

1. What is the difference between intermolecular forces and intramolecular forces?

Answer: Intermolecular forces occur between molecules; intramolecular forces occur within a molecule.

2. Is a hydrogen bond a true chemical bond? Explain.

Answer: A hydrogen bond is an example of an attractive force that occurs between molecules. In that sense, it is not a true chemical bond, which chemists consider to be formed within a molecule.

3. How can molecules without dipoles condense to form liquids or solids?

Answer: Molecules without dipoles can condense to form liquids as a result of London dispersion forces. These forces provide enough attraction when non-polar molecules are moving slowly to cause the molecules to condense into the next state.

4. Skip!

5. Why are changes of state considered to be physical changes and not chemical changes?

Answer: A change in state does not change the molecules of the substance in any way. Their motion simply increases or decreases. A chemical change requires that the molecule be changed to a different chemical. (a formula change, like H_2O changes into H_2 and O_2)

6. Why doesn't the temperature of a substance (Such as ice) change during melting? What is happening to the energy being added to the system?

Answer: The temperature of a substance doesn't change when it is melting because the energy being added to the system is used to overcome the attractive forces holding the molecules together.