TOPIC: 7

Diazonium salts – Preparation, synthetic applications and uses.

DIAZONIUM SALT:

I. Preparation of Diazonium salt:

When primary aromatic amine is treated with nitrous acid in a cool solution, product is unstable compound, known as diazonium salt.

Mechanism of diazotisation:
II. Reactions of diazonium salts:

These salts give substitution reactions and coupling reactions as follows:

1. Substitution reactions:

2. COUPLING REACTIONS:

Coupling reactions are electrophilic substitution reactions. Some examples are as follows:

General reaction
Examples:

\[
\text{Aniline} \xrightarrow{\text{H}^+} \text{p-aminobenzene} \\
\text{Phenol} \xrightarrow{\text{p-hydroxyazobenzene}} \\
\text{Anisole} \xrightarrow{\text{O}_2 \text{N}} \text{Methyl orange}
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