# Metallic Bonding



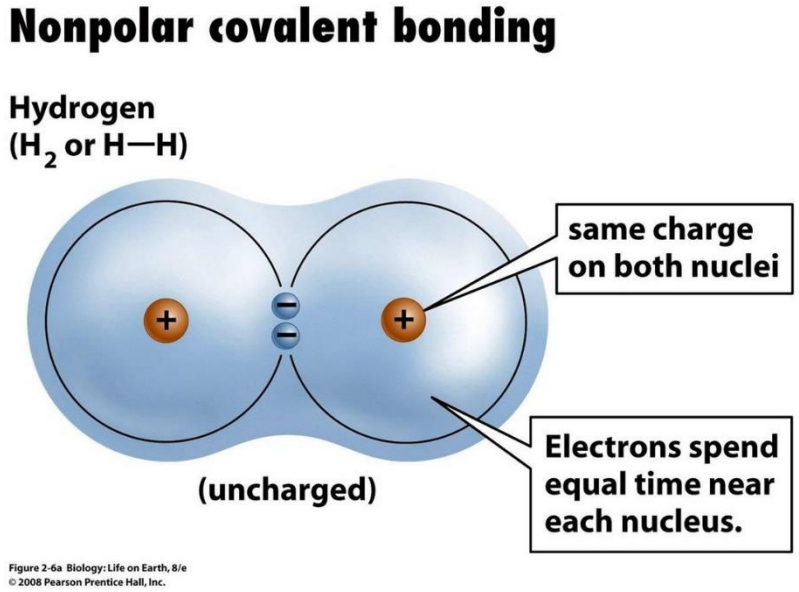
Properties:

- **High melting points** because of the electrostatic forces between the negative electrons and positive ions which need a lot of energy to be broken.
- **Conduct electricity** because of the sea of delocalised electrons which can move through the structure to carry the charge.
- **Malleable and ductile** because they are layered and the layers can slide over each other.

# Electronegativity and Bond Polarity



Non-polar covalent bond:



# Intermolecular Forces



Intermolecular forces are forces that exist between molecules. They apply to all covalent bonds. They affect melting and boiling points.

Three types of intermolecular forces:

- Temporary dipole-dipole
- Permanent dipole-dipole
- Hydrogen bonds