Relations thermochimie

$$\boxed{(\xi_f - \xi_I)\,\Delta_r H^\circ(T_0) + \int_{T_0}^{T_f} \left(\sum n_i C_{p,m_i}\right) dT = 0}$$

Transformation adiabatique ($Q = 0$) isobare ($P = cte$)

$$\boxed{\begin{aligned} d(\Delta_r H^\circ(T)) &= (\Delta_r C_p^\circ(T))\, dT \\ d(\Delta_r S^\circ(T)) &= (\Delta_r C_p^\circ(T)) \frac{dT}{T} \end{aligned}}$$

Pour trouver $\Delta_r H^\circ$ à T à partir de T_0 (Hors chang. d'état)

$$\boxed{\frac{\partial}{\partial T}\left(\frac{G}{T}\right) = -\frac{H}{T^2}}$$

Gibbs Helmholtz.

$$\boxed{\frac{\partial}{\partial T}(\Delta_r G) = -\Delta_r S^\circ(T)}$$

$$\boxed{\Delta_r G^\circ(T) = \Delta_r H^\circ(T) - T\,\Delta_r S^\circ(T)}$$

$$\boxed{\mu_i(T,P) = \mu_i^\circ(T) + RT \ln a_i}$$

$$\boxed{-S\,dT + V\,dP = \sum_i n_i\, d\mu_i}$$

Gibbs-Duhem

$$\boxed{K^\circ(T) = \exp\left(-\frac{\Delta_r G^\circ(T)}{RT}\right)}$$

Loi de conservation de masse.

$$\boxed{\frac{d\ln K^\circ(T)}{dT} = \frac{\Delta_r H^\circ(T)}{RT^2}}$$

Van't Hoff