

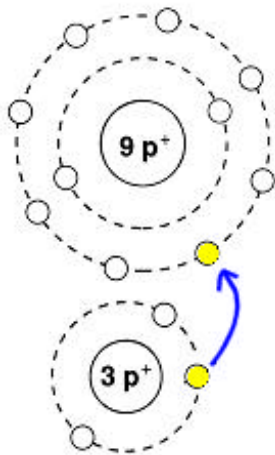
CHEMICAL BONDS

DEFINITION/DESCRIPTION:

Attraction that holds molecules together
Involves valence electrons

TYPES:

Ionic Bonds



Transfer of electrons from one atom to another

Difference in electronegativity is high
Electronegativity = atom's ability to attract and hold electrons

Forms ions

Cations = positive ions

Anions = negative ions

Weak bonds in solution

Covalent Bonds

Involves sharing of electrons

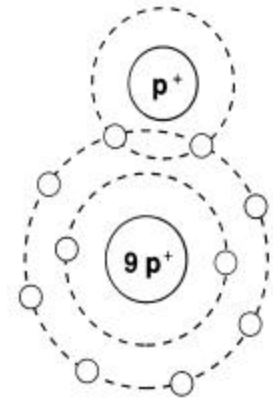
Electronegativities

O = 3.5

N = 3.0

C = 2.5

H = 2.1



Nonpolar = electrons shared equally

C-C or C-H

Small or no difference in electronegativity

Polar = electrons NOT shared equally

C-O or H-O

Difference in electronegativity is larger than nonpolar but smaller than ionic

TYPES:

Hydrogen Bonds

- Attraction between oppositely charged portions of 2 different molecules
- Weak
- Easily broken
- Easily reformed

Hydrogen bond (red) between water molecules

