

Lithium	Li
Potassium	K
Barium	Ba
Sodium	Na
Calcium	Ca
Magnesium	Mg
Aluminium	Al
Zinc	Zn
Iron	Fe
Nickel	Ni
Tin	Sn
Lead	Pb
Hydrogen	H
Copper	Cu
Mercury	Hg
Silver	Ag
Gold	Au
Platinum	Pt



(2,8,1) (2,8)



(2,8,7) (2,8,8)



Example : formation of NaCl

Electrostatic force of attraction due to which positively & negatively charged ions are bonded with each other is known as ionic bond.

Compound containing ionic bonds is known as ionic compound e.g. NaCl, MgO etc.

Definition

Definition

Ionic bond

Ionic compound

Properties

Reactivity series

Chemical properties of non-metal

METALS & NON-METALS

Chemical properties of metal

Reaction with oxygen

Non-metal + Oxygen → Non-metal oxide

C + O₂ → CO₂

S + O₂ → SO₂

Reaction with water

Non-metal + Water → No reaction

Reaction with dilute acid

Non-metal + Acid → No reaction

Reaction with salt solution

More reactive + Salt → Less reactive + Salt
Non-metal + Non-metal



Reaction with Hydrogen

Non-Metal + Hydrogen → Non-Metal hydride



Non-Metal

Metal

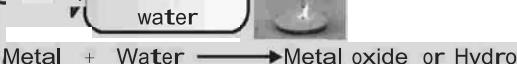
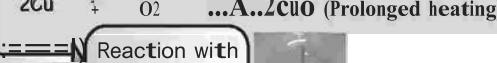
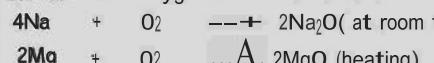
Physical properties of metal & non-metal

- Generally gaseous
- Low m.p. & b.p.
- Brittle
- Generally soft
- Bad conductor of heat & electricity
- Not ductile
- Do not have any lustre
- Not sonorous
- Low density
- Generally Solid
- High m.p. & b.p.
- Malleable
- Generally hard
- Good conductor of heat & electricity
- ductile
- lustrous
- Sonorous
- High density

- (i) Consist of ions
- (ii) Solid & hard due to strong electrostatic force of attraction
- (iii) Definite crystal structure
- (iv) High m.p. & b.p.
- (v) Soluble in polar solvents like H₂O
- (vi) Brittle nature
- (vii) Good conductor of electricity in molten and aqueous state

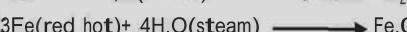
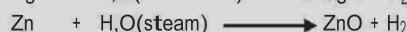
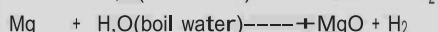
Reaction with oxygen

Metal + Oxygen → Metal oxide

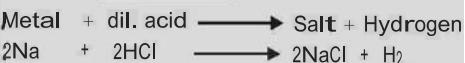


Reaction with water

Metal + Water → Metal oxide or Hydroxide + H₂



Reaction with dilute acid



Reaction with salt solution

More reactive metal + Salt → less reactive metal + salt

