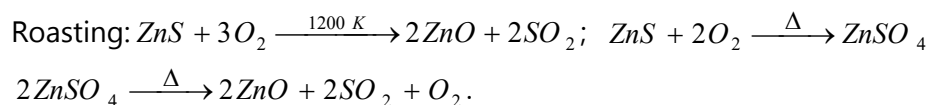


## Zinc and its Compounds.

Ores: Zincite (red zinc ore)  $ZnO$ , Franklinite ( $ZnFe_2O_3$ ), Zinc blende ( $ZnS$ ), Calamine (Zinc spar)  $ZnCO_3$ .

Extraction: Concentration: Froth floatation



Reduction of ZnO: The oxide ore is mixed with crushed coke and heated to about 1670K in fire clay retorts (Belgian process). The crude metal obtained called Zinc spelter.

Refining: By distillation and by electrolytic method

Anode: Spelter; Cathode: Pure zinc wire; Electrolyte: Zinc sulphate.

Note: Zinc is a volatile metal (easily vaporizable)

At ordinary temperature zinc metal is brittle but on heating at  $120 - 150^\circ C$  it is malleable and ductile.

Compounds of zinc

Zinc oxide ZnO: Zincite (ZnO) is also called Philosopher's wool. It is white powder, become yellow on heating and again white on cooling. It is amphoteric in nature. It is used as a white pigment under the name Zinc white or Chinese white.

Zinc Sulphate (white vitriol),  $ZnSO_4 \cdot 7H_2O$ : It is a colourless transparent crystal highly soluble in water.

It is used as an eye-lotion and for preparing double salts. On heating it loses its molecules of water as,

