

第一章

1. (1) - (2) - (3) - (4) -

2. (1) C (2) d (3) d (4) C (5) d (6) d

5. $n = \frac{m}{M} \approx 2.1 \times 10^{-2} \text{ mol}$

$$\therefore Q = Q_p \cdot n = 59.22 \text{ kJ}$$

$$\therefore Q_A = 30\% \times Q = 17.766 \text{ kJ}$$

6. $Q_p = -16.73 \text{ kJ/mol}$

12. (1) $n = \frac{m}{M} = \frac{1}{114} \text{ mol} \approx 8.77 \times 10^{-3} \text{ mol}$

$$\xi = \frac{n}{1} = 8.77 \times 10^{-3} \text{ mol}$$

$$Q_{v,m} = \frac{\Delta H}{\xi} \approx -5.45 \times 10^3 \text{ kJ/mol}$$

(2) $\Delta_r H_m^\theta(298.15\text{K}) = Q_{v,m} = -5.45 \times 10^3 \text{ kJ/mol}$

15. $\Delta_r H_m^\theta(298.15\text{K}) = \sum_B \nu_B \Delta_f H_{m,B}^\theta(298.15\text{K})$
 $= -8780.36 \text{ kJ/mol}$