

Consequences of chemical potential changes in mixtures: Colligative properties

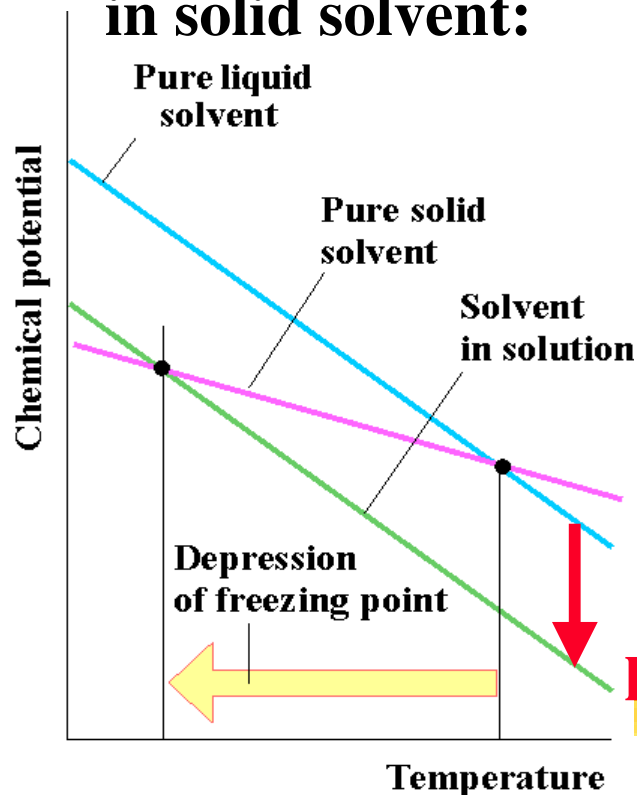
Freezing point depression:

$$\Delta T_f = K_f b_B$$

cryoscopic constant

molality

Solute is insoluble in solid solvent:



Chemical Potential lowered by solute

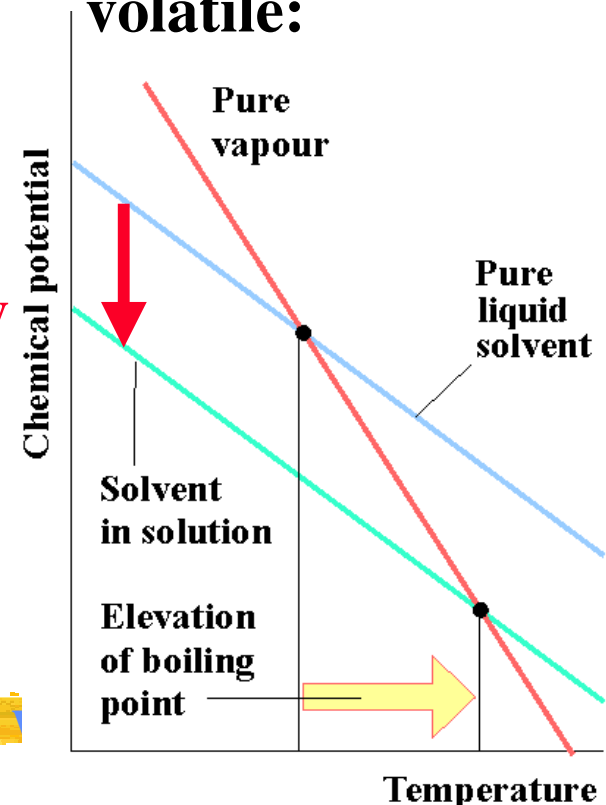
Boiling point elevation:

$$\Delta T_B = K_B b_B$$

ebullioscopic constant

Solute is not volatile:

Chemical Potential lowered by solute



Temperature