

$$V_m(T) = V_m(0\text{K}) + AU(T)$$

$$U(T) = 9NK_B T \left(\frac{T}{T_D}\right) \int_0^{T_D/T} \frac{x^3}{e^x - 1} dx$$

$$C_V(T) = \frac{\partial U}{\partial T}$$