

Ideal Two Component Liquid/Vapor Systems

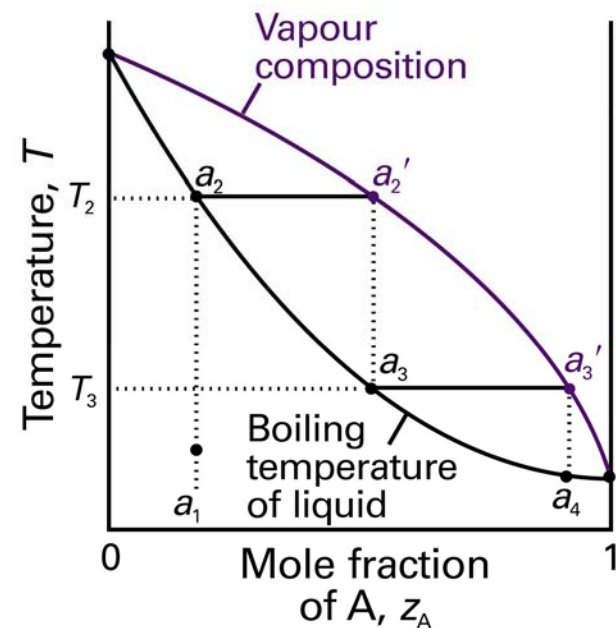
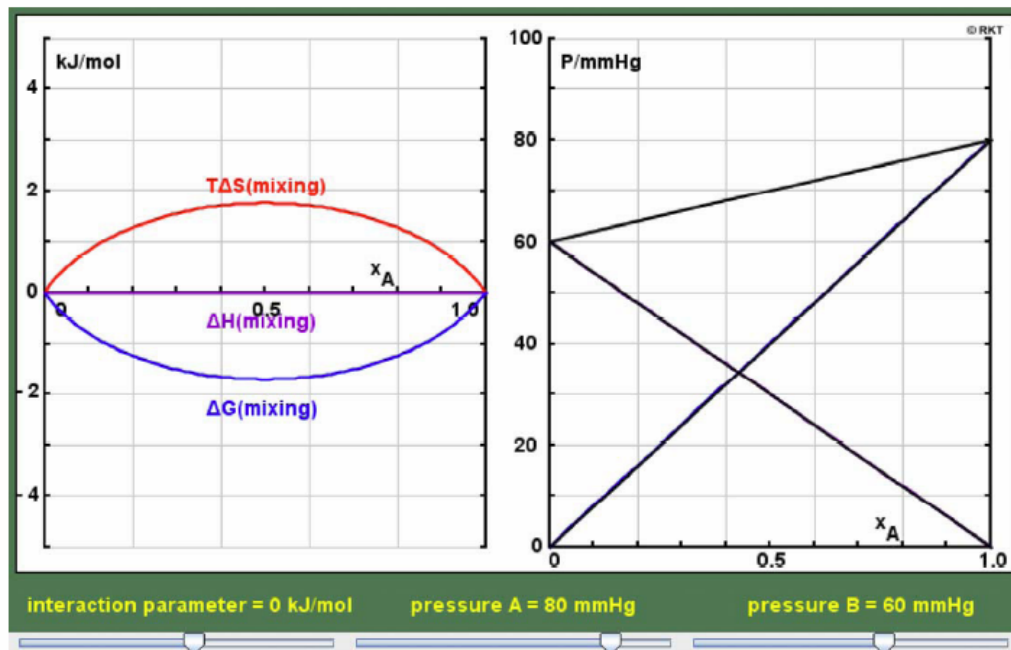


Figure 6-14
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Non-Ideal Two Component Liquid/Vapor Systems

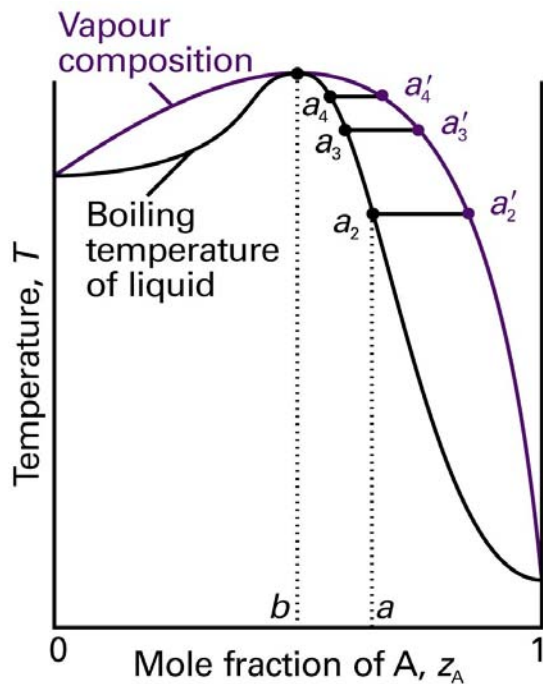


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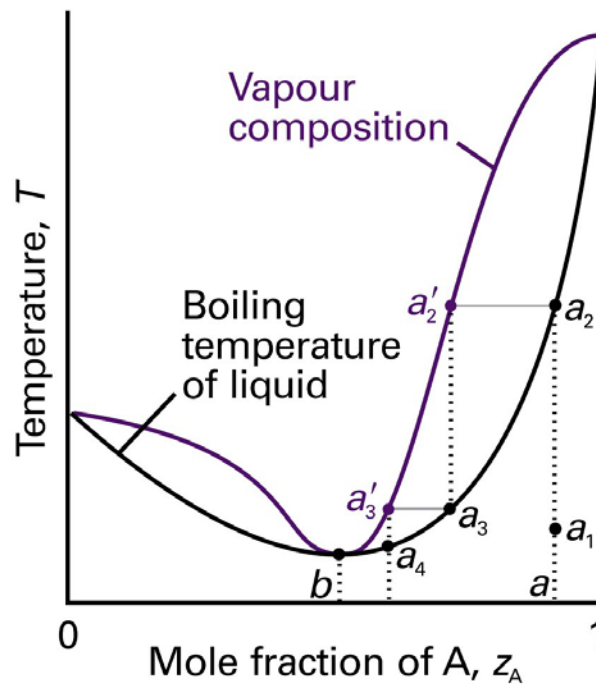
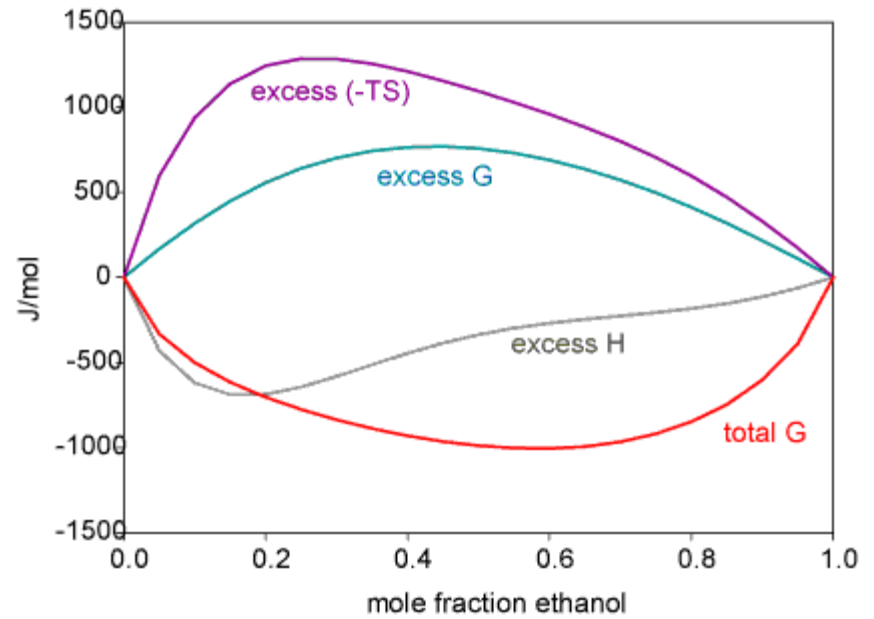
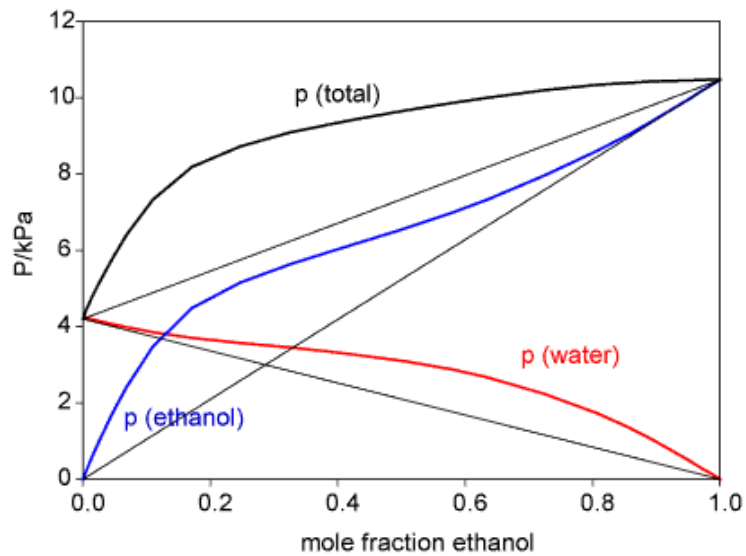


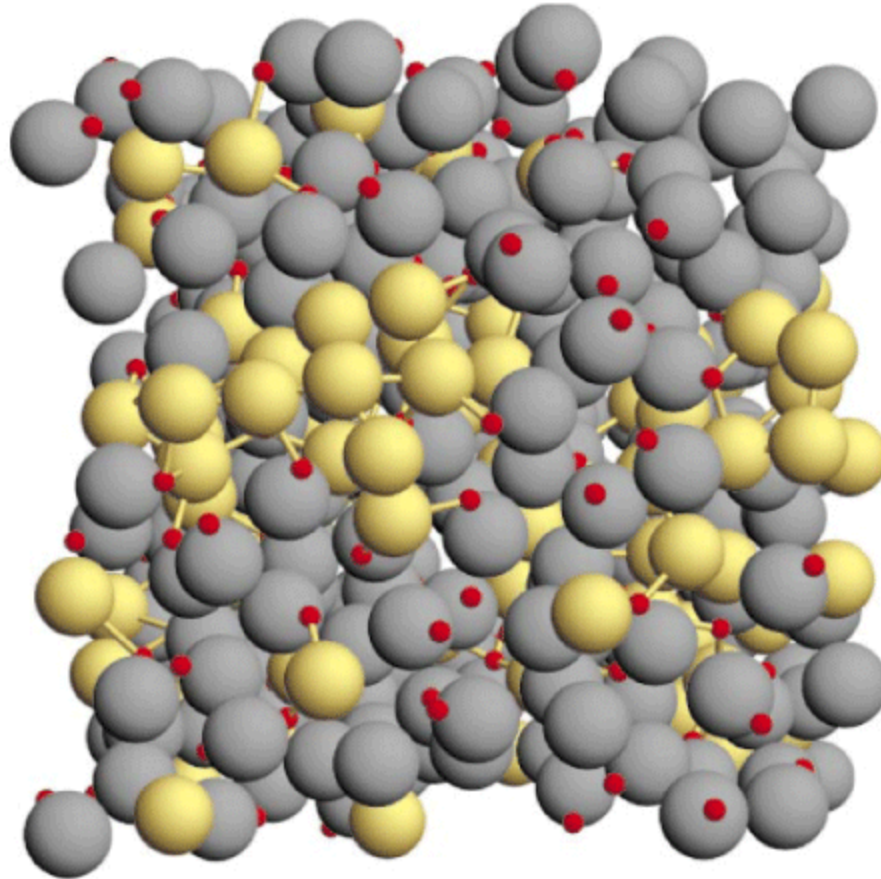
Figure 6-17
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Ethanol-Water: An Important (and Complicated) Example



(see Atkins and de Paula pp. 148-150 for more on excess functions)

Computed Structure of a Methanol-Water Solution (agrees with experiment)



**Upshot: Even miscible
alcohol/water mixtures
do not mix completely**

Sample structure of methanol/water solution at molar ratio
7/3: methyl in grey, OH in red, water in yellow
(from Finney, Soper et al. Nature 2003)