Documents sur les cristaux ioniques

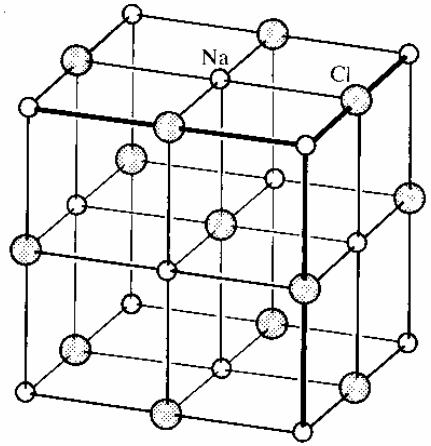

Fig. 4.11 The rock-salt structure. Note i
relation to the fcc structure in Fig. 4.6a, v ın
anion in each octahedral hole. Alternatively,
treat the lattice as the location of anions, in
which case the cations occupy the octahedral
holes.

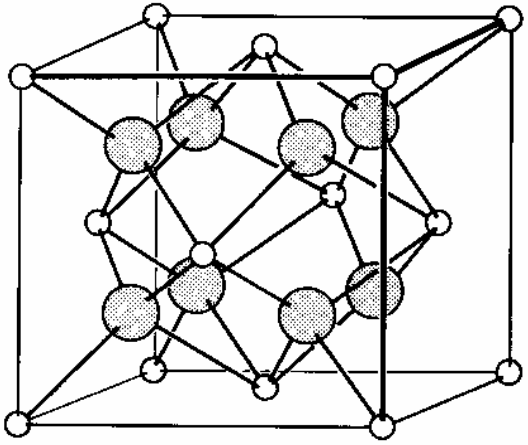

Fig. 4.14 The antifluorite and fluorite structures. These too are related to the fcc structure, but all the tetrahedral holes are occupied (Fig. 4.6b).

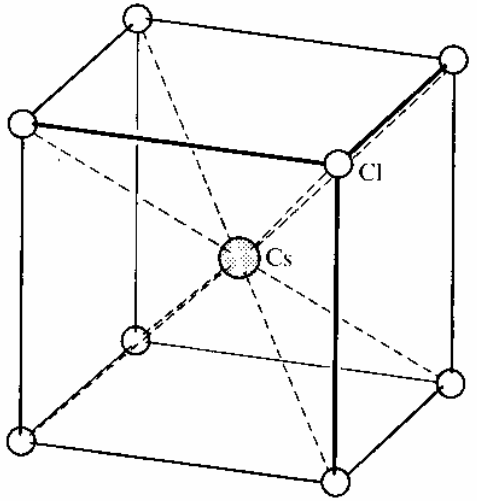

Fig. 4.12 The cesium chloride structure. Note that the corner ions, which are shared by eight cells, are surrounded by eight nearest-neighbor center atoms.

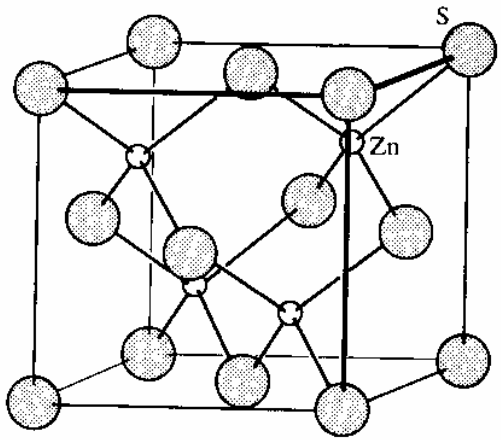

Fig. 4.13 The sphalerite (zinc blende) structure. Note its relation to the fcc structure in Fig. 4.6b, with half the tetrahedral holes occupied by Zn^{2+} ions.

Table 4.1. Compounds with particular crystal structures

Crystal structure	Example*
Antifluorite	K_2O, K_2S, Li_2O, Na_2O, Na_2Se, Na_2S
Cesium chloride	**CsCl**, CaS, TlSb, CsCN, CuZn
Fluorite	**CaF_2**, UO_2, $BaCl_2$, HgF_2, PbO_2
Nickel arsenide	**NiAs**, NiS, FeS, PtSn, CoS
Perovskite	**$CaTiO_3$**, $BaTiO_3$, $SrTiO_3$
Rock-salt	**NaCl**, LiCl, KBr, RbI, AgCl, AgBr, MgO, CaO, TiO, FeO, NiO, SnAs, UC, ScN
Rutile	**TiO_2**, MnO_2, SnO_2, WO_2, MgF_2, NiF_2
Sphalerite (zinc blende)	**ZnS**, CuCl, CdS, HgS, GaP, InAs
Wurtzite	**ZnS**, ZnO, BeO, MnS, AgI, AlN, SiC, NH_4F

* The substance in bold type is the one that gives its name to the structure.