Chemical Engineering (Thermodynamics I) (UCH305)

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Lecture 8

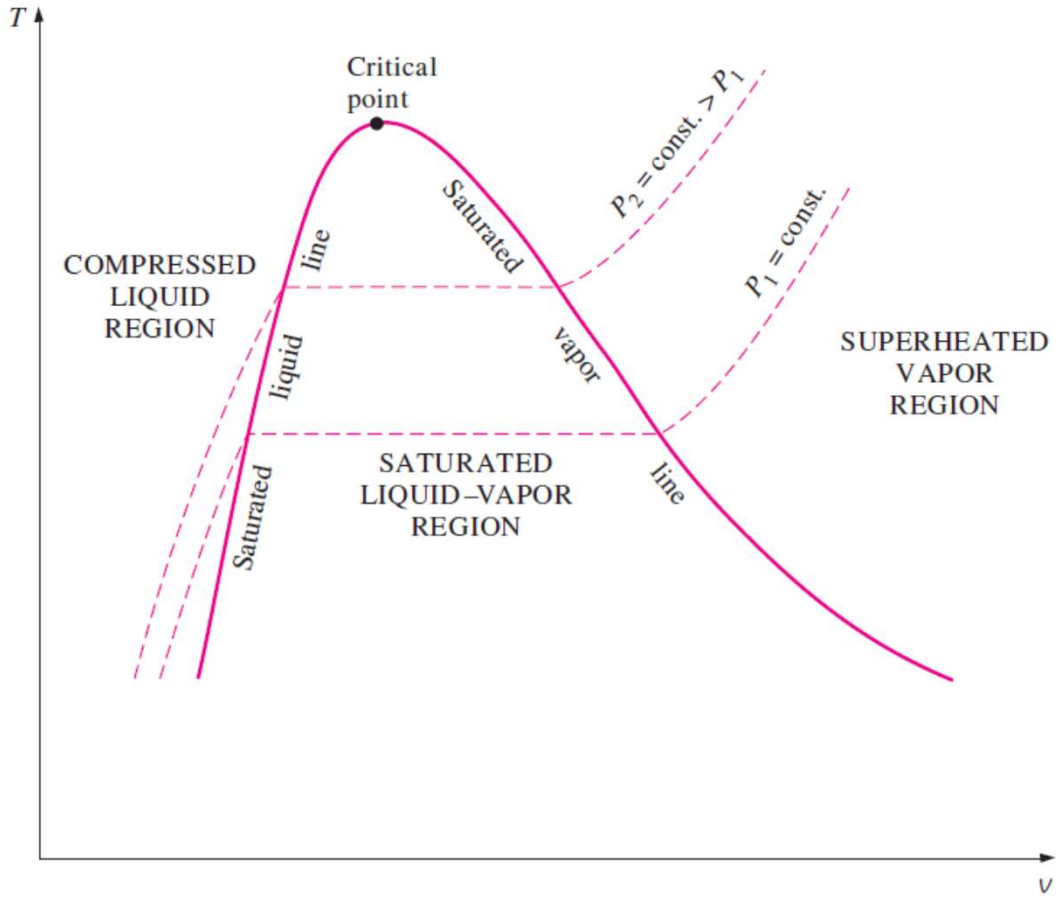
Property diagrams

Outline

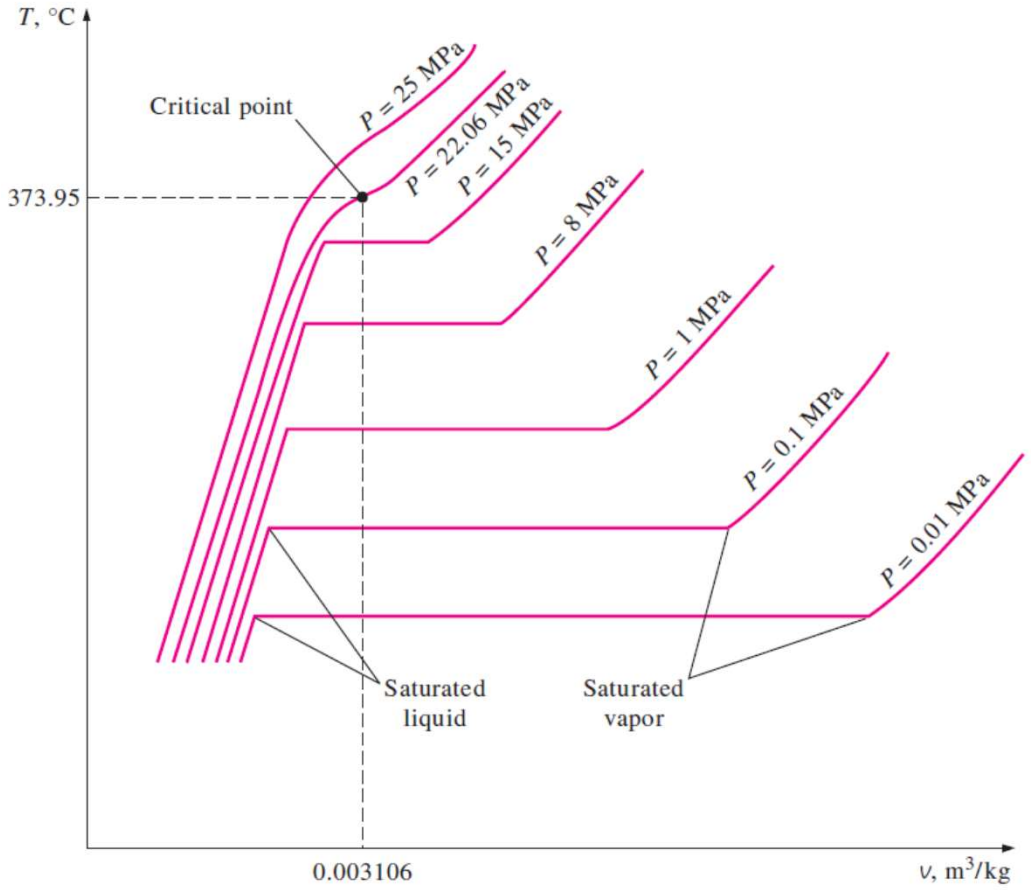
Property diagrams

- T - v diagram
- P - v diagram
- P - T diagram

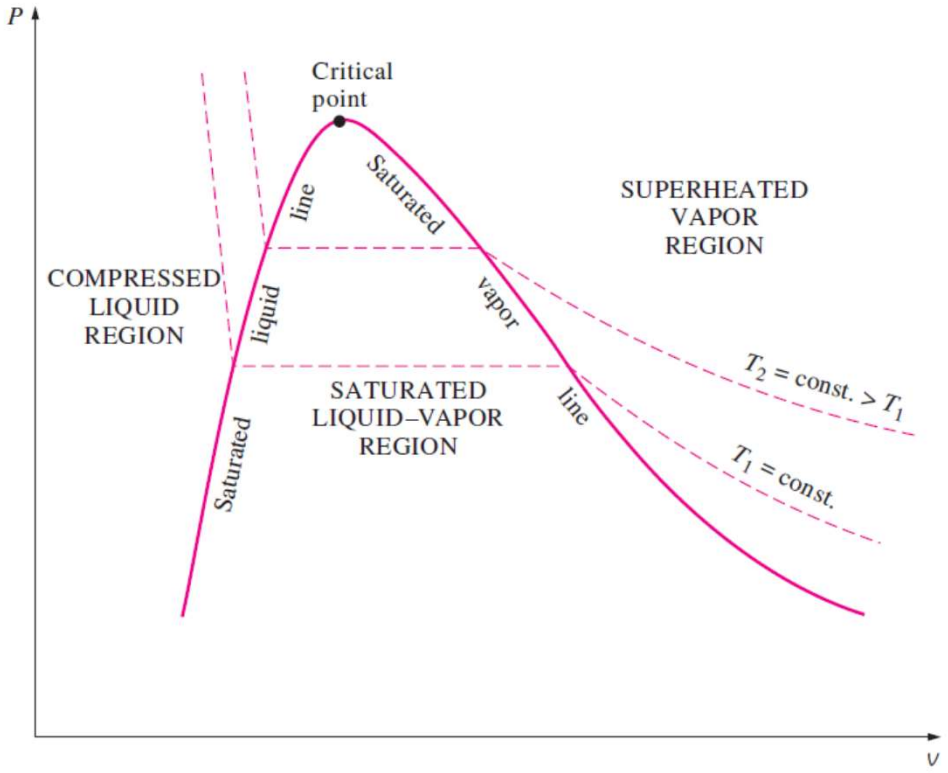
T-*v* diagram of a pure substance



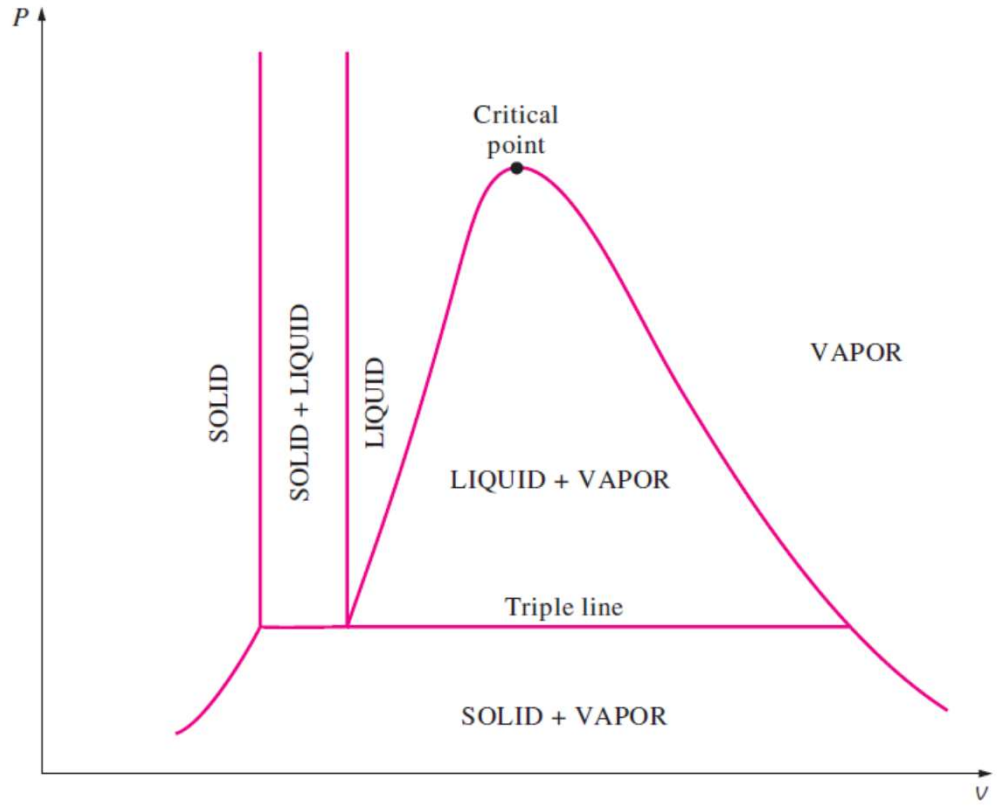
T-*v* diagram of constant-pressure phase-change processes of a pure substance at various pressures (numerical values are for water)



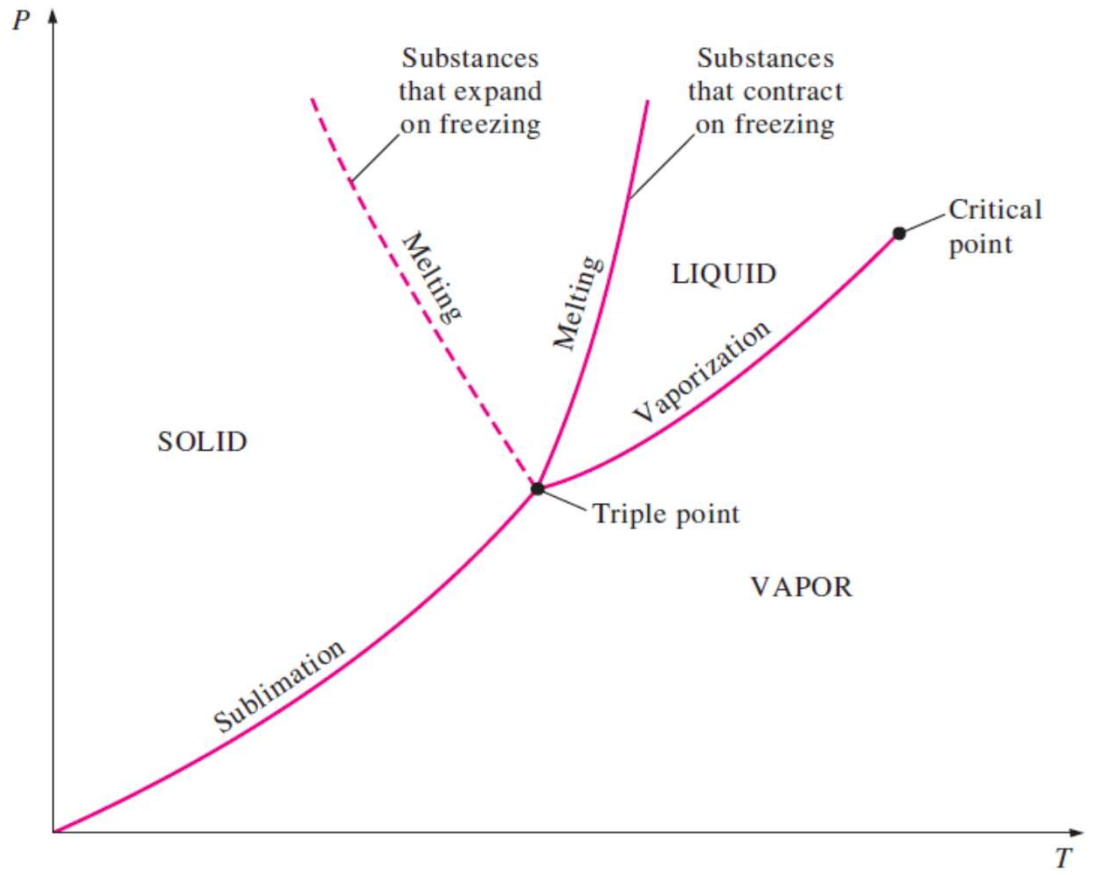
P-v diagram of a pure substance



P-v diagram of a substance that contracts on freezing



P-T diagram of pure substances



References

1. *Rao, Y.V.C., Thermodynamics, Universities Press (2004).*
2. *Smith J. M. and Van Ness H. C., Chemical Engineering Thermodynamics, Tata McGraw-Hill (2007).*
3. *Nag, P.K., Engineering Thermodynamics, Tata McGraw Hill (2008) 3rd ed.*
4. *Cengel, Y. A. and Boles, M., Thermodynamics: An Engineeing Approach, Tata McGraw Hill (2008).*

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Thank you for your Patience