

# משוואת גיבס

$$\Delta S_{\text{tot}} > 0$$

$$\Delta S_{\text{tot}} = \Delta S_{\text{sys}} + \Delta S_{\text{sur}}$$

$$\Delta S_{\text{sur}} = \frac{-q_{\text{sys}}}{T} = \frac{-\Delta H_{\text{sys}}}{T}$$

$$\Delta S_{\text{tot}} = \Delta S_{\text{sys}} - \frac{\Delta H_{\text{sys}}}{T} \cdot (-T)$$

$$-T \Delta S_{\text{tot}} = -T \Delta S + \Delta H$$

$$\Delta G_{\text{sys}} = -T \Delta S_{\text{tot}} \quad \checkmark$$

$$\Delta G = -T \Delta S + \Delta H$$

$$\Delta G = \Delta H - T \Delta S$$