A substitution is a reaction in which a ligand in an organic molecule is replaced with another ligand.

eg. 1:
\[
\text{H}_2\text{C}\text{Br} + \text{H}_2\text{O} \rightarrow \text{H}_2\text{C} - \text{OH} + \text{HBr}
\]

eg. 2:
\[
\text{H}_2\text{C} - \text{H} + \text{Cl}_2 \xrightarrow{\Delta} \text{H}_2\text{C} - \text{Cl} + \text{HCl}
\]

eg. 3:
\[
\text{Cl} + \text{NaNH}_2 \xrightarrow{\text{NH}_3 (g)} \text{NH}_2 + \text{NaCl}
\]

eg. 4:
\[
\text{Cl} + \text{Cl}_2 \xrightarrow{\text{catalyst: } \text{AlCl}_3} \text{Cl}
\]

see also nucleophilic substitution, electrophilic substitution, allylic substitution

Contributors

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