Lesson 50: Introduction to Bonding Notes

Chemistry with Lab

Chemical bond – forms when 2 or more atoms rearrange _____ _____ to increase _____.

Ionic bond – forms when valence _____ are _____ from one atom to another.

- cation – atom _____ electrons to become _____ charged
- anion – atom _____ electrons to become _____ charged
- In ionic compounds, the ions are arranged in a _____ and _____ _____ forces hold the ions together.

Properties of ionic compounds:

- high _____ and _____ points
- _____ - not easily _____
- _____ electricity when _____ or _____ because the ions are free to _____.

Covalent bond - _____ are _____, forming _____.

- Covalent compounds have _____ forces holding the _____ together.

Properties of covalent compounds:

- Lower _____ and _____ points

- Many covalent compounds are _____ liquids or gases.
- _____ - easier to _____
- are not _____ of electricity

Electronegativity – property that tells how strong an atom's _____ is for _____.

- Since oxygen has a _____ electronegativity than hydrogen, oxygen holds onto shared electrons _____, giving the oxygen a _____ negative charge and the hydrogen a partial _____ charge.

polar covalent bonds – electrons are shared _____, creating partially charged ends or _____.

nonpolar covalent bonds – electrons are shared _____ because atoms have the same electronegativities

Electronegativity difference	Type of Bond
greater than or equal to 1.7	
between 1.7 and 0.3	
less than or equal to 0.3	

Examples:

Mg and F? S and O?

Program 501, problem set 1:

metallic bond – electrons are _____

(crates a "_____ of _____")

properties of metals:

1.

2.

3.

4.

The Chemistry Quiz

CR1. _____ CR2. _____ 1. _____ 2. _____ 3. _____

4. _____ 5. _____