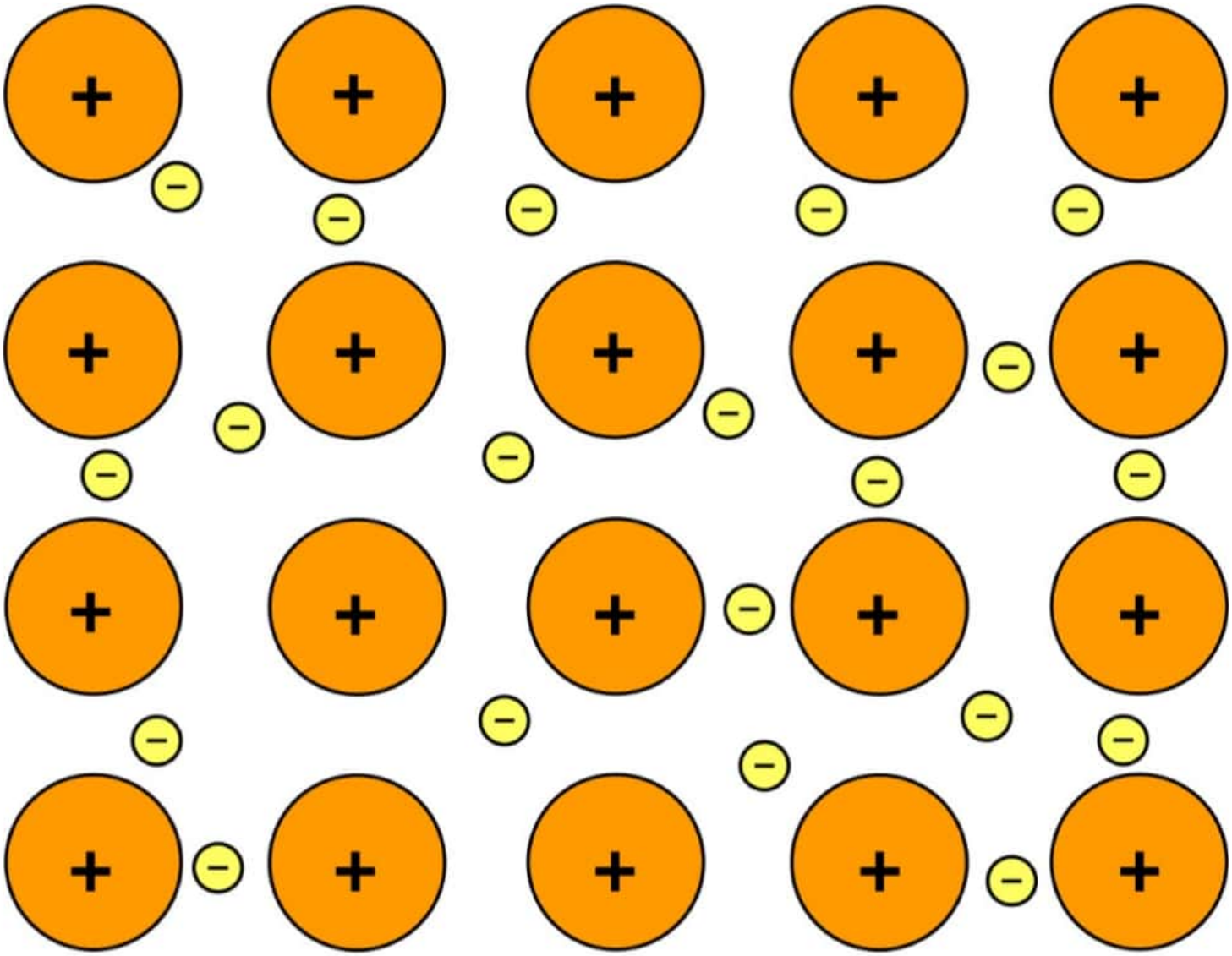
4. Metallic Solids

Definition 

- Metallic solids are metal atoms held together by metallic bonds.
- Metallic bonding is the sharing of a bunch of delocalized valence electrons that move freely throughout the solid. (sometimes called the "sea of electron" model)
- The metal atoms have a uniform distribution.



Properties

- Metallic solids vary *a lot* when it comes to melting points. Tungsten has the highest melting point at 3422°C, whereas mercury has the lowest at -38.83°C.
- They are shiny, strong, and malleable.
- They **can conduct electricity** because of their delocalized electrons.
- Adding another element to a metallic solid can form an **alloy** with new properties.