

Metals and their Compounds

Lecture 3.1

Most metals have crystalline structures based on close packed layers.

Hexagonal cp : sodium, magnesium

Cubic cp : copper, iron (γ -form)

Cubic cp is identical to a lattice based on the *face-centred cube*. The lattices based on the cube are shown in Fig 11.31 in BLB.

The cubic lattice *body-centred cubic* is *not* close-packed, but is also common for metals

Body-centered cubic : iron (α -form), chromium

Iron changes from α -form to γ -form at 900°C