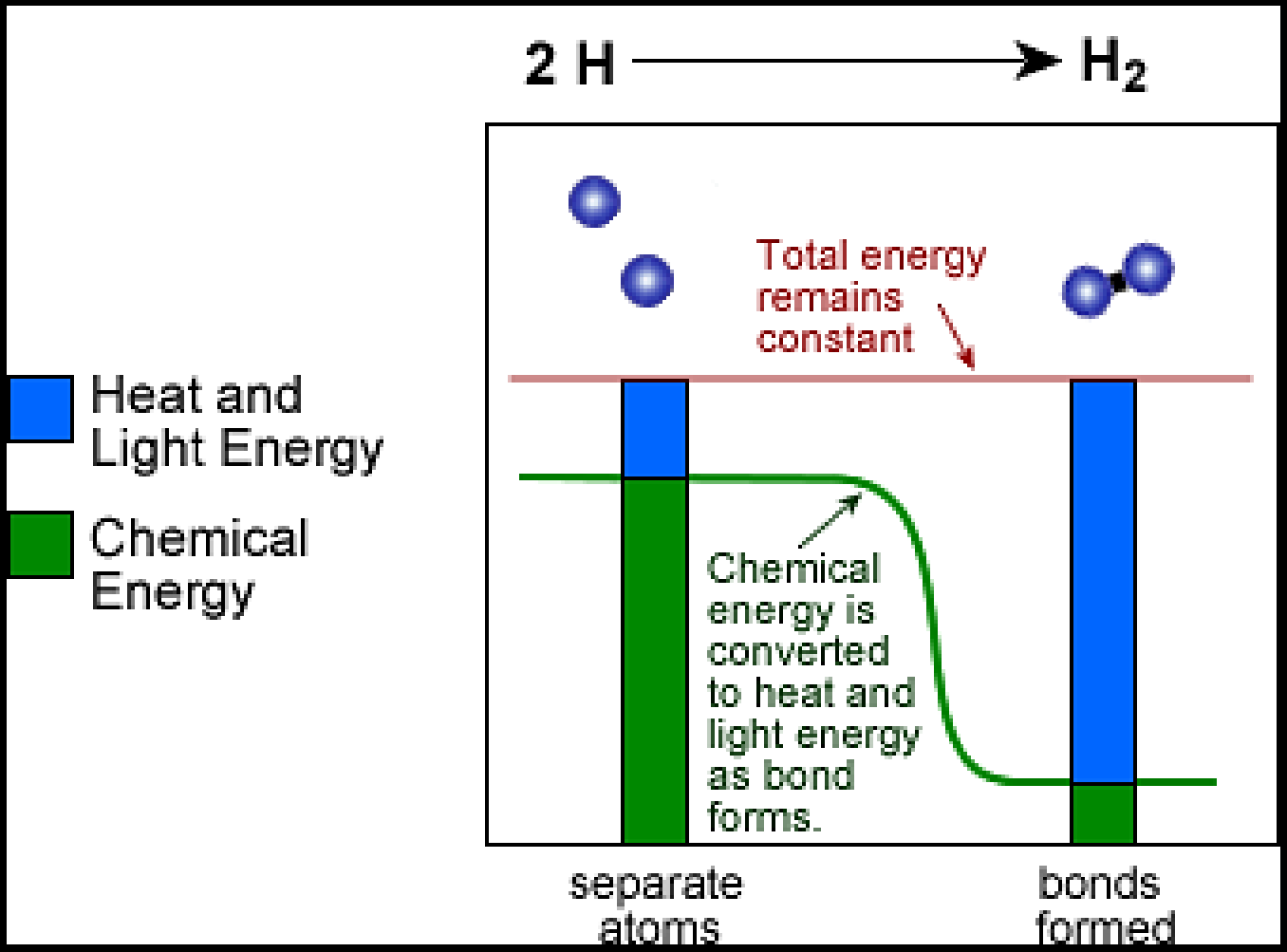
Př. 5/MM: Chemický potenciál & fázové přechody

Atkins, de Paula: Podkapitola 4.2

5.1 Chemická potenciální energie

Zkráceně chemický potenciál (látky J), (μ_J)



5.2 Závislost chemického potenicálu na T

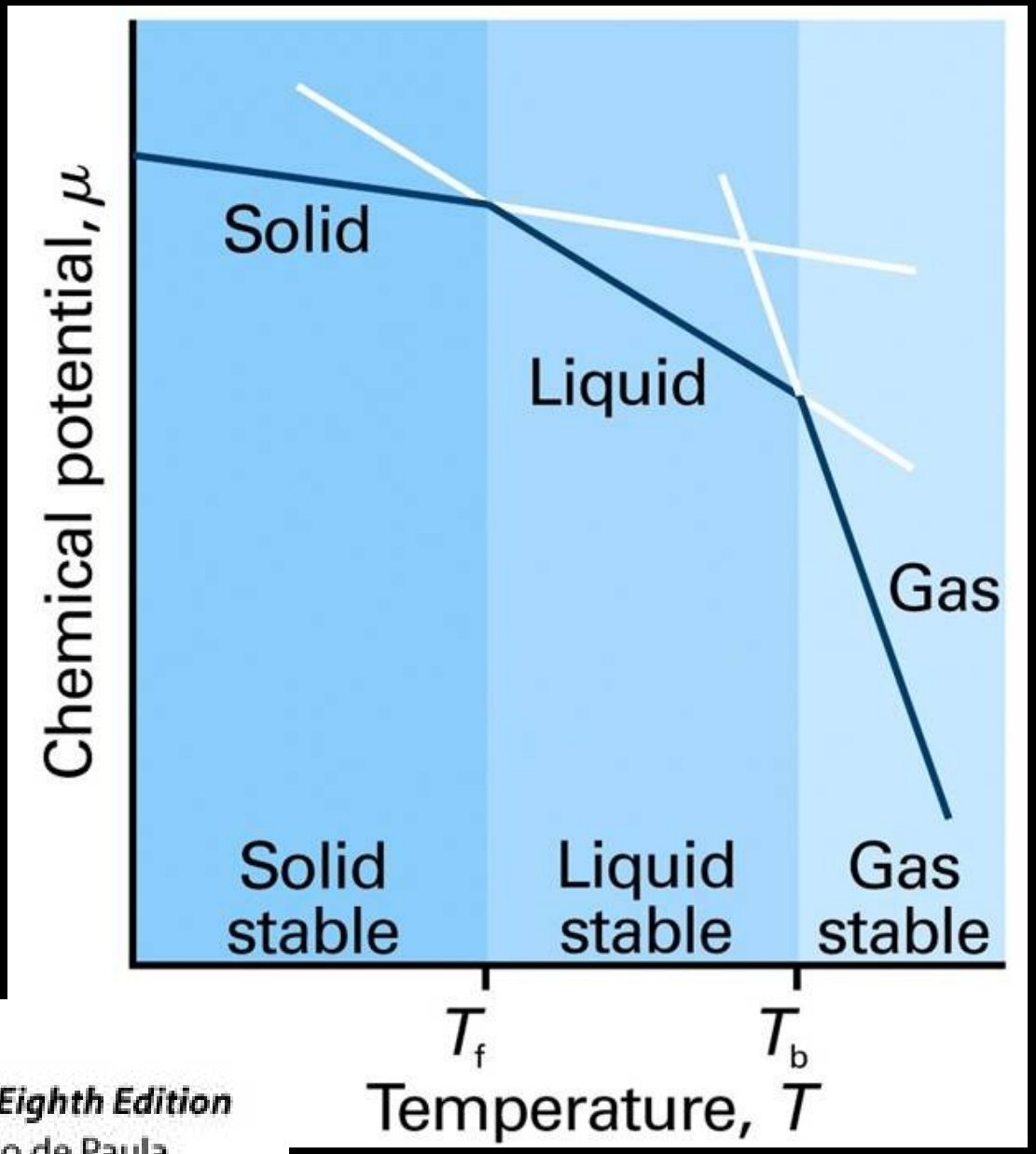
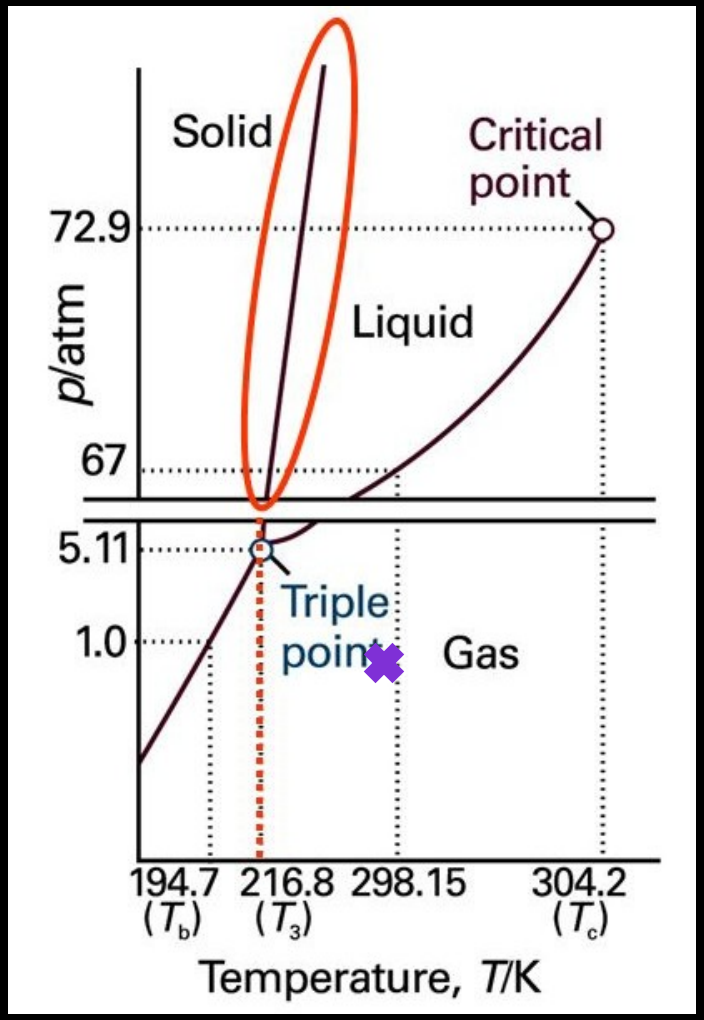
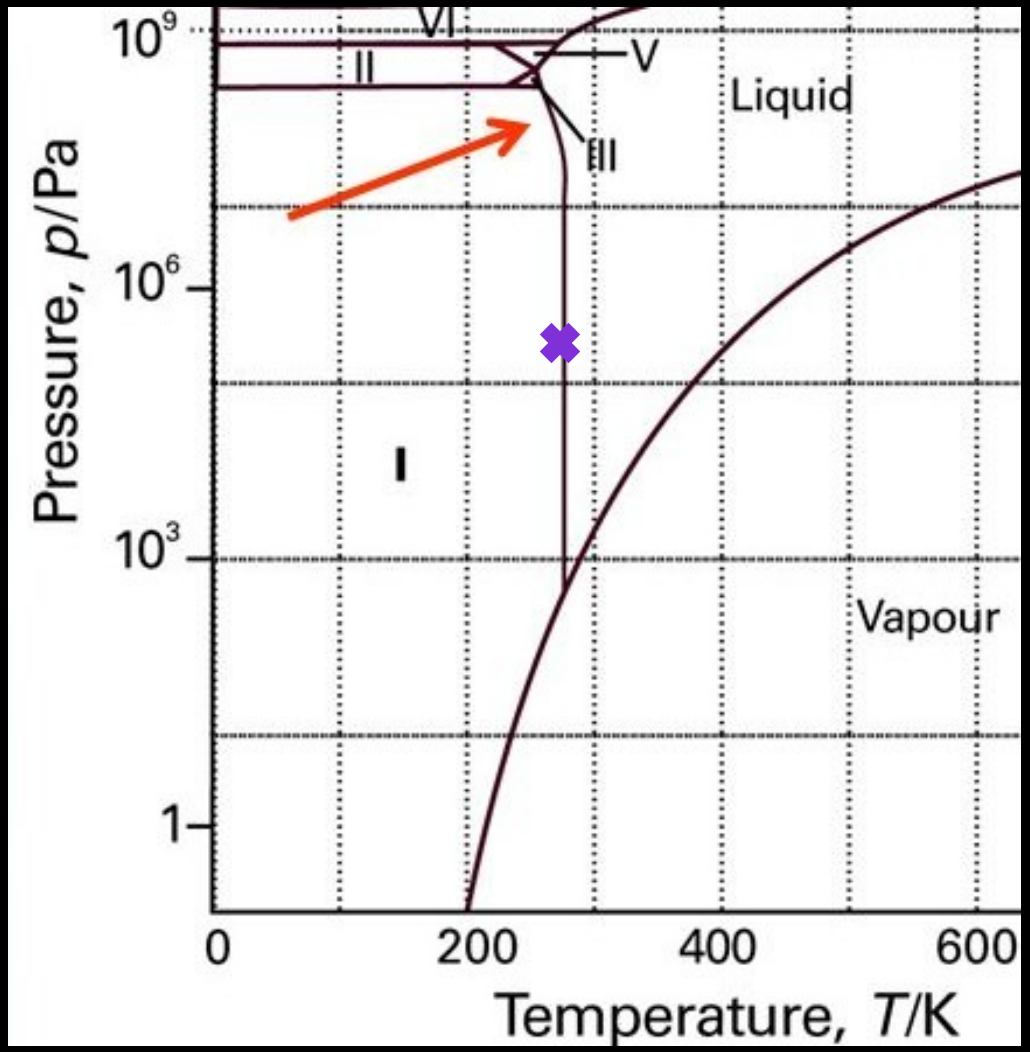


Figure 4-9
Atkins Physical Chemistry, Eighth Edition

5.3 Závislost T_f na p

CO_2 ← → H_2O





✖ **Standardní tlak a pokojová teplota**

5.4.a Závislost T_f na p pro CO_2

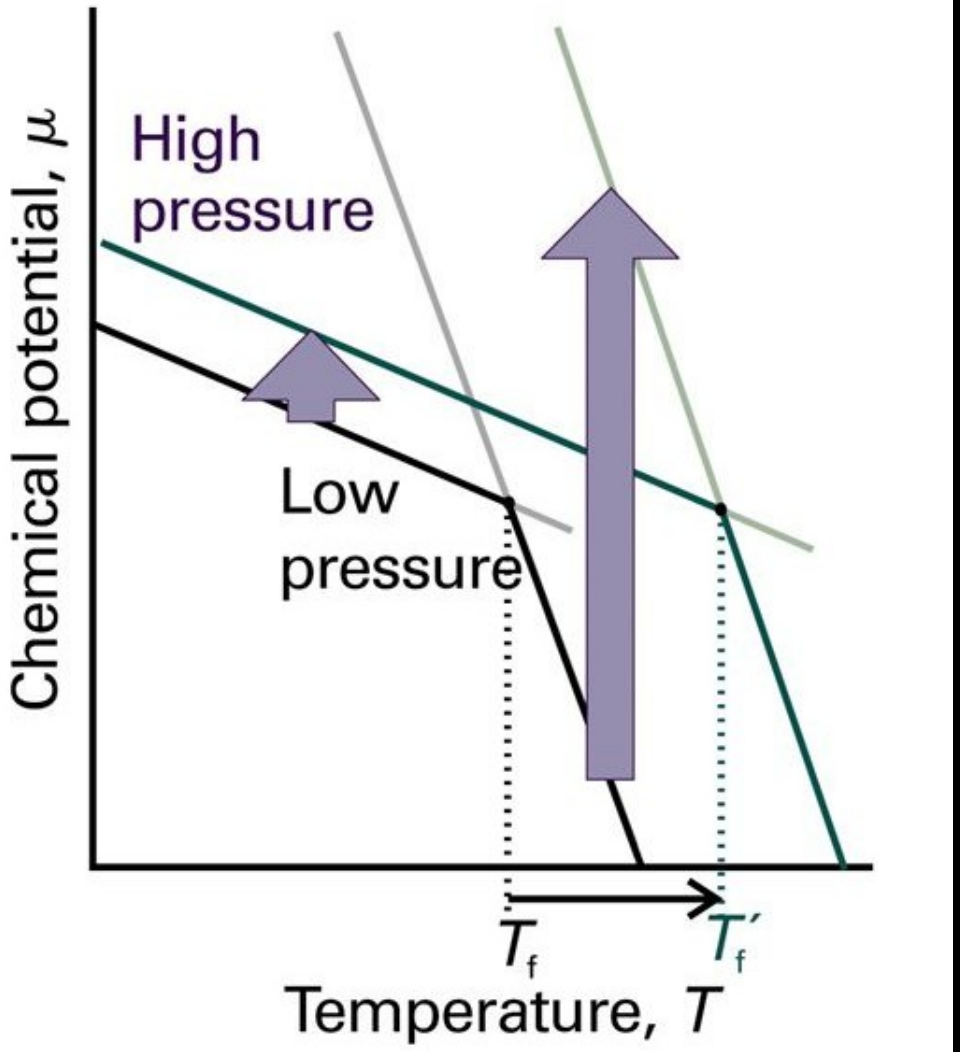
Pressure dependence of the chemical potential

$$\left(\frac{\partial G_m}{\partial P}\right)_T = \left(\frac{\partial \mu}{\partial P}\right)_T = V_m$$

$$d\mu = V_m\, dP$$

Substances for which

$$V_m(s) < V_m(l)$$



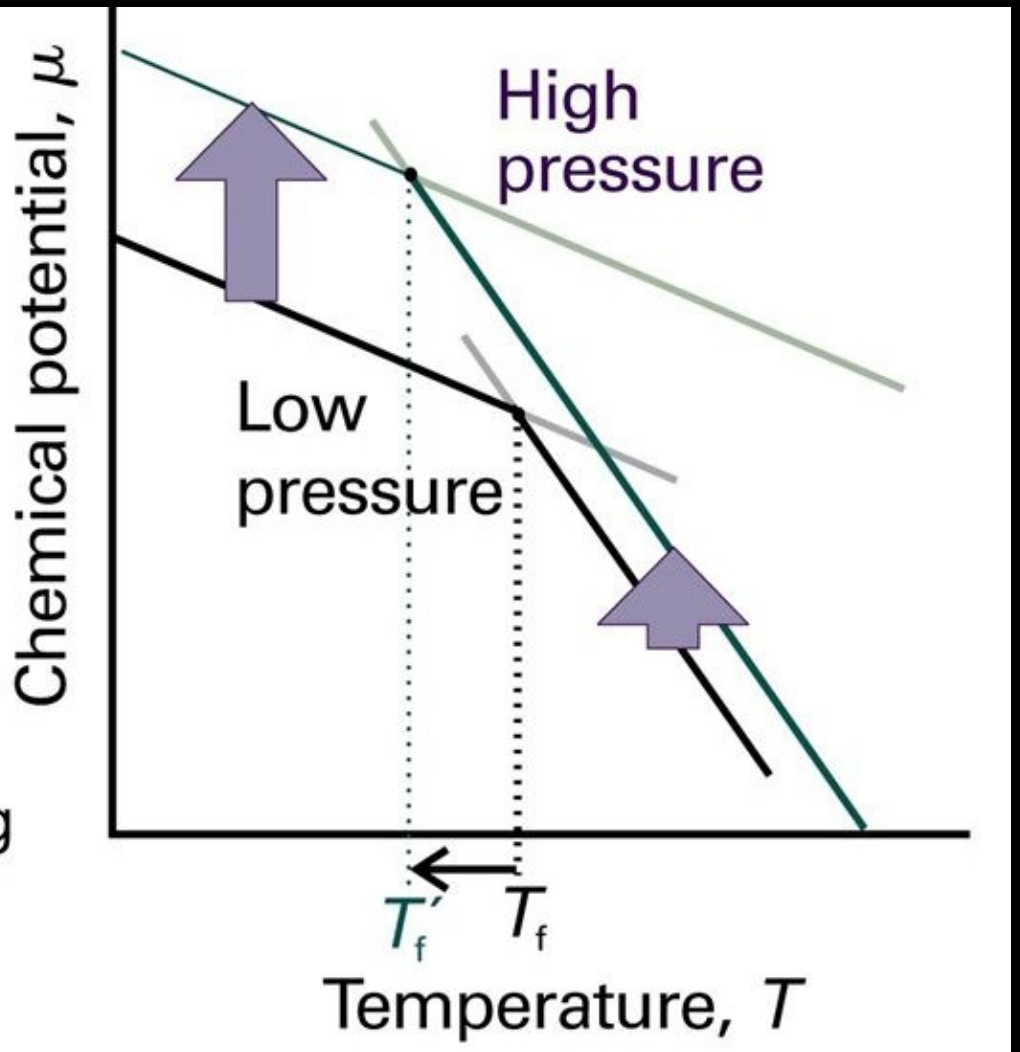
5.4.b Závislost T_f na p pro H_2O

Pressure dependence of the chemical potential

Substances for which

$V_m(s) > V_m(l)$

e.g., water,
which expands upon freezing



5.5a Clapeyronova rovnice

= obecná rovnice pro směrnice koexistenčních křivek ve FD