

and a slightly negative atom on another molecule. The hydrogen bond is one of the strongest intermolecular attractions, but weaker than a covalent or an ionic bond.

#### 4. Compare covalent from ionic bond, what makes them unique?

Covalent bonds and ionic bonds are two main types of chemical bonding. In covalent bonding, atoms share valence electrons in order to get the full octet. In ionic bonds, valence electron(s) is transferred between atoms. It is a type of chemical bond that generates two oppositely charged ions. An ionic bond is between a metal and a nonmetal, and a covalent bond is between 2 nonmetals. You can determine what kind of bond a compound is through the difference of electronegativity. If the difference is between 0.0-0.3: the bond is nonpolar covalent. If the difference is between 0.4-1.7 (Some say 1.9): the bond is polar covalent. If the difference is greater than 1.7 (or above 2.0 in some books): the bond is ionic.

#### 5. How can we identify acids and bases from a certain compound substance?

Acids are chemical compounds that show, in water solution, a sharp taste, and the ability to turn certain blue vegetable dyes red. Bases are chemical compounds that, in solution, are soapy to the touch and turn red vegetable dyes blue. To determine whether a substance is an acid or a base, count the hydrogen on each substance before and after the reaction. If the number of hydrogen has decreased that substance is the acid (donates hydrogen ions). If the number of hydrogen has increased that substance is the base (accepts hydrogen ions).