Born Haber cycle

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17:53

Lattice energy from experimental data vs. lattice energy from datebook

- Greater differences in values for the same molecule means that it has more covalent character - so the closer the experimental and theoretical values are, the more ionic character they have but the further the values the more covalent character

Differences in theoretical and experimental values of different molecules eg. MgI_2 and $MgCl_2$

- Because iodide is a larger atom than Chloride, it has a lower charge density.
- This means that it is easily polarised giving it more covalent character

Experimental data:
Problems with equipment that might result in an anomalous value

- Incomplete combustion: not all the energy is released therefore a lower value is obtained
- Heats up the beaker: moles are too great therefore enthalpy change is too large
- Heat lost to surrounding: no system to trap heat
- Impurities: depends how impure
- Distance between flame and beaker is too large
- Stir water: hot centres but cold outer areas