

Name _____

The Magical World of Van der Waals Forces

Short Answer Key

1. Dispersion forces can be found in substances like helium and methane.
2. Water forms droplets on surfaces because of the attraction between water molecules (cohesion) and between water molecules and the surface (adhesion), both driven by Van der Waals forces.
3. Van der Waals forces influence boiling and melting points by making them higher in substances with stronger forces due to the extra energy required to break these intermolecular bonds.
4. The main factor that determines whether a molecule will experience dipole-dipole forces is whether the molecule is polar, meaning it has an uneven distribution of electrons.
5. Hydrogen bonding occurs when a hydrogen atom is bonded to a highly electronegative atom (like oxygen or nitrogen) and forms a strong attraction with another electronegative atom in a nearby molecule. An example is the hydrogen bonding between water molecules.

