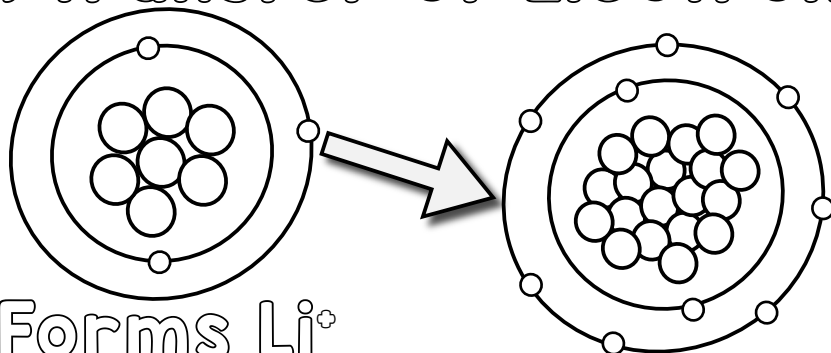


IONIC BONDING

A Transfer of Electrons



Properties of Ionic Compounds

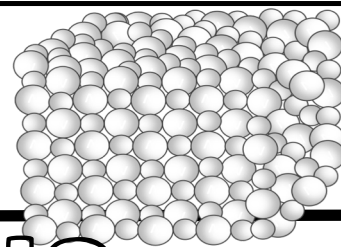
1. Between metal and nonmetal ions, or polyatomic ions - net charge equals _____.
2. _____ melting point & boiling point - most are _____ at room temperature.
3. Most form a _____ structure.
4. Hard, but _____
5. Conduct electricity in molten or _____ state.

Electrostatic _____ between oppositely charged ions forms an ionic compound - LiF

Ionic compounds form a _____ lattice formation, and are also called _____.

Metals _____ electrons, and form _____ ions called _____

Nonmetals _____ electrons, and form _____ ions called _____



COVALENT BONDING

A Sharing of Electrons

define

molecule: _____

Draw diagrams to represent polar and nonpolar covalent molecules.

POLAR

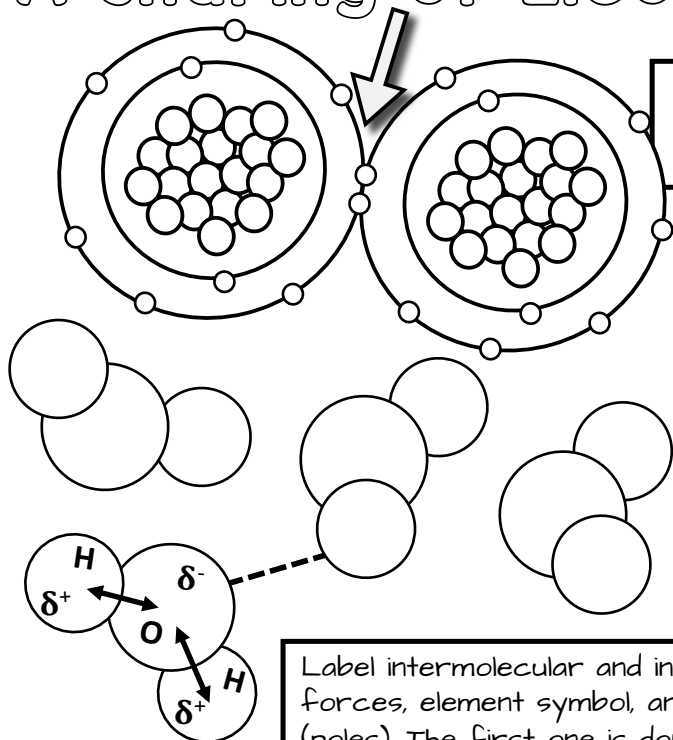
END = 0.3 - 1.7

NONPOLAR

END = 0.0 - 0.3

Properties of Molecular Compounds

1. Between nonmetal and _____
2. _____ melting point & boiling point
3. Can have partially _____ poles.
4. Do _____ conduct electricity.



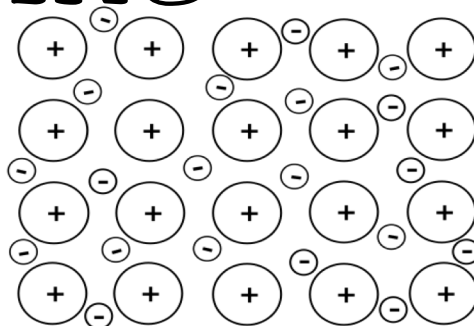
Label intermolecular and intramolecular forces, element symbol, and partial charges (poles). The first one is done for you.

METALLIC BONDING

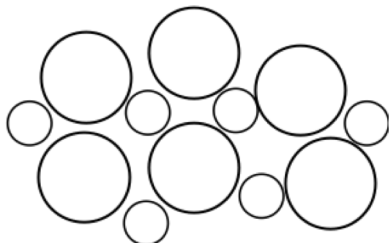
A Sea of Electrons

In metals, electrons are _____, free to roam about among structured positively charged _____.

Valence-level *p* orbitals are _____, while *d* orbitals are nearly _____. These orbitals overlap.



Metal Alloys



Metal atoms can _____ other metal atoms, or occupy space between larger metal atoms to form _____.

Properties of Metals

1. Good conductors of _____ and _____.
2. _____
3. _____
4. Strong _____ and _____ of light.

Example Alloys:

Comparing Chemical Bonding

	IONIC	COVALENT	METALLIC
Types of Atoms			
Method of Bond Formation			
Type of Structure			
Melting Point			
Electrical Conductivity			
Other Properties			
Images – Draw an image that represents the bond type for each of the chemical bonds.			