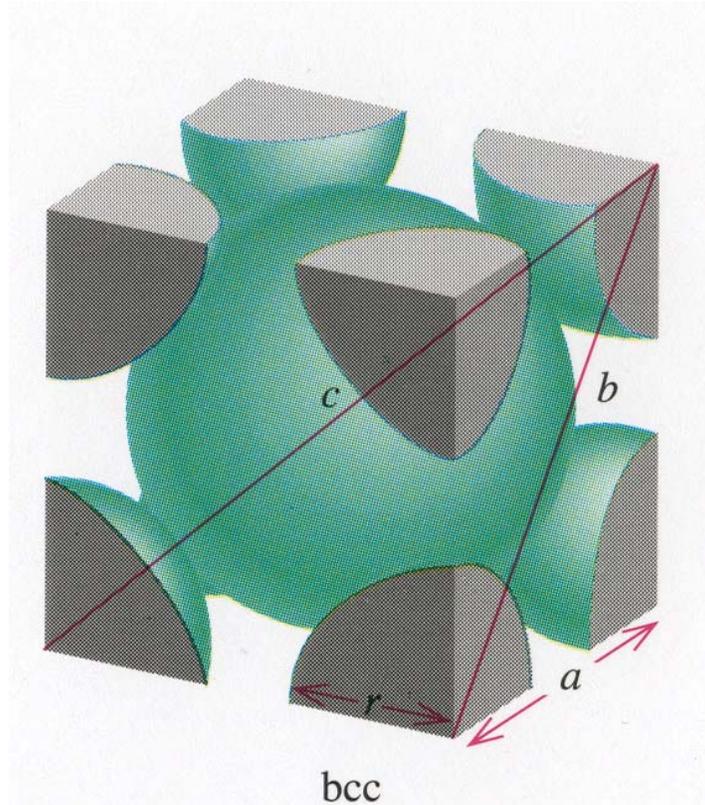


Metals and their Compounds

Lecture 3.5

Body-centered cube (p 417 BLB)



cube length = a

atom radius = r

Atoms *touch* along *body-diagonal* of cube, so

$$c = 4r \text{ and } r = c/4$$

$$b^2 = 2a^2 \text{ and } c^2 = a^2 + 2a^2 \text{ so } c = \sqrt{3}a$$

$$\text{so } r = \sqrt{3}a/4$$