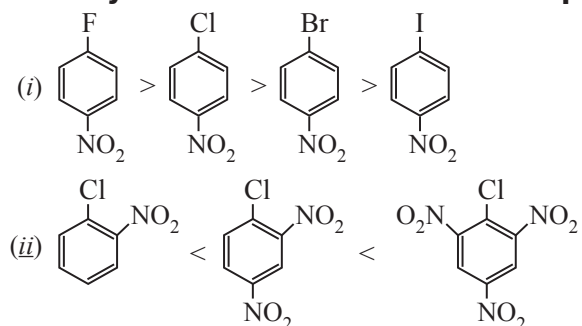


- Density:  $n\text{—C}_3\text{H}_7\text{Cl} < n\text{—C}_3\text{H}_7\text{Br} < n\text{—C}_3\text{H}_7\text{I}$
- Solubility  $\rightarrow$  slightly soluble in water

## Chemical Reactions of Haloarene (Chlorobenzene)

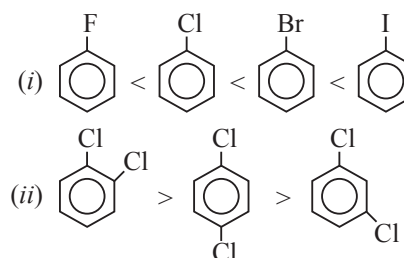


## Reactivity of Haloarenes Towards Nucleophile

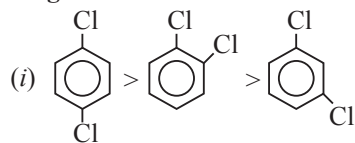


## Physical Properties of Haloarenes

### (A) Boiling Point



**(B) Melting Point**



**Preparation and Chemical Reactions of Trichloro-Methane**

