What are the factors that Affect Lattice Energy?

The two primary factors that affect the lattice energy of an ionic compound are the magnitude of charge associated with the constituent ions and the distance between the ions.

Charge held by the Constituent Ions

Due to the electrostatic forces between them, the individual ions in an ionic lattice are attracted to each other. The strength of the electrostatic force of attraction is directly proportional to the magnitude of the charge held by the constituent ions, i.e. the greater the charge, the stronger the force of attraction, the stronger the lattice.

For example, the lattice energy of calcium chloride is greater than that of potassium chloride despite the similarity in the crystal arrangements of these

Distance between the Ions

The lattice energy of an ionic compound is inversely proportional to the distance between the ions. The further the distance between the ions in a lattice, the weaker the electrostatic forces holding them together, the lower the lattice energy.