Crystal Structures

Notes

Crystalline :

Amorphous:

Ionic:

Metallic:

Covalent Network:

Molecular:

Simple Cubic

Number of atoms/cell = a =

Polonium forms a simple cubic unit cell. The radius of a Po atom is 118 pm. What is the volume of a unit cell of polonium? How many atoms are there per unit cell of polonium?

Face Centered Cubic

Number of atoms/cell = a =

Nickel forms a face centered cubic unit cell. The radius of a nickel atom is 125 pm. What is the density of nickel in grams/cm3?

Body Centered Cubic

Number of atoms/cell = a =

Tungsten forms a body centered cubic unit cell. The density of tungsten is 19.3 g/cm3. What is the radius of a tungsten atom?



