

N24b – Bonding

Metallic Bonding & Alloys

YouTube Link to Presentation: *No video as of now. So sorry!*

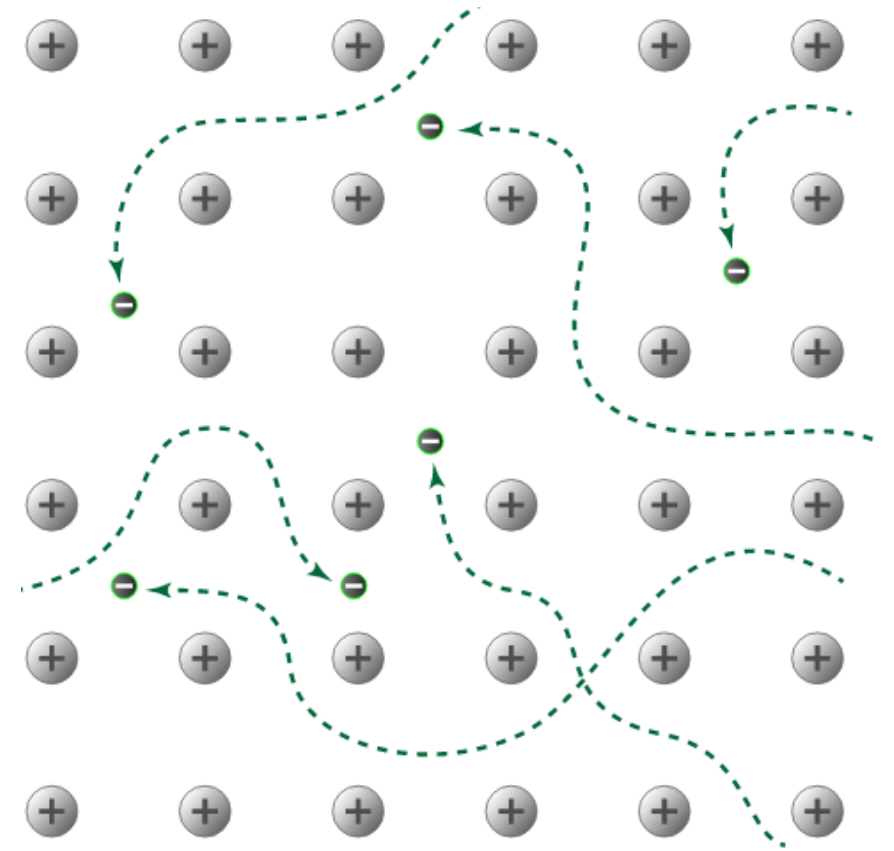
N24b – Bonding

Metallic Bonding & Alloys

Target: I can describe the delocalization of electrons in metallic bonds, and can describe two types of alloys.

“Sea of Electrons”

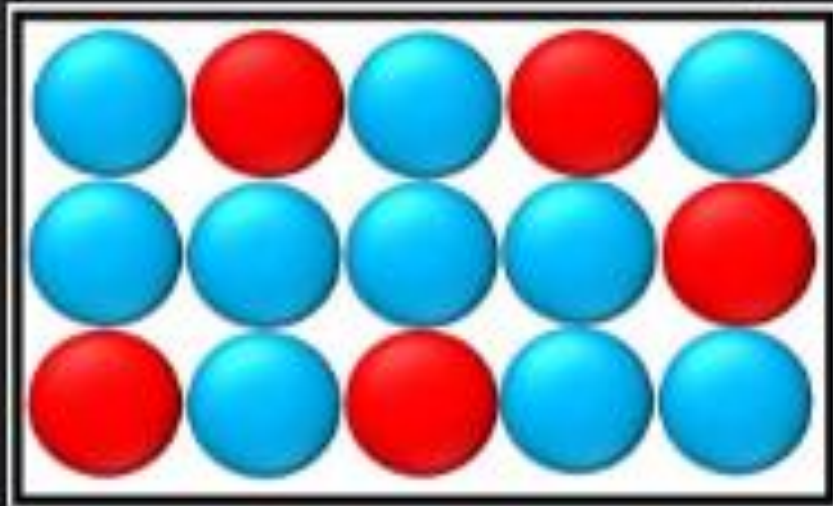
- In a metallic bond the valence electrons are **delocalized**, they move freely around the positive metal ions



Types of Alloys

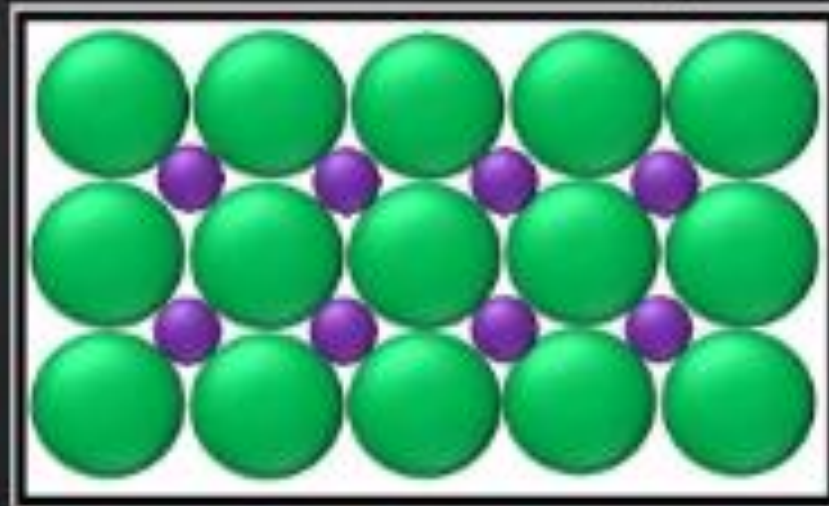
- Based on how similar the size of the metals are.

Substitutional alloy



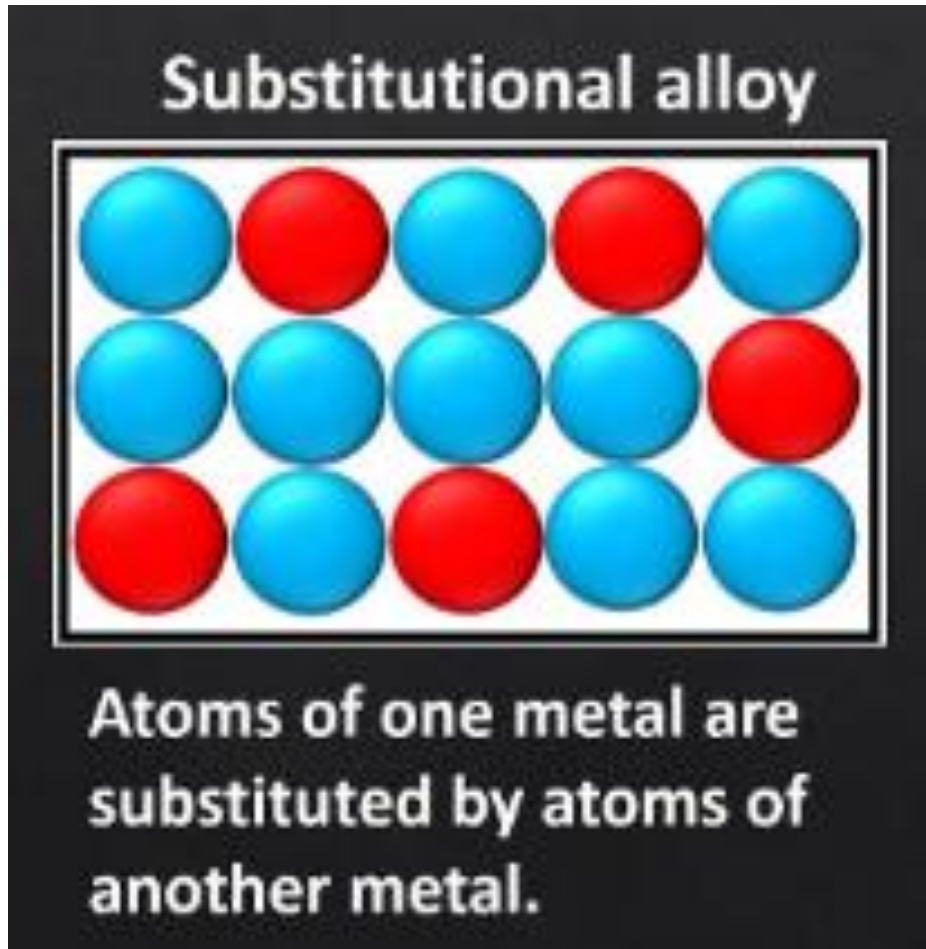
Atoms of one metal are substituted by atoms of another metal.

Interstitial alloy



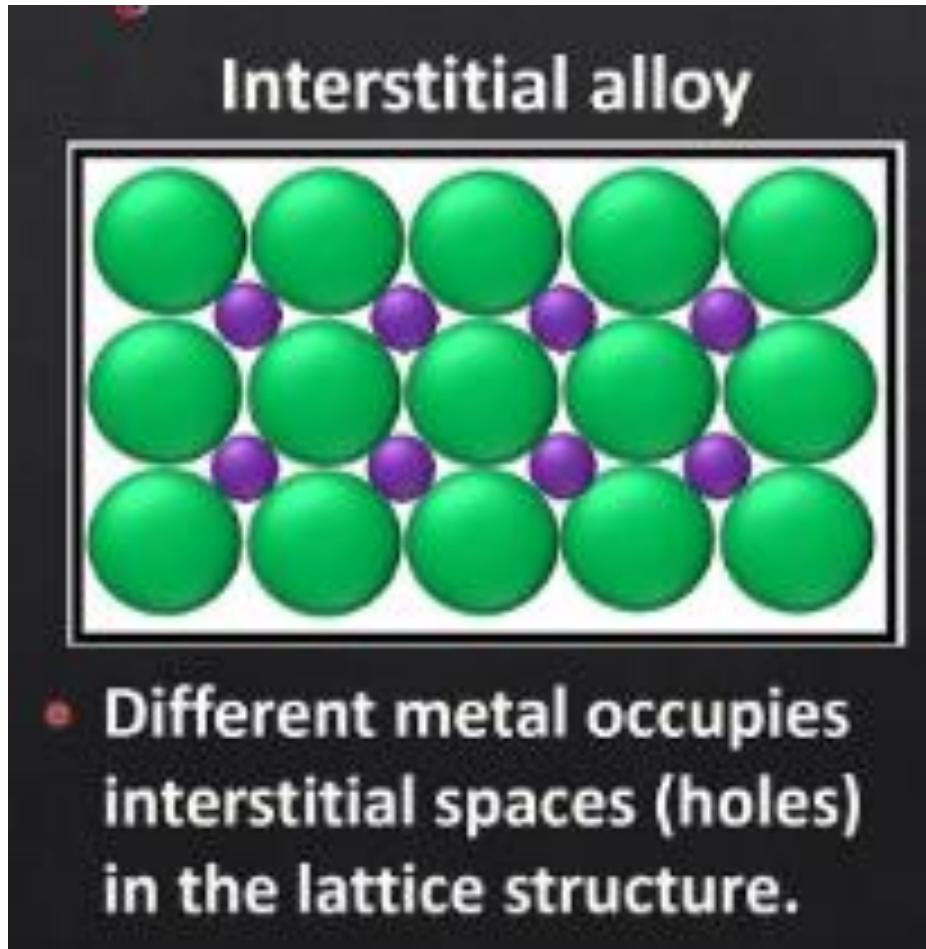
- Different metal occupies interstitial spaces (holes) in the lattice structure.

Types of Alloys



- If both metals are similar sizes the “impurity” will replace/displace/substitute some of the other metal atoms.

Types of Alloys



- If the atoms are significantly different sizes the smaller atom will occupy the “interstitial spaces” between the other atoms.

Types of Alloys

- Professor Dave Explains
 - Alloys: Types and Examples

<https://youtu.be/388TPL5M9us>

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