

GENERAL ACIDITY AND BASICITY

Physical changes result in the transition of a molecular material from one form into another without any change in the composition of the material. A liquid compound can be cooled until it freezes or heated until it evaporates, but the atoms that make up the material are still connected together in the same way.

Chemical reactions result in a change in the composition of a material. Atoms become associated in different ways. Changes in bonding occur. Because bonding involves some kind of shared distribution of electrons between atoms, a chemical reaction involves some change in how electrons are arranged in the material.

- The standard way to think about a chemical reaction is to consider the movement of electrons in the reaction.

Reactions often involve many changes, so that one material is transformed into others via numerous redistributions of electrons. These individual steps within an overall reaction are sometimes called elementary reactions. One of the most common ways to analyze an elementary reaction is to understand in a very basic way where the electrons are moving from and where they are moving towards.



Figure AB1.1. Electron movement and bond formation in a generalized reaction. Here, atom B is donating a pair of electrons to atom A.

- An atom or molecule that supplies a pair of electrons to form a new bond is an electron donor. An electron donor is often called a Lewis base.
- An atom or molecule that accepts a pair of electrons to form a new bond is an electron acceptor. An electron acceptor is often called a Lewis acid.

Source : <http://employees.csbsju.edu/cschaller/Principles%20Chem/acidity/acid%20gen1.htm>