

## THERMOCHEMISTRY

### 1. Enthalpy of Chemical Reaction

$$H = E + PV$$

The change in Enthalpy:

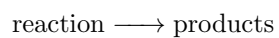
$$\Delta H = \Delta E + \Delta(PV)$$

If the pressure is held constant:

$$\Delta H = \Delta E + P\Delta V$$

#### Enthalpy of Reaction

- Because most reactions are constant-pressure process, we can equate the heat change in these cases to the change in enthalpy.



→ The change in enthalpy, called the **Enthalpy of Reaction**,  $\Delta H$ .

$$\Delta H = H(\text{products}) - H(\text{reactants})$$

- $\Delta H > 0$ , the reaction is an endothermic process.
- $\Delta H < 0$ , the reaction is an exothermic process.