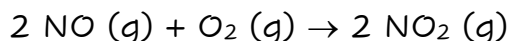


Enthalpy

$$q_p = \Delta H = \Delta E + P\Delta V$$
$$\Delta H = H_{\text{final}} - H_{\text{initial}} = H_{\text{products}} - H_{\text{reactants}}$$
$$w = -P\Delta V$$

1. What conditions will the enthalpy change of a process or reaction be equal to the heat that is transferred into or out of the system?
2. If a process is run under constant pressure and heat is released from the system, will the enthalpy of the system increase or decrease?
3. Consider the following balanced equation:



If the reaction were carried out in a constant volume container at constant temperature, would the amount of heat (absorbed or released) correspond to ΔH or ΔE ? Which quantity would be larger for this reaction?

4. A gas is confined to a vessel under a constant pressure. The gas undergoes a chemical reaction and absorbs 785 J of heat from the surroundings. There are 625 J of work done on the gas from the surroundings. Calculate both ΔH and ΔE for this reaction.