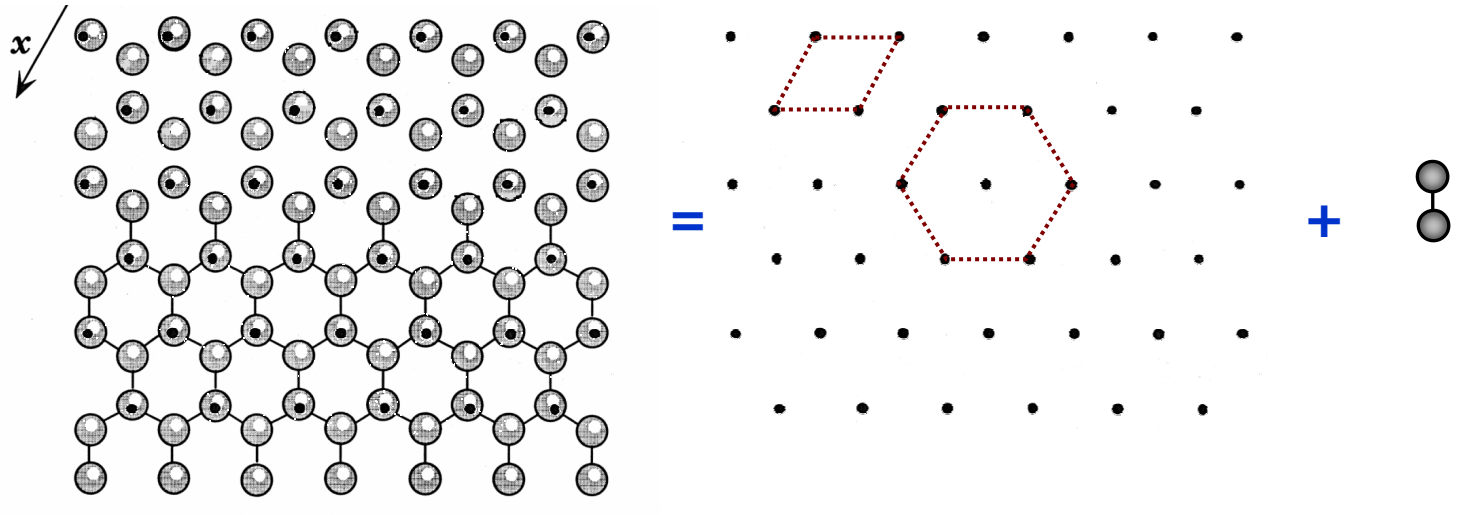
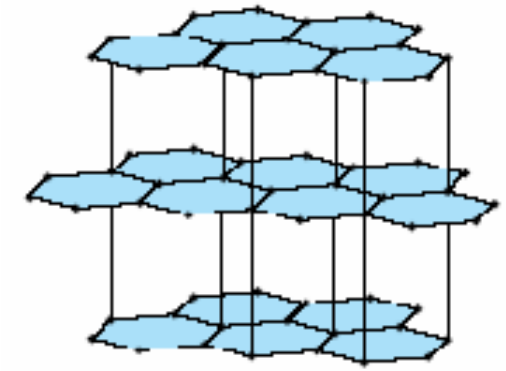
3.2 EJEMPLOS DE ESTRUCTURAS 2D – El Grafito

ESTRUCTURA CRISTALINA = RED + BASE



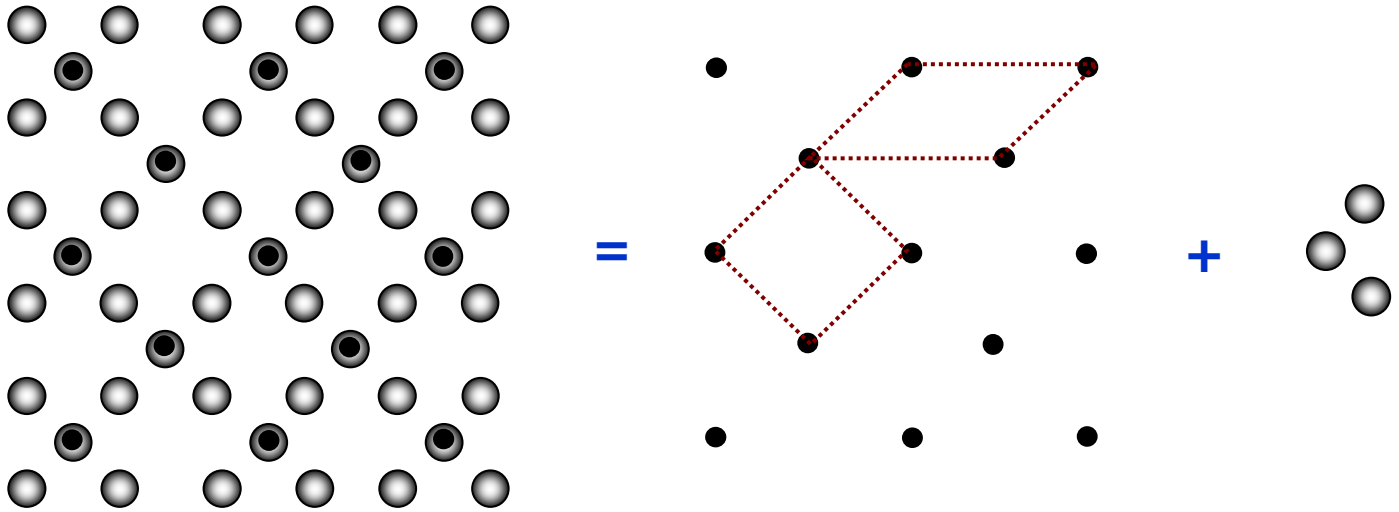


GRAFITO

- Negro
- Conductor eléctrico
- Blando, se exfolia en láminas
- Estructura: capas de anillos hexagonales unidas debilmente entre si
- Prop. lubricantes

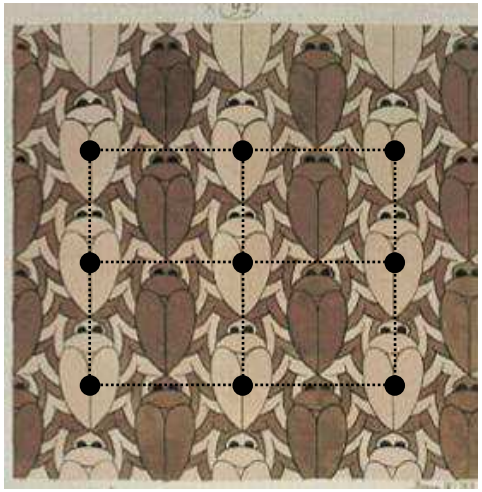
3.2 EJEMPLOS DE ESTRUCTURAS 2D

ESTRUCTURA CRISTALINA = RED + BASE



3.2 EJEMPLOS DE ESTRUCTURAS 2D

ESTRUCTURA CRISTALINA = RED + BASE



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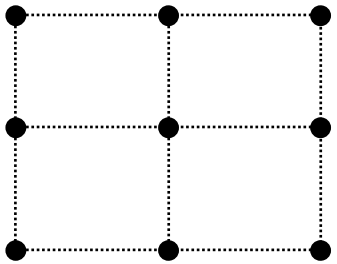

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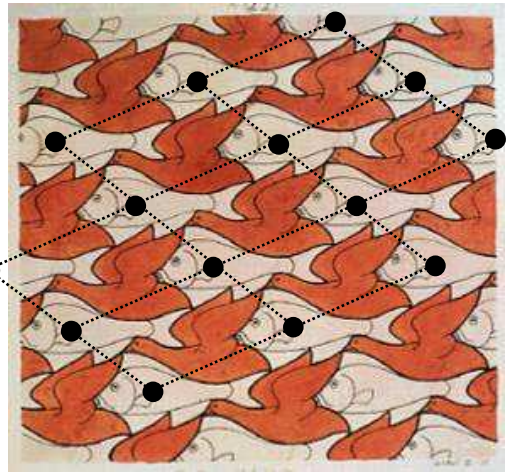

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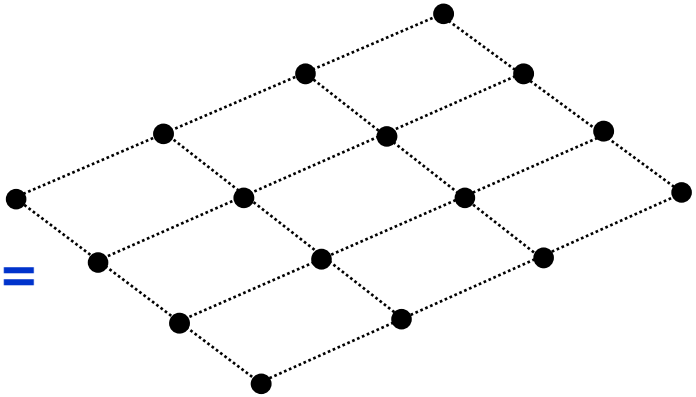

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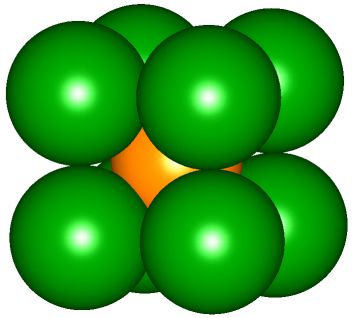
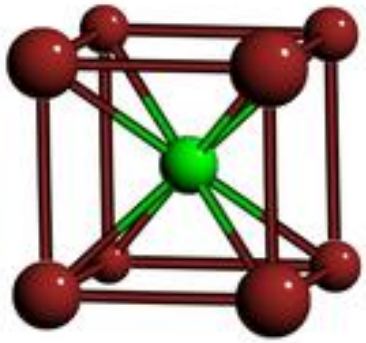
(M.C. Escher)

3.3 PRINCIPALES EST. CRISTALINAS -OTRAS (I)

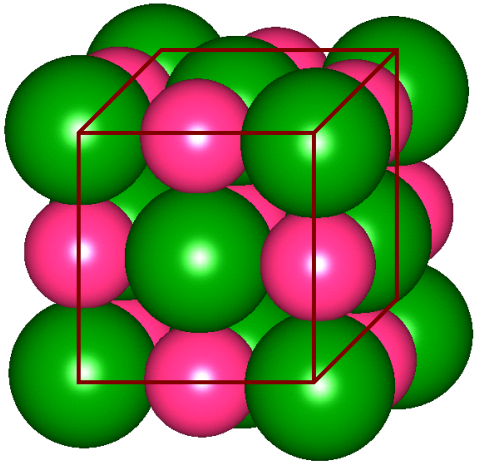
Estructura tipo CsCl





Red: cúbica simple
Base: CsCl
Cl^-: 000 Cs^+: ½½½
Iones/celda: $1Cl^- + 1Cs^+$
Ej) AlNi ordenada

Estructura tipo NaCl



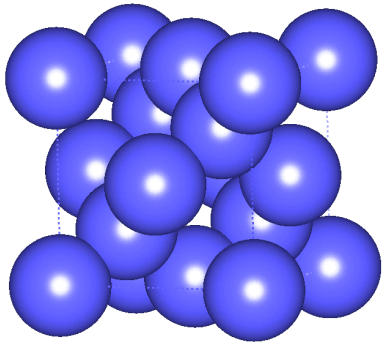
Cl^-

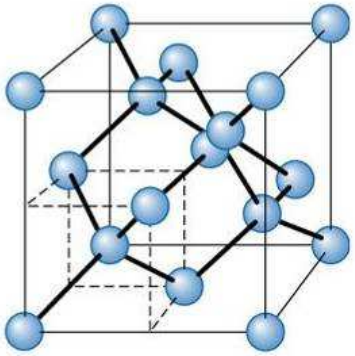
Na^+

Red: fcc
Base: NaCl
Cl^-: 000 Na^+: ½00
Iones/celda: $4Cl^- + 4Na^+$
Ej) MgO, CaO, FeO, NiO

3.3 PRINCIPALES EST. CRISTALINAS - OTRAS (II)

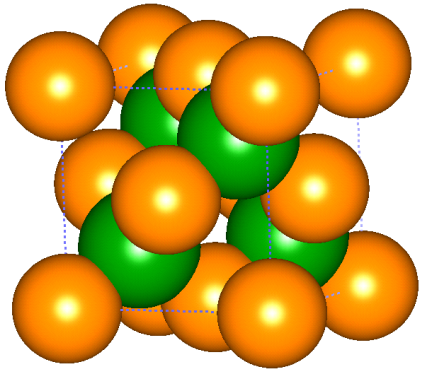
Estructura del diamante





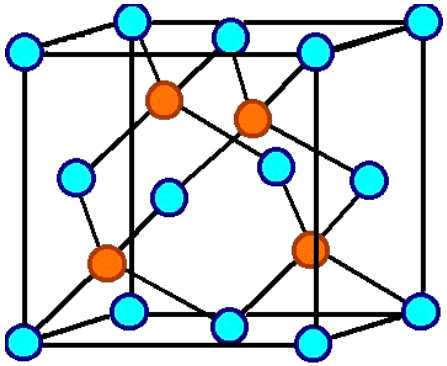
Red: fcc
Base: C-C
C: 000 C:¼¼¼
Átomos/celda: 8
Ej) Si, Ge

Estructura tipo Zincblenda - ZnS



Zn^{2+}

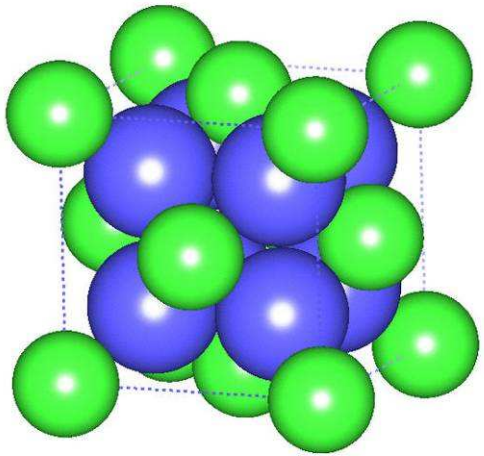
S^{2-}

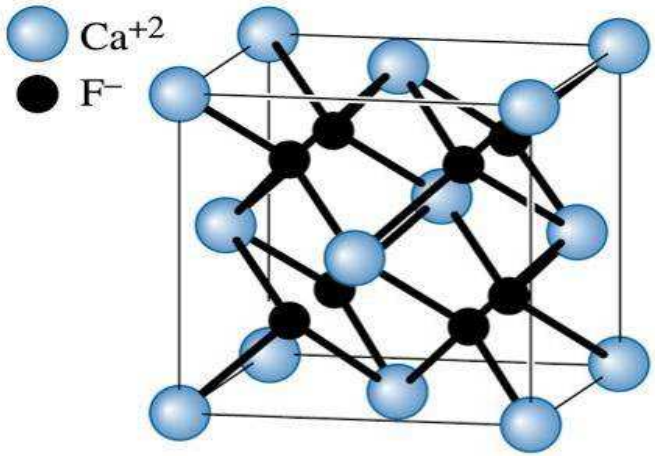


Red: fcc
Base: ZnS
Zn^{2+}: 000 S^{2-}:¼¼¼
Iones/celda: $4Zn^{2+}+4S^{2-}$
Ej) GaAs, SiC

3.3 PRINCIPALES EST. CRISTALINAS -OTRAS (III)

Estructura tipo fluorita - CaF_2





Red: fcc

Base: CaF_2

Ca^{2+}: 000 F^-: ¼ ¼ ¼ F^-: ¼ ¼ ¼

Iones/celda: $4Ca^{2+}+8F^-$

Ej) TeO_2, UO_2