

Hey, Baby. You and I Have a Bond...Ch. 8

I. IONIC BONDING FUNDAMENTALS

A. They form between...

1. A _____ and a _____
 - a. A _____ to become _____
 - b. A _____ to become _____

B. How it happens (Let's first focus on two atoms):

1. When a metal and a nonmetal meet,
2. Once the _____ they become _____.
 - a. The _____
 - b. The _____

3. Because _____, they are _____ is known as
 - a. This attraction between _____
 - b. This is when _____
 - c. One set of attracted ions is known as a _____

4. There are usually more one formula unit present when
 - a. They start arranging themselves into an _____
 - i. _____ are surrounded by _____
 - ii. _____ are surrounded by _____
 - b. This structure is known as a _____
 - c. _____

5. Ionically bonded compounds are called _____

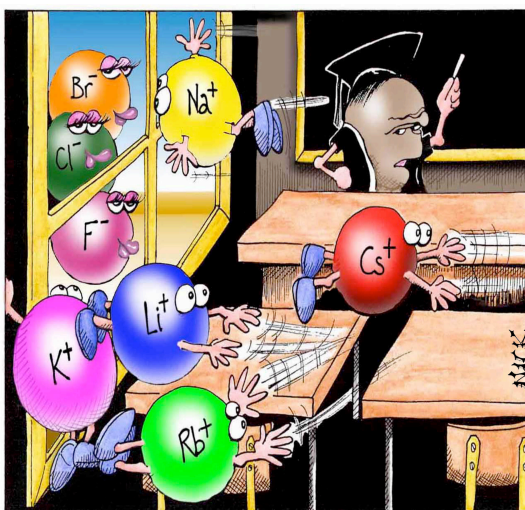
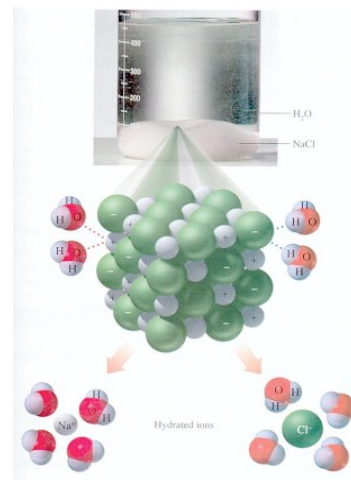
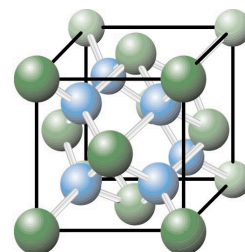
II. Ionic Bonding Properties

A. Ionic bonds are

1. Because of this, they are:
 - a. _____
 - b. _____
 - c. _____

2. When _____, they will form solutions with ions,

a. This is also known as an _____



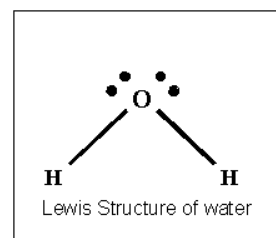
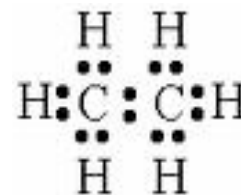
"Perhaps one of you gentlemen would mind telling me just what it is outside the window that you find so attractive..?"

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III. Covalent Bonding Fundamentals

A. What happens when two elements want electrons?

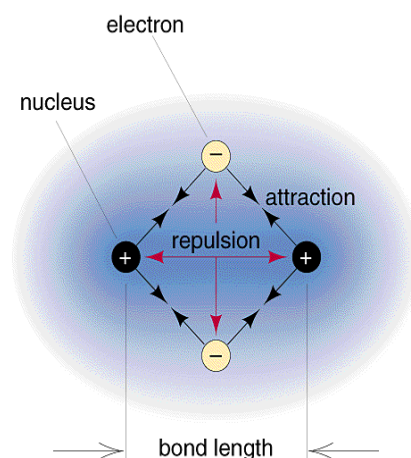
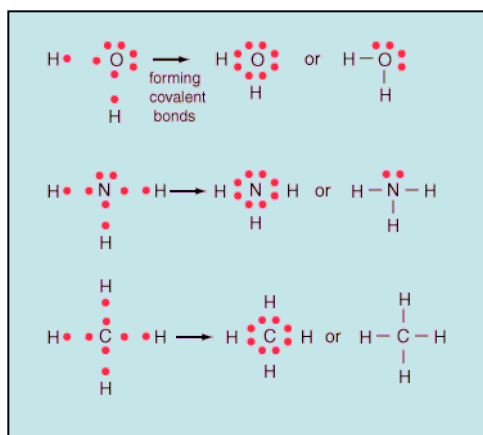
1. They
2. Covalent bond:
3. If the
a bond is formed.



II. Drawing Molecules

A. Lewis Dot

- 1.
2. These are used to model covalently bonded molecules.
 - a.
 - b.



B. Drawing Lewis Structures for Molecules

1. Count the number of valence electrons you have.
2. Arrange the atoms. The single atom is usually in the center (usu. carbon)
3. Draw single bonds (one line) between all atoms and subtract the number of electrons you used.
4. Fill in the remaining electrons around outer atoms until you run out.
 - a. Extra electrons? Place them on the central atom.
 - b. Need electrons? Move outer electrons into a double or triple bond.
5. NOTE: CHECK YOUR WORK!!!
 - a. Structures MUST only have the amount of valence electrons that you started with.
 - b. Make sure that ALL the atoms are eight!

6. Examples:

