

Ionic Compounds

Section 8.1 Forming Chemical Bonds

In your textbook, read about chemical bonds and formation of ions.

Use each of the terms below just once to complete the passage.

chemical bond

electrons

energy level

ions

noble gases

nucleus

octet

pseudo-noble gas formations

valence

The force that holds two atoms together is called a(n) **(1)** _____.

Such an attachment may form by the attraction of the positively charged **(2)** _____ of one atom for the negatively charged **(3)** _____ of another atom, or by the attraction of charged atoms, which are called **(4)** _____. The attractions may also involve **(5)** _____ electrons, which are the electrons in the outermost **(6)** _____. The **(7)** _____ are a family of elements that have very little tendency to react. Most of these elements have a set of eight outermost electrons, which is called a stable **(8)** _____. The relatively stable electron structures developed by loss of electrons in certain elements of groups 1B, 2B, 3A, and 4A are called **(9)** _____.

For each statement below, write *true* or *false*.

- _____ **10.** A positively charged ion is called an anion.
- _____ **11.** Elements in group 1A lose their one valence electron, forming an ion with a 1+ charge.
- _____ **12.** Elements tend to react so that they acquire the electron structure of a halogen.
- _____ **13.** A sodium atom tends to lose one electron when it reacts.
- _____ **14.** The electron structure of a zinc ion (Zn^{2+}) is an example of a pseudo-noble gas formation.
- _____ **15.** A Cl^- ion is an example of a cation.
- _____ **16.** The ending *-ide* is used to designate an anion.
- _____ **17.** Nonmetals form a stable outer electron configuration by losing electrons and becoming anions.