

# Redox Reactions

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## Redox reaction

A Redox reaction is a reaction in which **electron transference** takes place.

A Redox reaction consists of **two halfreactions**, an **oxidation halfreaction** and a **reduction halfreaction**, that takes place **simultaneously**.

During the **oxidation halfreaction** one substance is **oxidised** and is therefore a **reduction agent**.

During the **reduction halfreaction** one substance is **reduced** and is therefore an **oxidation agent**.

There are three main types of redox reactions: **synthesis reactions**, **decomposing reactions** and **displacement reactions**.

During a **synthesis reaction** two or more reactants are **merged** to form a product.

During a **decomposing reaction** a connection is **broken down** in two or more simpler connections.

During a **displacement reaction** one substance in a connection is **replaced** with another substance,

## Oxidation Figures

An oxidation figure is the charge that an atom of an element in a connection would have in case electron transference took place at all connections.

The oxidation figure of:

- An atom of an unbound element is zero.
- Simple ions that only consists of one atom is equal to the ion charge.
- F is -1.
- H is usually +1 except in metal hybrids.
- is -2 except  $\text{H}_2\text{O}_2$  and  $\text{OF}_2$

When the oxidation figures of atoms in a connection must be added up, it has to be equal to the charge of the connection.