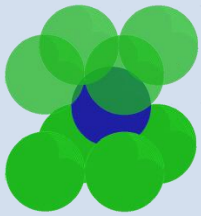
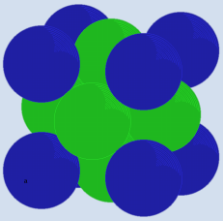
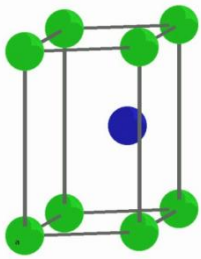
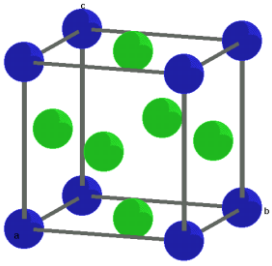
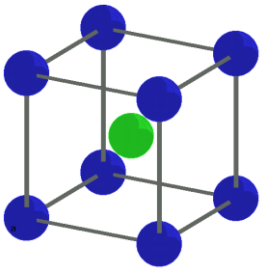
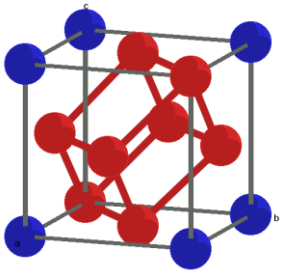
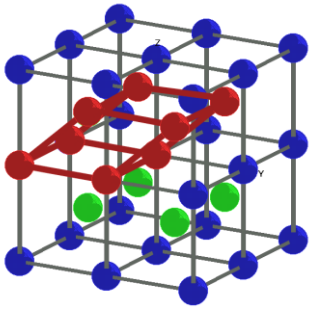
Les cristaux métalliques

C2 – Chapitre 8

Réseau	Hexagonal compact	Cubique mode F	Cubique mode I
Maille usuelle compacte			
Maille usuelle éclatée			
Relations	$a = b$ $c = 2a\sqrt{2/3}$ $\alpha = \beta = 90°\ \ \gamma = 60°$	$a = b = c$ $\alpha = \beta = \gamma = 90°$	$a = b = c$ $\alpha = \beta = \gamma = 90°$
Rayon	$a = 2r$	$4r = a\sqrt{2}$	$4r = a\sqrt{3}$
Atomes par maille	2	4	2
Coordinences	12	12	8
Compacité	$C = \frac{\pi\sqrt{2}}{6} = 0{,}74$	$C = \frac{\pi\sqrt{2}}{6} = 0{,}74$	$C = \frac{\pi\sqrt{3}}{8} = 0{,}68$
Maille élémentaire	Maille usuelle		
Paramètres de la maille élémentaire		Rhomboèdre $a_0 = b_0 = c_0 = 2r = \frac{a\sqrt{2}}{2}$ $\alpha_0 = \beta_0 = \gamma_0 = 60°$	Parallélépipède $a_0 = b_0 = a$ $c_0 = 2r = \frac{a\sqrt{3}}{2}$ $\gamma_0 = 90°$ $\alpha_0 = 35{,}3°$ $\beta_0 = 180° - \alpha$