

Factors Affecting Ionization Energy

- Atoms tend to loose or gain _____ electrons _____ according to their position _____ in the periodic table _____.
- Electropositive elements tend to loose to form cations.
- Electronegative elements tend to gain to form anions.
- Metals are electropositive in nature; non-metals are electronegative.
- Electropositive elements are found on the left side of the periodic table.
- Electropositive elements are found on the right side of the periodic table.
- Elements located along the staircase are classed as metalloids.
- Position within a period:** Ionization energy increases (left to right) across a period.
- Position within a group:** Ionization energy decreases down a group.
- Pairing of electrons:** It is harder to remove electrons with a partner because due to greater stability.
- Half-filled sublevels:** it is harder to remove an electron from a half-filled sublevel (e.g. N, P) because half-filled configuration adds stability.

Ionization energy is highest in the element F because of the **greatest ENC, strongest force of attraction between the nucleus and outmost electrons** and lowest in Fr because of the **greatest number of energy levels, weakeest force of attraction between the nucleus and outmost electrons**

Electron affinity is highest in the element F because _____ because of the **greatest ENC, strongest force of attraction between the nucleus and outmost electrons** and lowest in Fr because of the **greatest number of energy levels, weakeest force of attraction between the nucleus and outmost electrons**