

Maharaja collage, Ara.
Chemistry Department
UG: B.Sc. Part II (Hons.)

Organic Chemistry.
Group "A"

Sandmeyer Reaction.

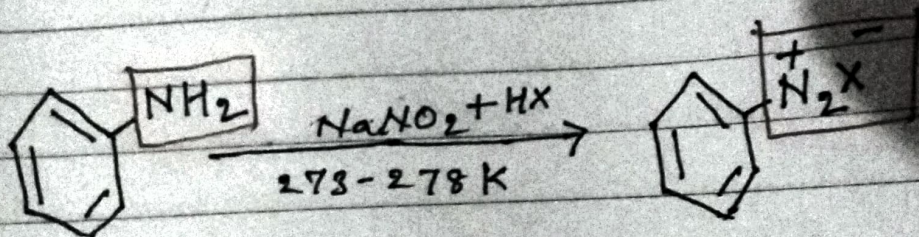
by

Dr. Manju Kumari

Sandmeyer's reaction:

When a primary aromatic amine, dissolved or suspended in cold aqueous mineral acids, is treated with sodium nitrite, a diazonium salt is formed.

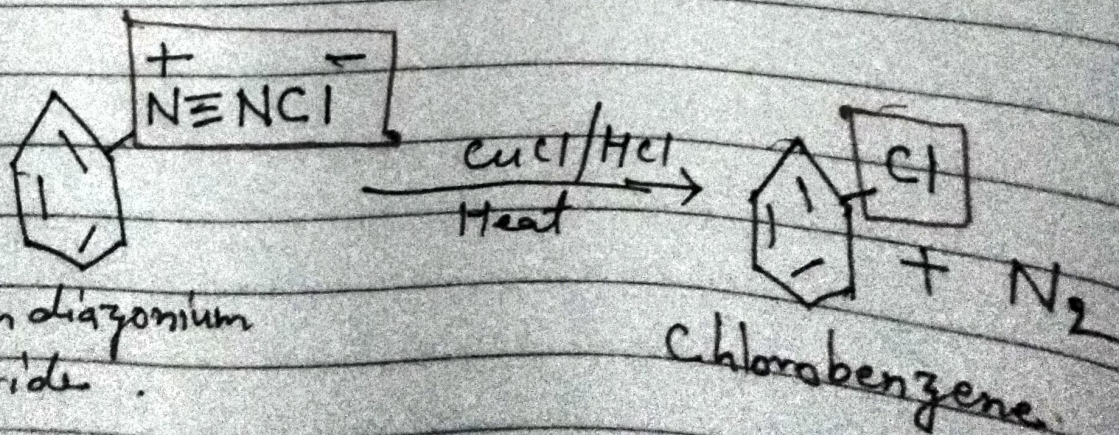
e.g.,



Benzene diazonium
halide.

The conversion of benzene diazonium chloride to chlorobenzene, bromobenzene and benzonitrile on treatment with CuCl/HCl or CuCN/KCN is called Sandmeyer reaction.

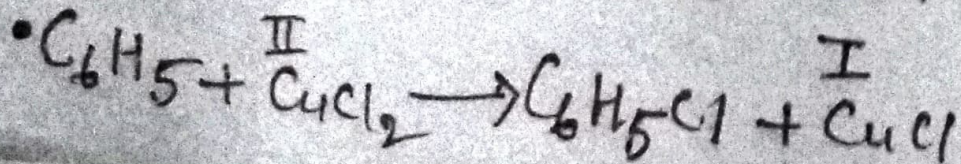
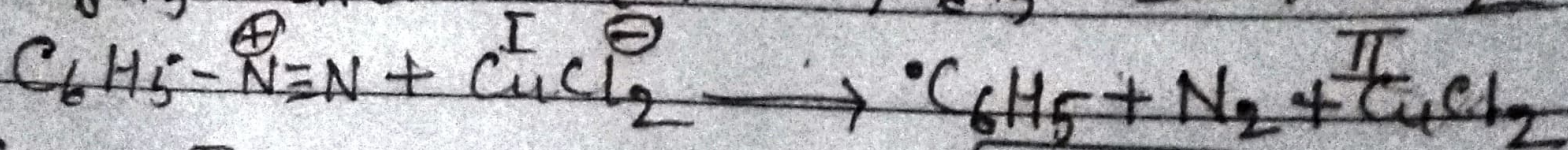
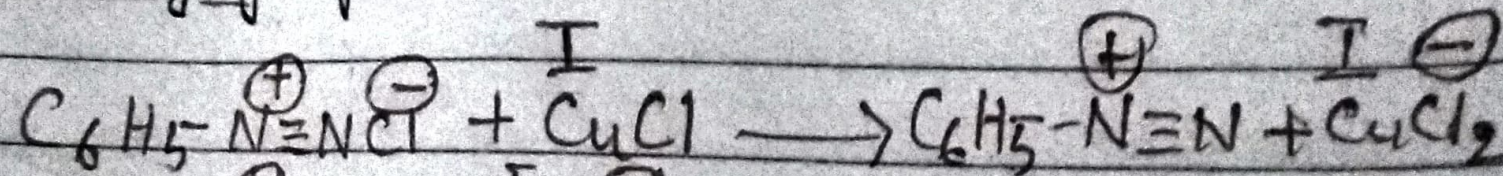
Example:



Chloride.

Mechanism: cuprous copper has the power to reduce diazonium ion to aryl radical by oxidation-reduction involving one electron transfer.

The copper first acts as reducing and then as (II) oxidizing agent.



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