III.—PREPARATION.

(1) The Sulphide or Carbonate is roasted at a high temperature in order to convert it into the oxide.	(1) The metal is obtained with difficulty by the reduction of the oxide by heating it with Charcoal, at a very high temperature.	(1) The metal in the form of a grey pyrophoric powder may be prepared, on a small scale, by the reduction of the oxide in a stream of hydrogen gas.	(1) Same as Nickel; powder is dark grey, also pyrophoric.	(1) A button of pure iron may be obtained by exposing fine iron wire, mixed with some oxide of iron (FeO, Fe_2O_3 or Fe_3O_4) and powdered glass, to a high temperature in a covered crucible. The Carbon of the iron wire is burned by the oxygen of the oxide—the oxide in excess is taken up by the molten glass.
(2) The oxide is then reduced by strongly heating it with Carbon—Carbon Monoxide escapes, the metallic Zinc distils over, and may be condensed.	(2) By the reduction of Manganous Fluoride by means of Sodium.	(2) By strongly heating Nickelous Oxalate, NiC_2O_4.	(2) and (3) Same as Nickel, but in a compact condition.	(2) Pure iron, in the form of a black powder, is obtained by the reduction of the oxides at a moderate heat in a current of hydrogen. This powder (so called Pyrophorous) immediately takes fire and burns to oxide when exposed to the air.
	(3) By the reduction of a mixture of Manganous Chloride and Calcium Fluoride by means of Sodium.	(3) In a fused state by the reduction of its oxide by means of Charcoal at a white heat.		(3) If a stream of dry hydrogen gas be passed over heated Ferrous Chloride $FeCl_2$ contained in a glass tube, a bright metallic mirror of pure iron will be found coating the side of the tube.