

OCR (A) Chemistry A-level

Topic 5.2.1 - Lattice enthalpy

Flashcards

This work by [PMT Education](https://www.pmt.education) is licensed under [CC BY-NC-ND 4.0](https://creativecommons.org/licenses/by-nc-nd/4.0/)



Define lattice enthalpy



Define lattice enthalpy

Formation of 1 mole of ionic lattice from gaseous ions under standard conditions



What does a more exothermic
lattice enthalpy mean?



What does a more exothermic lattice enthalpy mean?

More exothermic = more stronger ionic bonds



Why is it not possible to
measure lattice enthalpy
directly?



Why is it not possible to measure lattice enthalpy directly?

It is not possible to form 1 mole of ionic solid from its gaseous ions



Define enthalpy change of solution



Define enthalpy change of solution

Enthalpy change that takes place when 1 mole of a solute is completely dissolved in water under standard conditions



Define enthalpy change of hydration



Define enthalpy change of hydration

The enthalpy change that takes place when dissolving one mole of gaseous ions in water



What are the factors that impact the size of lattice enthalpy?



What are the factors that impact the size of lattice enthalpy?

- Size of ions involved
- Charges on the ions
- Ionic bond strength



Which ions have more
negative lattice enthalpy
values? smaller / larger ions?
Why?



Which ions have more negative lattice enthalpy values? smaller / larger ions? Why?

Smaller ions because they can get closer
hence more stronger attraction



Describe hydration



Describe hydration

When an ionic lattice is broken the ions become part of the solution

Positive ions get attracted towards slightly negative oxygen and negative ions get attracted towards slightly positive hydrogen



What are the factors that impact the magnitude of the enthalpy of hydration?



What are the factors that impact the magnitude of the enthalpy of hydration?

- Size of the ion
- Charge on the ions

