OXIDATION AND REDUCTION REACTION

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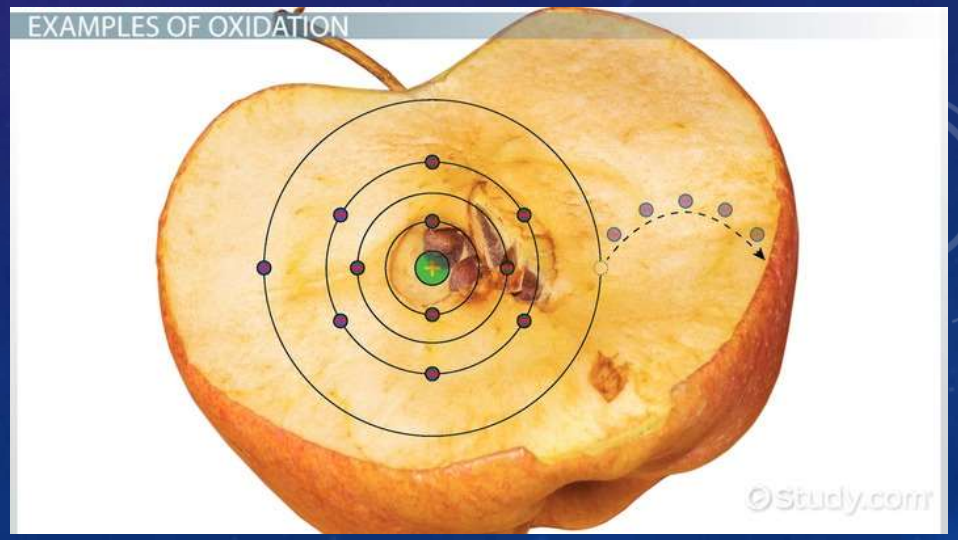
Oxidation:

It is defined as the addition of oxygen to the substance or the removal of hydrogen from the substance.

(In electronic terms loss of electrons is called oxidation.)

For example;

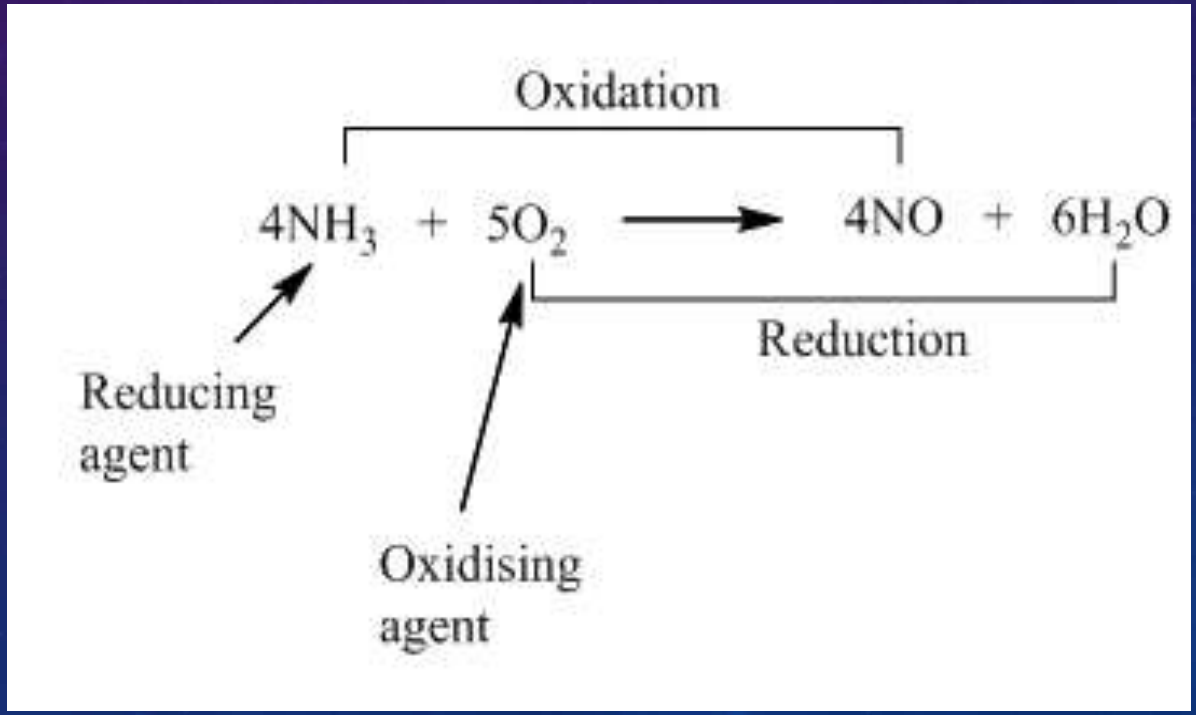
$$C(s) + O_2(g) \rightarrow CO_2(g)$$



Oxidizing agent

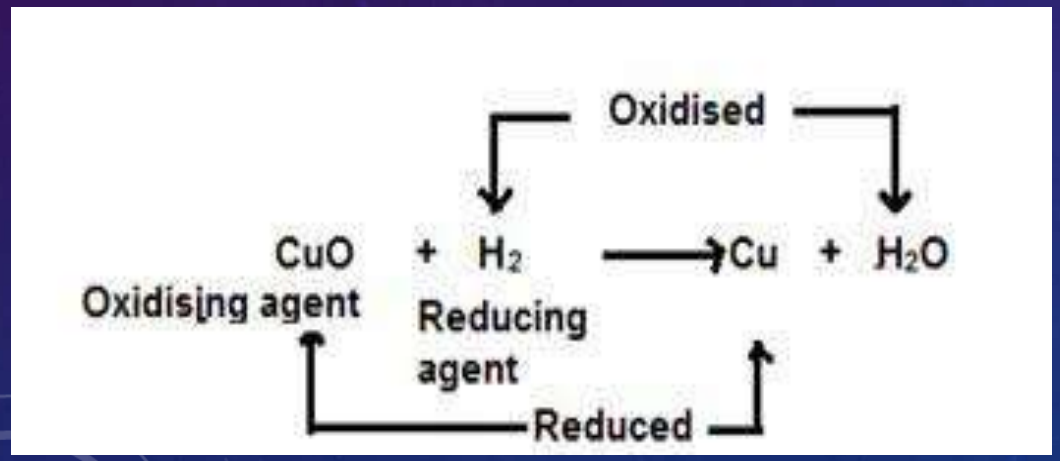
The substances which can add oxygen to other compounds are known as oxidising agents.

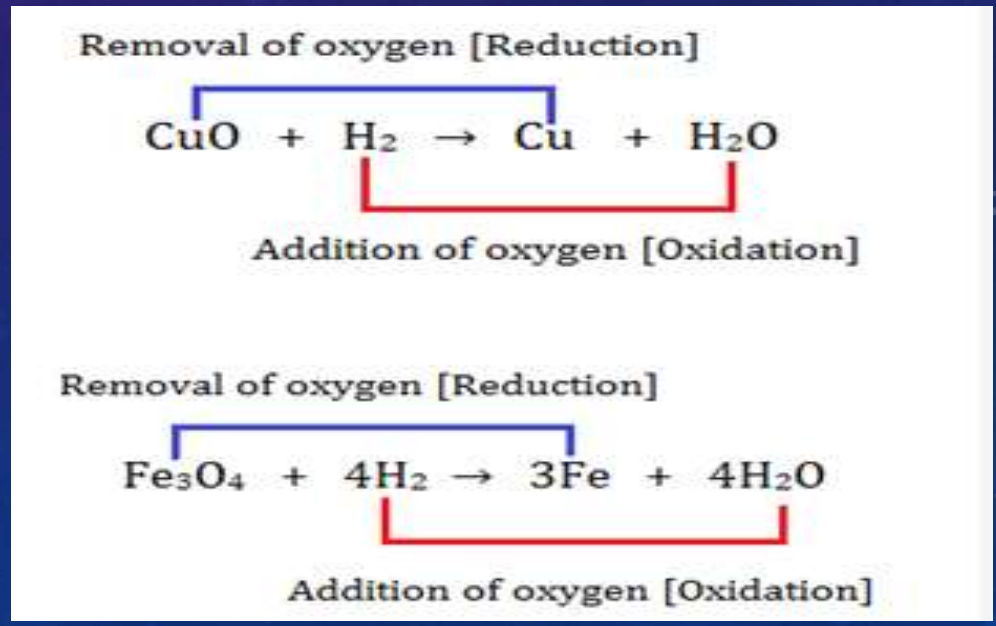
Eg: O2 , O3, HNO3, KMnO4



Reduction reactions

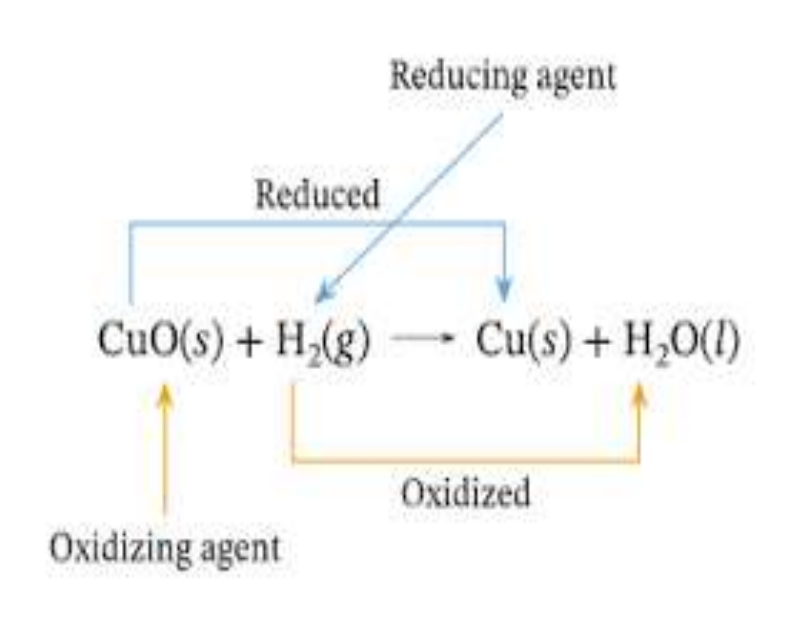
Those reactions **in which hydrogen combines with a substance or oxygen is removed from a** substance, are known as reduction reactions.
For eg:

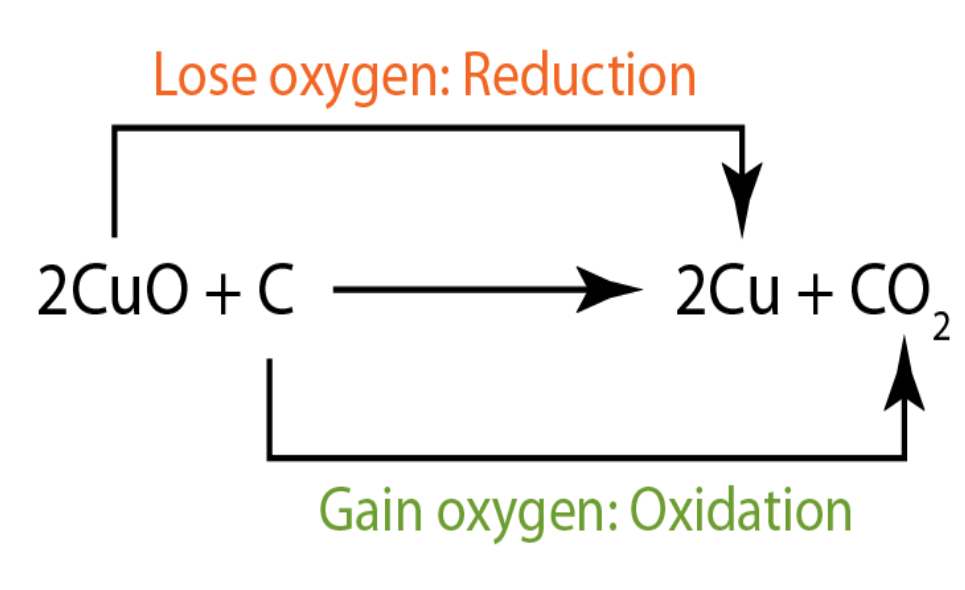




Reducing agent

Reducing agent is a substance that provides Hydrogen or removes Oxygen from other compound.





Oxidising agents	Reducing agents
Bromine (Br_2)	Carbon (C)
Chlorine (Cl_2)	Carbon monoxide (CO)
Concentrated sulphuric acid (H_2SO_4)	Hydrogen (H_2)
Nitric acid (HNO_3)	Hydrogen sulphide (H_2S)
Oxygen (O_2)	Metals
Potassium manganate(VII) ($KMnO_4$)	Potassium iodide (KI)
Potassium dichromate(VI) ($K_2Cr_2O_7$)	Sulphur dioxide (SO_2)
Hydrogen peroxide (H_2O_2)	Ammonia (NH_3)