

Modern Atomic Theory Atomic Properties and the Periodic Table Metals and Nonmetals

The atomic theory is an attempt to help us understand why things occur.

This can help us better control the chemical events in our daily lives.



Metals and Nonmetals

- Metals have the following physical properties: Lustrous
 - lustrous appearance
 - ability to change shape without breaking



Nonmetals usually are not lustrous and do not make good conductors of heat or electricity, though there are exceptions. Chemical differences: Metals tend to lose electrons to form positive ions. Nonmetals tend to gain electrons to form negative ions. When they react, electrons are usually transferred from the metal to the nonmetal.

Most of the elements are metals.

A few of the elements are nonmetals.

- 7 elements are <u>metalloids</u> or <u>semimetals</u>.
 - These exhibit both metallic and nonmetallic behaviors.
 - Si, Ge, As, Sb, Te, Po, At



- It is important to understand that not all metals (or nonmetals) behave exactly the



The end