

Lattice Enthalpy

Pre-lesson assignment – p.346-348

It is definitely worth revising the Hess cycle before starting this topic.

Please watch the video tutorial on Born-Haber Cycles

Define/revise the following terms

- Lattice Enthalpy
- Standard enthalpy change of formation
- Standard enthalpy change of atomisation
- First ionisation energy
- First electron affinity

Make notes on Lattice enthalpy

1. What is lattice enthalpy a measure of?
2. Construct a Born-Haber cycle in general terms (fig 2). Annotate your cycle explaining what happens in each process. Why can the lattice enthalpy not be directly measured?
3. Write an equation for the standard enthalpy of formation of NaCl
4. Write an equation for the standard enthalpy change of atomisation of NaCl and show how it relates to bond enthalpy.
5. Write the equation for the first ionisation energy for sodium
6. Write the equation for the first electron affinity for chlorine