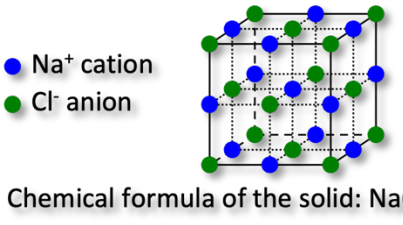
# Cohesion of ionic compounds

## *What is an ionic compound?*

An ionic compound is a solid made up of anions and cations regularly arranged in space, but the whole remains electrically neutral.
The formula of the solid indicates the nature and proportion of the ions present, without mentioning their charges.

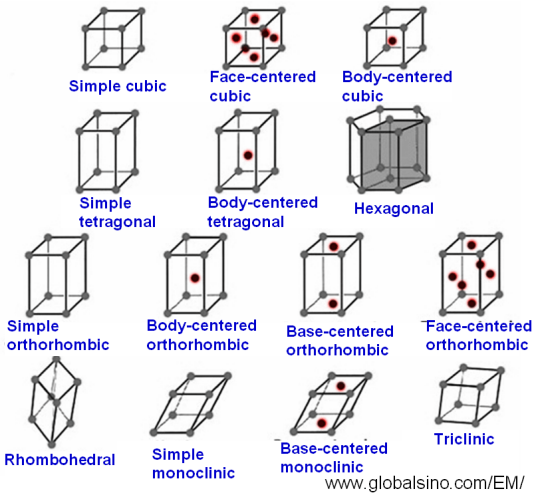
***Ex :*** *Sodium chlorine (AKA kitchen salt)*




## Cohesion of an ionic compound

Each individual ion is interacting with the surrounding ions. This interaction is electrostatic, attractive with ions of opposite sign and repulsive with ions of the same sign. The ions form a structure that maximizes attractions and minimizes repulsions.

Several parameters influence the spatial arrangement of ions in the crystal lattice, such as the stoichiometry of the ionic compound, of course, but also the radii of the ions involved or external factors such as temperature or pressure.
This leads to a list of 14 different structures, known as Bravais lattices




*Note: The macroscopic shape of a cristal is directly related to the microscopic Bravais lattice formed by their ions.*

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