

Question #59982, Chemistry, Other

How to write thermochemical equations for reactions?

Answer:

A thermochemical equation has two parts: a balanced chemical equation and the change in one or more thermodynamic quantities (e.g., temperature, energy, or enthalpy) that occurs when that change occurs. The balanced equation can describe either a physical change (as in the example shown) or a chemical change.

Example: $\text{H}_2\text{O (s)} \longrightarrow \text{H}_2\text{O (l)} \quad \Delta H = 6.00 \text{ kJ}$

In the example above, the equation states that when one mole of solid water melts into liquid water at 0°C , the enthalpy of the system increases by 6.00 kJ (the reactants and products in a thermochemical equation will almost always be the system in a thermodynamics problem).