

# Les sites dans les réseaux compacts

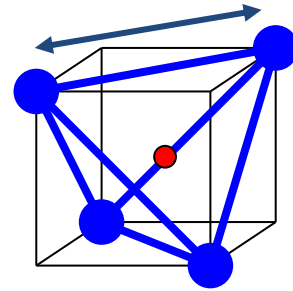
C2 – Chapitre 9

## I. Sites tétraédriques

### 1. Description

4 atomes tangents 2 à 2 forment un tétraèdre régulier, et il se forme un site dans lequel peut se loger un atome T.

$$r_T = r \left( \sqrt{\frac{3}{2}} - 1 \right) = 0,225r$$



### 2. Positions

Réseau hexagonal compact	Réseau cubique mode F
4 sites T par maille	8 sites T par maille

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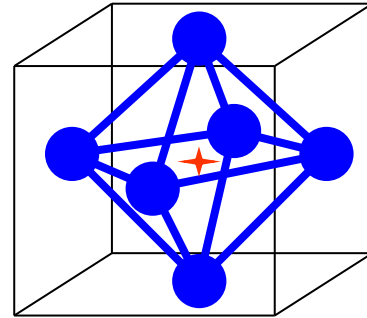
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## II. Sites octaédriques

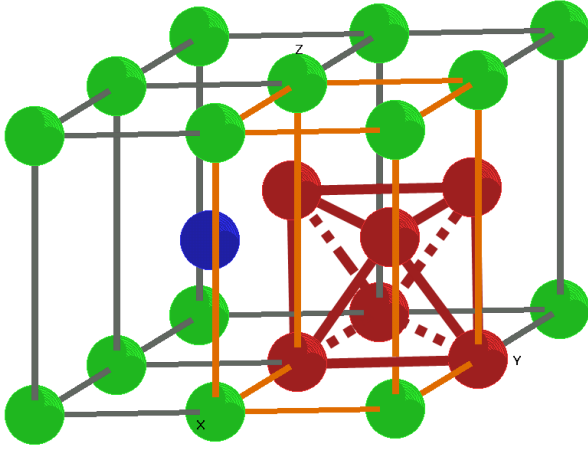
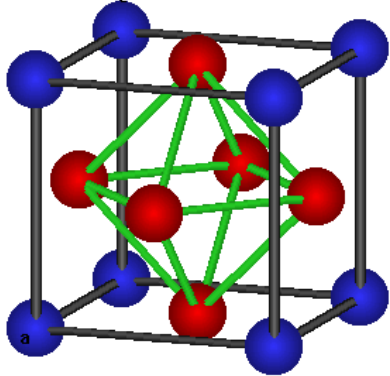
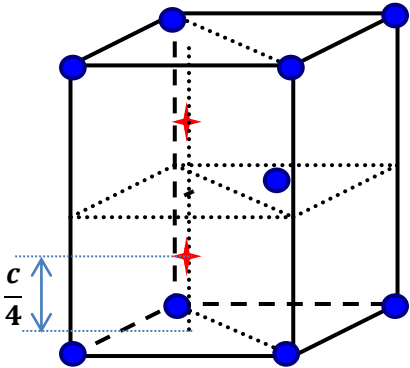
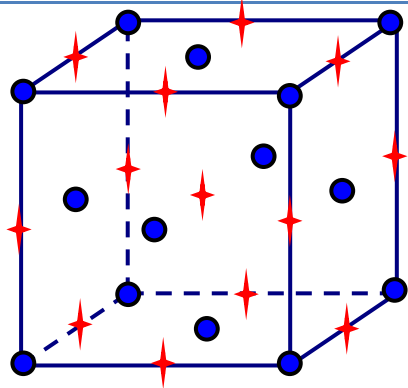
### 1. Description

6 atomes tangents 2 à 2 forment un octaèdre, et il se forme un site dans lequel peut se loger un atome O.

$$r_o = r(\sqrt{2} - 1) = 0,414r$$



### 2. Positions

Réseau hexagonal compact	Réseau cubique mode F
 A 3D model of a hexagonal close-packed (HCP) lattice. Green spheres represent the atoms, and a red octahedron is shown within the lattice. The octahedron is formed by six green spheres. A blue sphere is shown at the center of the octahedron, representing an interstitial site. The x, y, and z axes are indicated.	 A 3D model of a face-centered cubic (FCC) lattice. Blue spheres represent the atoms at the corners and midpoints of the edges. A red octahedron is shown within the lattice, formed by six blue spheres. A blue sphere is shown at the center of the octahedron, representing an interstitial site.
 A diagram of a hexagonal lattice. Blue spheres are at the corners of a hexagonal prism. A red octahedron is shown within the lattice, formed by six blue spheres. A blue sphere is shown at the center of the octahedron, representing an interstitial site. The vertical height of the prism is labeled as c/4.	 A diagram of a face-centered cubic (FCC) lattice. Blue spheres are at the corners and midpoints of the edges. A red octahedron is shown within the lattice, formed by six blue spheres. A blue sphere is shown at the center of the octahedron, representing an interstitial site.
2 sites O par maille	4 sites O par maille