

CAIE Chemistry A-level

27: Group 2 (A-level only) Definitions

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Definitions and Concepts for CAIE Chemistry A-level Group 2

Anion: A negatively charged ion, formed when an atom gains electrons, e.g. S^{2-} .

CO_3^{2-} : The molecular formula for a carbonate ion.

Enthalpy of hydration: The enthalpy change when one mole of gaseous ions is dissolved in water to form one mole of aqueous ions under standard conditions.

Enthalpy of solution: The enthalpy change when one mole of solute is dissolved in water to infinite dilution so that the ions no longer interact under standard conditions.

Ionic radius: The radius of an ion. It is the distance between the nucleus and the outermost electron of the ion.

Lattice dissociation enthalpy: The enthalpy change when one mole of a solid ionic compound is completely dissociated into its gaseous constituent ions under standard conditions. This is an endothermic process.

Lattice formation enthalpy: The enthalpy change when one mole of a solid ionic compound is formed from its gaseous constituent ions under standard conditions. This is an exothermic process.

NO_3^- : The molecular formula for a nitrate ion.

OH^- : The molecular formula for a hydroxide ion.

SO_4^{2-} : The molecular formula for a sulfate ion.

Solubility: The ability of a given substance to dissolve in a solvent. Solubility of the Group 2 hydroxides increases down the group and solubility of the Group 2 sulfates decreases down the group.

Thermal stability: How easy/much energy does it take for a molecule to break down using heat.

