

Table 4.1

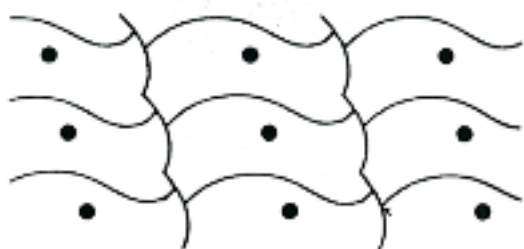
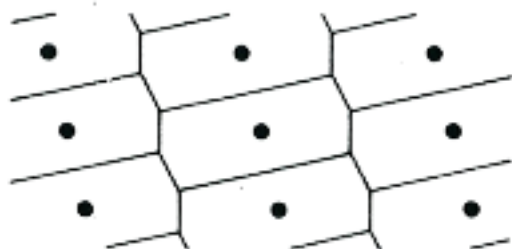
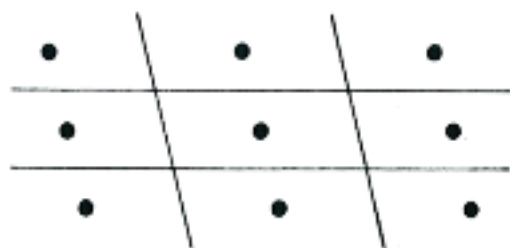
**ELEMENTS WITH THE MONATOMIC FACE-CENTERED
CUBIC CRYSTAL STRUCTURE**

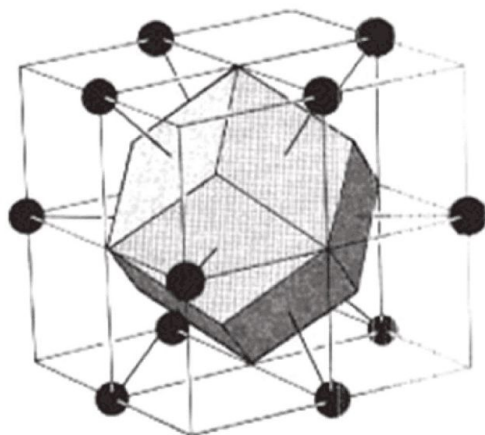
ELEMENT	a (Å)	ELEMENT	a (Å)	ELEMENT	a (Å)
Ar	5.26 (4.2 K)	Ir	3.84	Pt	3.92
Ag	4.09	Kr	5.72 (58 K)	δ -Pu	4.64
Al	4.05	La	5.30	Rh	3.80
Au	4.08	Ne	4.43 (4.2 K)	Sc	4.54
Ca	5.58	Ni	3.52	Sr	6.08
Ce	5.16	Pb	4.95	Th	5.08
β -Co	3.55	Pd	3.89	Xe (58 K)	6.20
Cu	3.61	Pr	5.16	Yb	5.49

Table 4.2

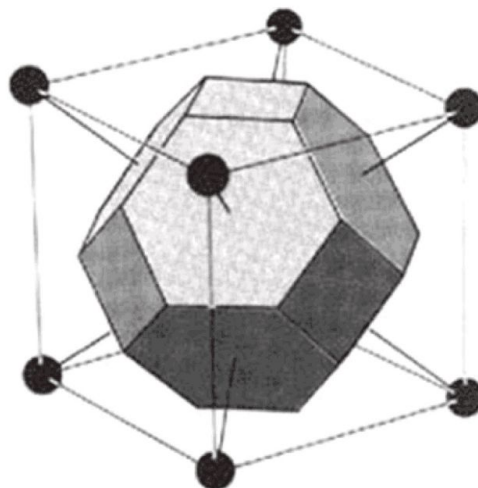
**ELEMENTS WITH THE MONATOMIC BODY-CENTERED
CUBIC CRYSTAL STRUCTURE**

ELEMENT	a (Å)	ELEMENT	a (Å)	ELEMENT	a (Å)
Ba	5.02	Li	3.49 (78 K)	Ta	3.31
Cr	2.88	Mo	3.15	Tl	3.88
Cs	6.05 (78 K)	Na	4.23 (5 K)	V	3.02
Fe	2.87	Nb	3.30	W	3.16
K	5.23 (5 K)	Rb	5.59 (5 K)		



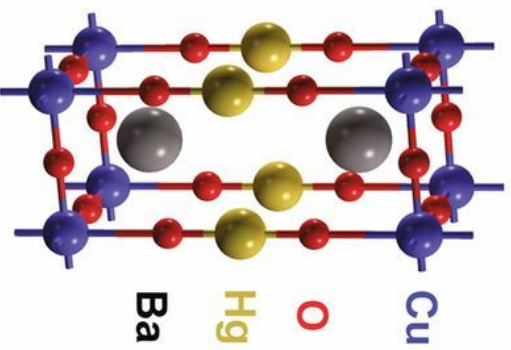


Face-centered cubic
Rhombic dodecahedron

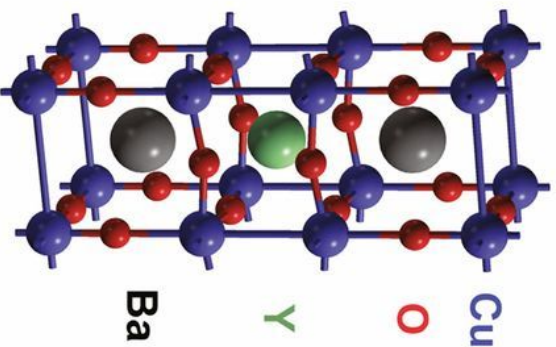


Body-centered cubic
Truncated octahedron

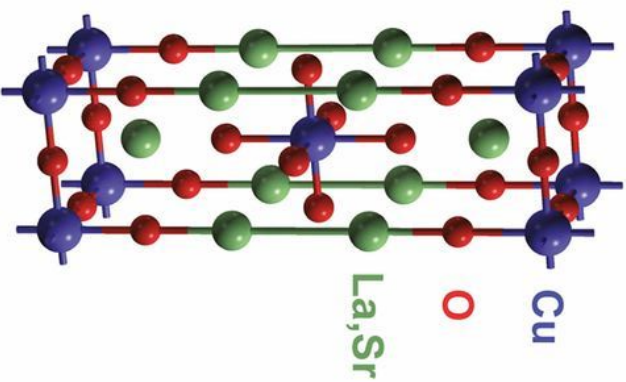
$\text{HgBa}_2\text{CuO}_{4+\delta}$
(Hg1201)



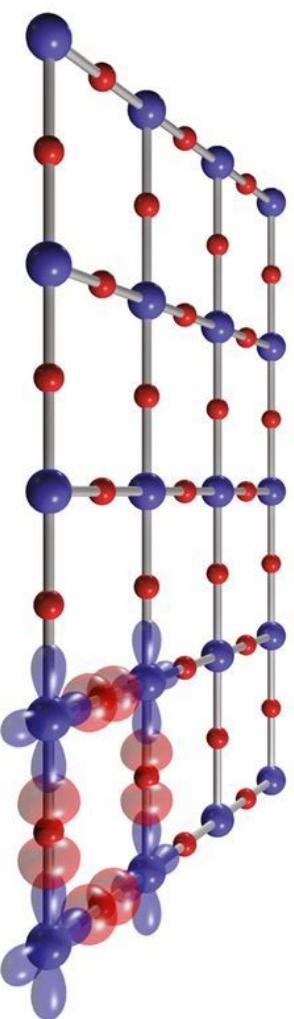
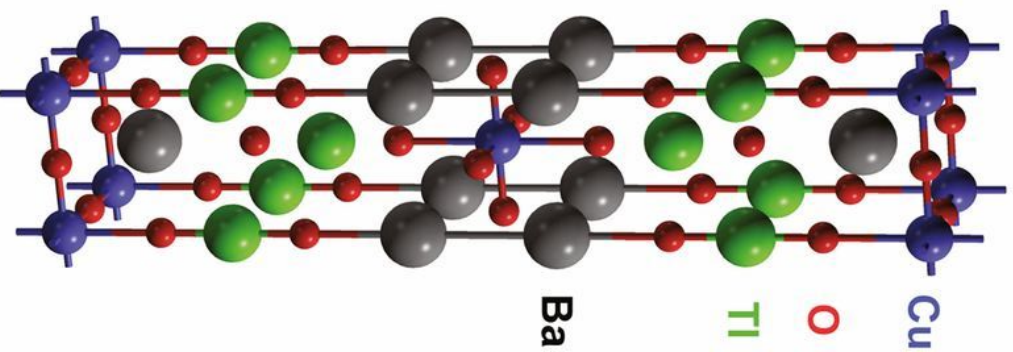
$\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$
(YBCO)



$\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$
(LSCO)



$\text{Tl}_2\text{Ba}_2\text{CuO}_{6+\delta}$
(Tl2201)



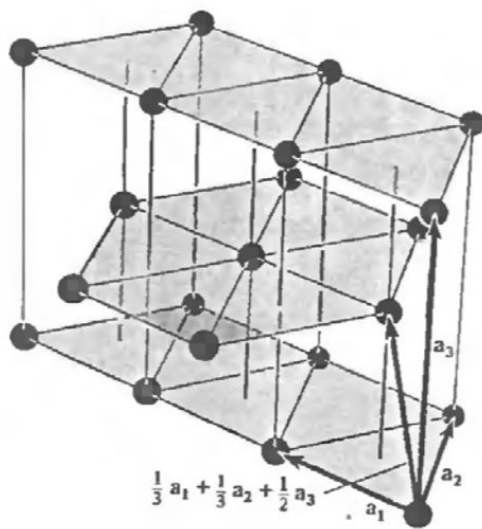
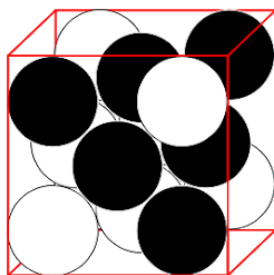
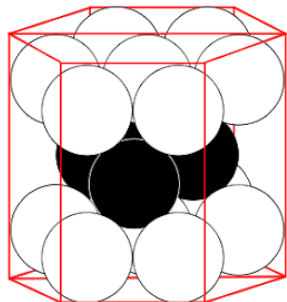
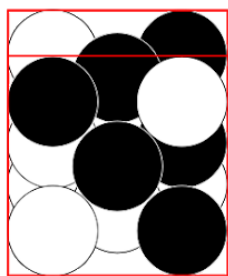
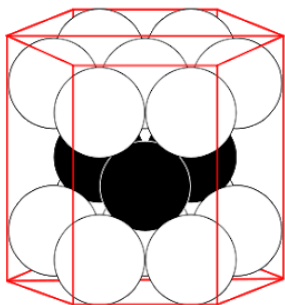
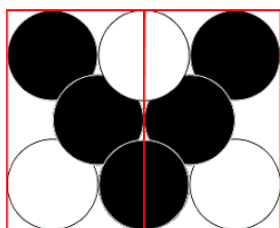
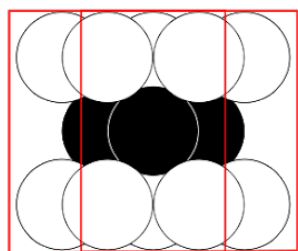
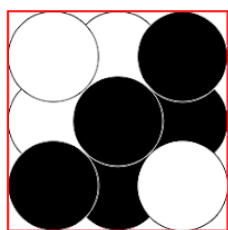
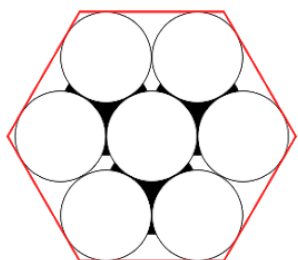
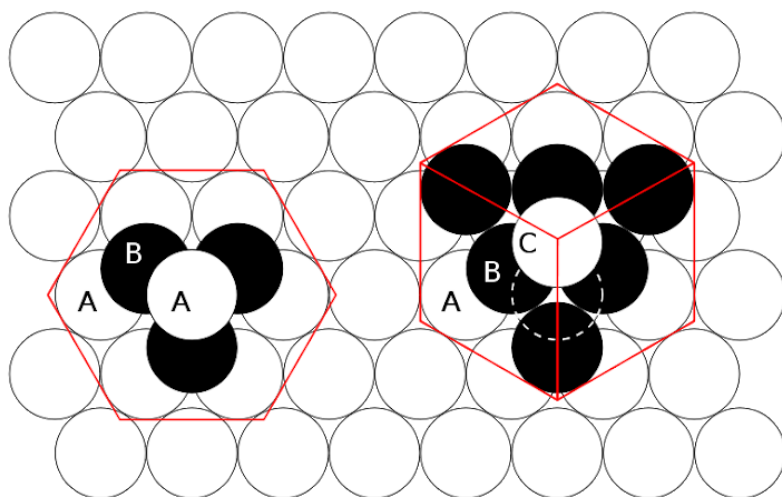
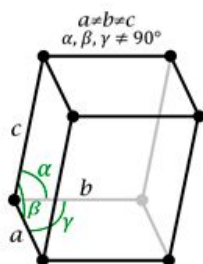


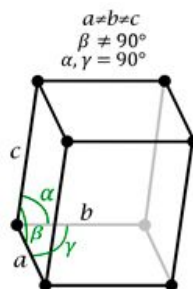
Figure 4.20

The hexagonal close-packed crystal structure. It can be viewed as two interpenetrating simple hexagonal Bravais lattices, displaced vertically by a distance $c/2$ along the common c -axis, and displaced horizontally so that the points of one lie directly above the centers of the triangles formed by the points of the other.



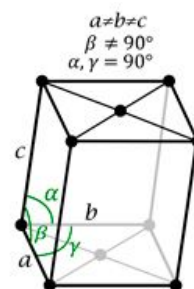


Triclinic

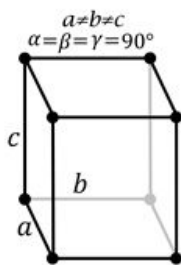


P

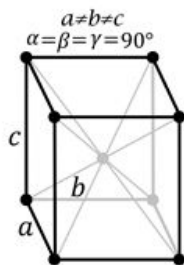
Monoclinic



C

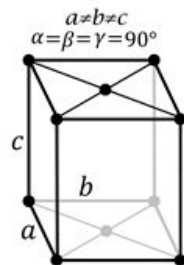


P

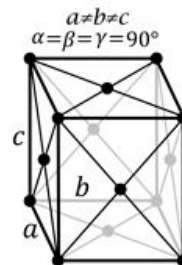


I

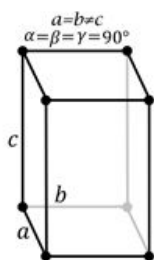
Orthorhombic



C

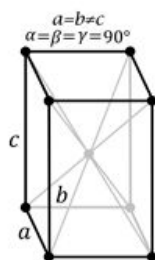


F

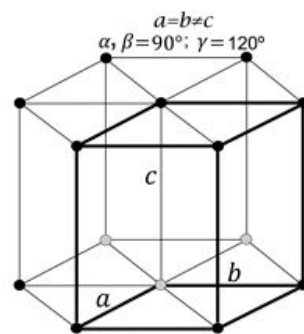


P

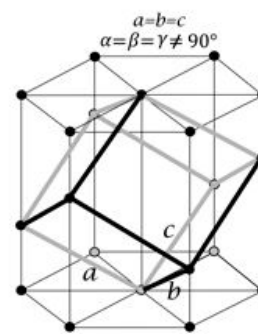
Tetragonal



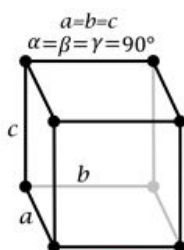
I



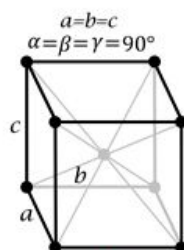
Trigonal / Hexagonal P



Trigonal R

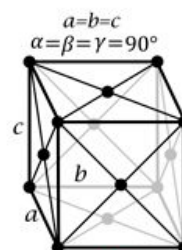


P

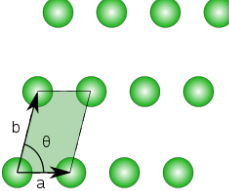
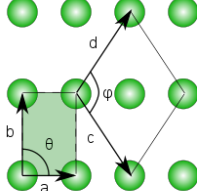
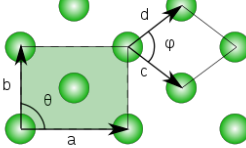
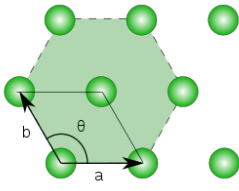
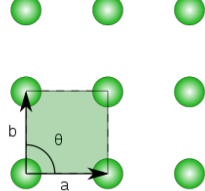


I

Cubic



F

 <p>1</p>	 <p>2</p>  <p>3</p>	 <p>4</p>	 <p>5</p>
<p>$a \neq b , \theta \neq 90^\circ$</p> <p>m</p>	<p>$a \neq b , \theta = 90^\circ$ $c = d , \varphi \neq 90^\circ$</p> <p>o</p>	<p>$a = b , \theta = 120^\circ$</p> <p>h</p>	<p>$a = b , \theta = 90^\circ$</p> <p>t</p>