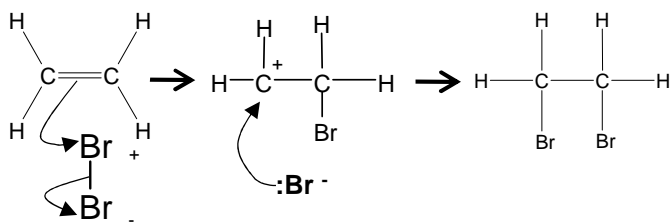
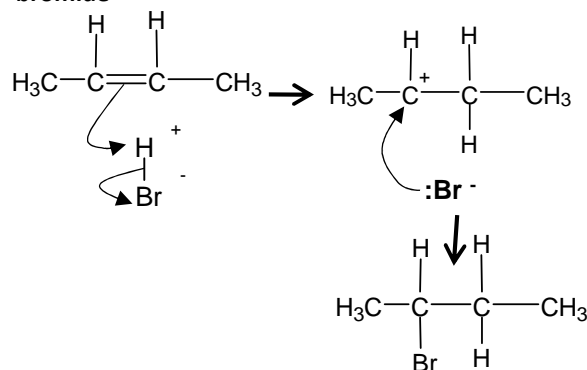


Organic Reaction Mechanisms

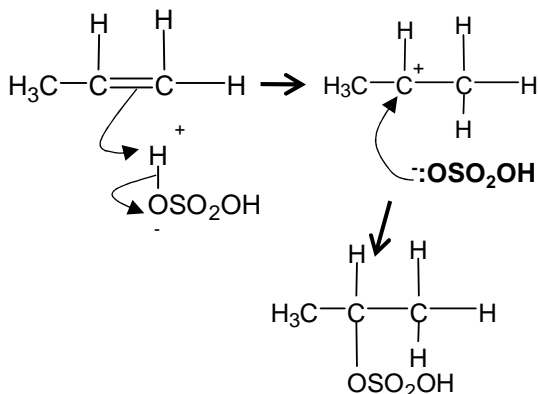
Electrophilic Addition of Alkenes with Bromine



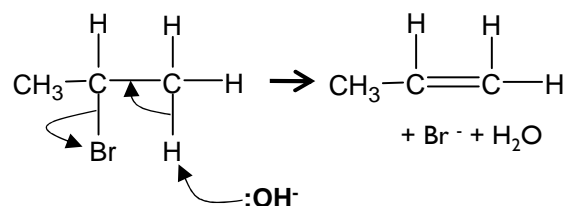
Electrophilic Addition of Alkenes with hydrogen bromide



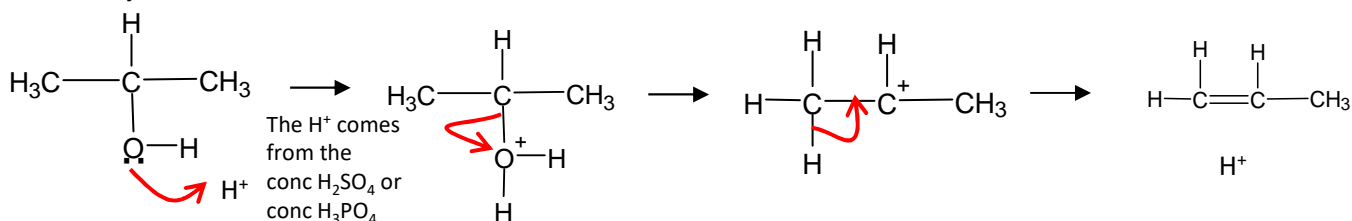
Electrophilic Addition of Alkenes with sulphuric acid



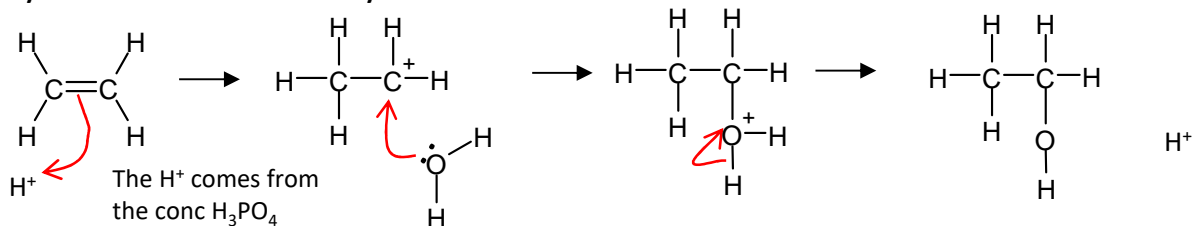
Elimination of Halogenoalkanes with ethanolic hydroxide ions



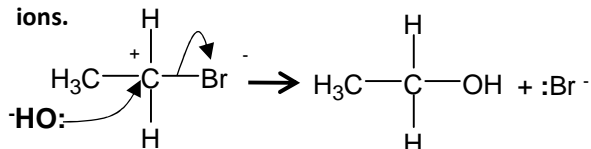
Acid catalysed elimination mechanism: alcohols \rightarrow alkenes



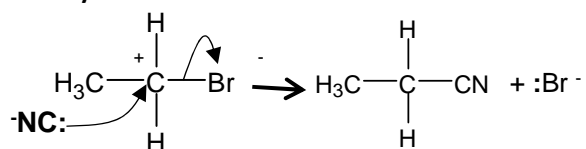
Acid catalysed addition mechanism for hydration of ethene



Nucleophilic Substitution of Halogenoalkanes with aqueous hydroxide ions.



Nucleophilic Substitution of Halogenoalkanes with cyanide ions.



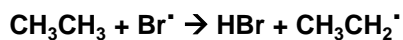
Free Radical Substitution of Alkanes with Bromine

STEP ONE Initiation

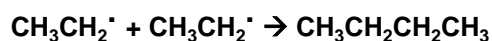
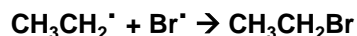
Essential condition: UV light



STEP TWO Propagation

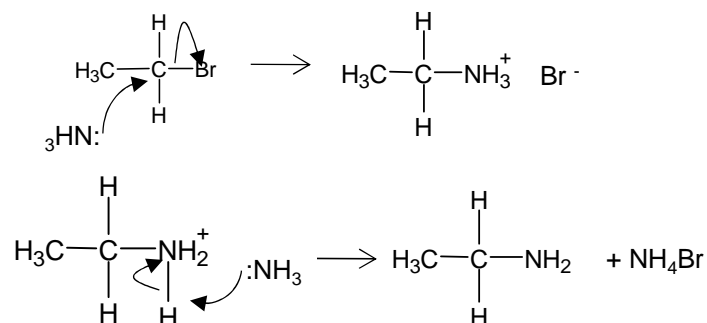


STEP THREE Termination



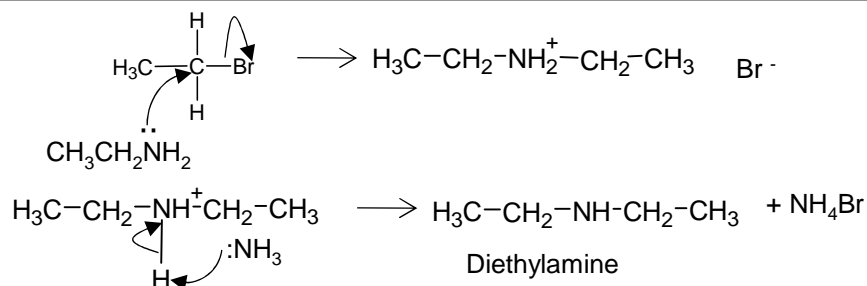
Nucleophilic Substitution reactions of ammonia/amines

Reaction 1 with ammonia forming primary amine

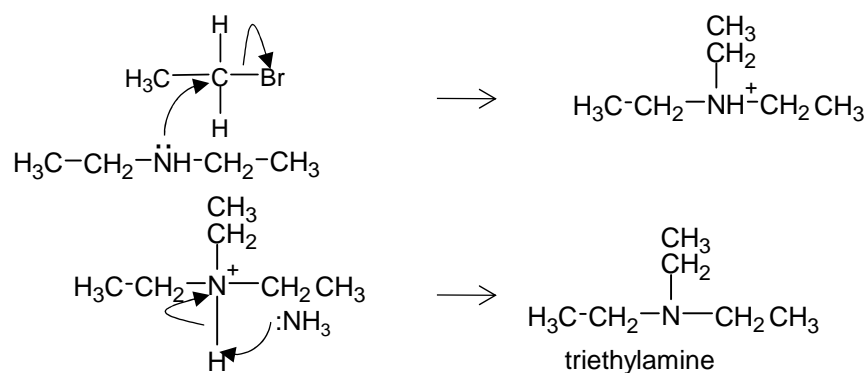


Reaction 2 forming secondary amine

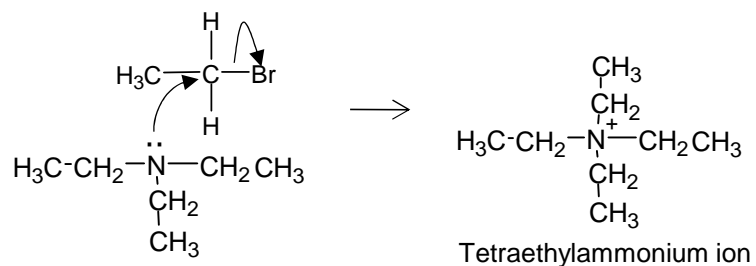
The amine formed in the first reaction has a lone pair of electrons on the nitrogen and will react further with the haloalkane.



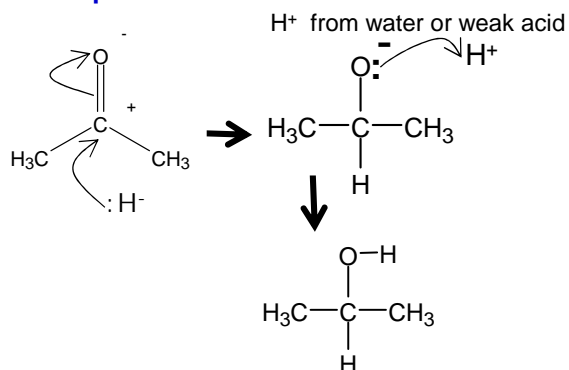
Reaction 3 forming a tertiary amine



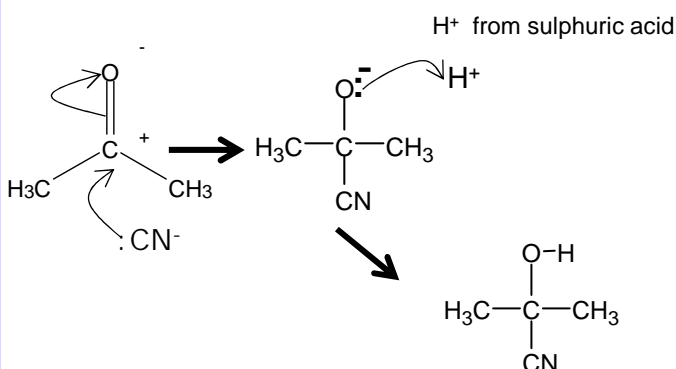
Reaction 4 forming a quaternary ammonium salt



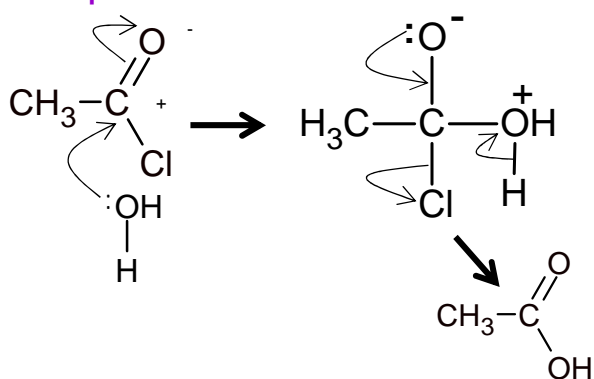
Nucleophilic Addition Mechanism



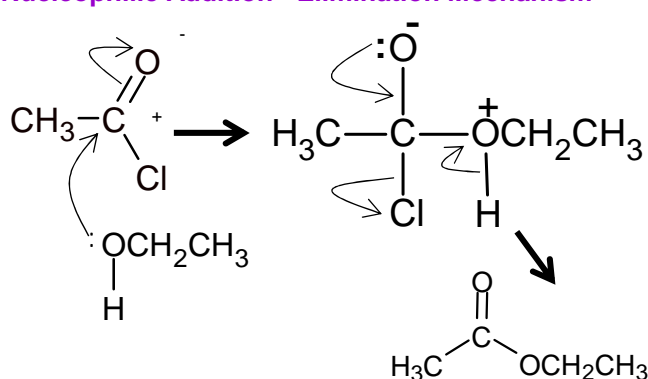
Nucleophilic Addition Mechanism



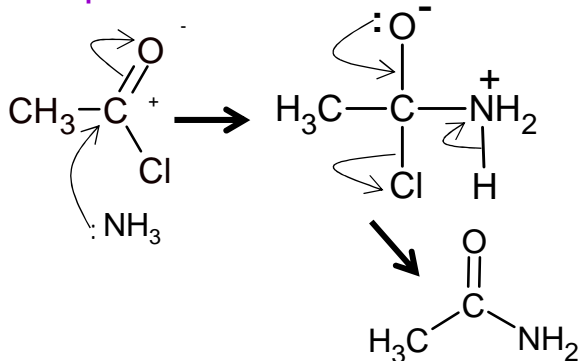
Nucleophilic Addition –Elimination Mechanism



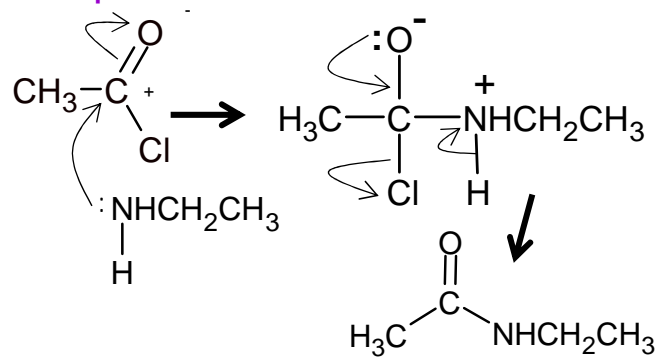
Nucleophilic Addition –Elimination Mechanism



Nucleophilic Addition –Elimination Mechanism

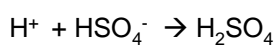
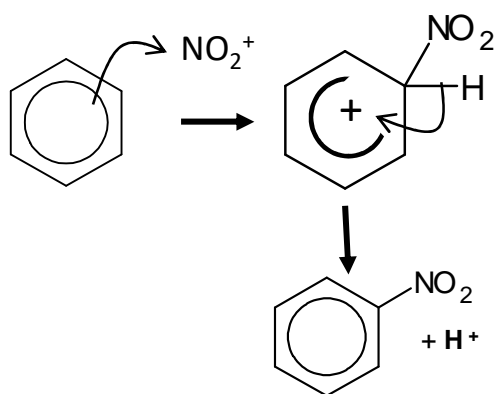


Nucleophilic Addition –Elimination Mechanism



Electrophilic Substitution

Equation for Formation of electrophile
 $\text{HNO}_3 + 2\text{H}_2\text{SO}_4 \rightarrow \text{NO}_2^+ + 2\text{HSO}_4^- + \text{H}_3\text{O}^+$



Electrophilic Substitution

Equation for Formation of the electrophile.
 $\text{AlCl}_3 + \text{CH}_3\text{COCl} \rightarrow \text{CH}_3\text{CO}^+ \text{AlCl}_4^-$

