

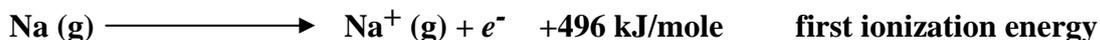
Ionization energy, Electron Affinity, Electronegativity

- **Ionization Potential or Ionization energy:**

The amount of energy required to remove an electron from an isolated gaseous atom is known as ionization potential or ionization energy.

Units: eV (electron volt) or kilo Joule/mole

The first ionization energy is always less than second ionization energy.



Tendencies in the Periodic Table:

Generally speaking, atomic ionization energies decrease down a group (i.e. column) of the periodic table, and increases left-to-right across a period.

- **Electron Affinity:**

The amount of energy **released** or **required** to add an electron in gaseous state of an atom is known as electron affinity.

Units: (electron Volt) or kilo Joule/mole



Energy Released = +ve value of Electron Affinity

Energy Required = -ve value of Electron Affinity

Tendencies in Periodic Table:

Electron affinities generally become smaller as we go down a column of the periodic table and electron affinity increases as we go from left to right in the periods of the periodic table. (both with a few exceptions!)

- **Electronegativity**

It is the ability of an atom to attract the shared pair of electrons towards it self.

Fluorine has the highest electronegativity which is of 4 and Cs has lowest electronegativity which is of 0.79. Their exist different scales for the electronegativity, the most common ones are the Pauling values.

Tendencies in the Periodic Table:

Electronegativity values decrease down the groups and increases from left to right in the periodic table (for main group elements).