

Chapter 11

Principles of Metallurgy

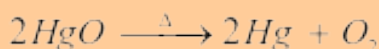
Extraction of less reactive metals:

- Less reactive metals means the metals, which are present in the bottom of metal activity series.
- Least reactive metals will be mostly available in native state or free state.
- If they are available in their compound form they can be converted into their oxides and oxides can be reduced by simple heat or replacement by more reactive metals.

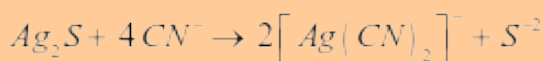
Ex. Cinnabar (HgS) is an ore of mercury can be roasted to obtain mercuric oxide (HgO).



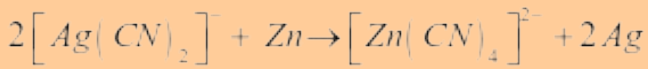
Mercuric oxide can be heated to obtain mercury in its metallic form.



- Sulphide ore of silver (Ag_2S) roasted to obtain silver oxide (Ag_2O) or can be dissolved in potassium cyanide (KCN) to form dicyanoargentate ions.



These ions from solution can be precipitated as pure silver by adding zinc metal.



- Either by simple heating or by displacement using least reactive metals can be obtained in their elemental form.

