

Modern Atomic Theory Periodic Trends Ionization Energy

Atomic Size

- The sizes of atoms vary.
- Atoms get larger as we go down a group and get smaller as we go

from left to right.



- ▶ **Ionization energy** → the amount of $^{\circ}$ energy required to remove an electron from a gaseous atom or ion.
- Metals have relatively low ionization energies.
 - You only need to input a small amount of energy to remove an electron from a typical metal.
 - Ionization energies tend to decrease in going down.



- Nonmetals have relatively large ionization energies.
 - Nonmetals tend to gain, not lose, electrons.
- Ionization energies tend to increase from left to right across a given period on the periodic table.





 Lower left region have the lowest ionization energies (most chemically active metals).
Upper right region have the highest ionization energies (most chemically active nonmetals).

The end