

Advanced Thermodynamics
Prof. B.S. Murty
Department of Metallurgy and Material Science Engineering
IIT Madras

Solution models, chemical potential

Questions:

1. What is a regular solution? How does it differ from an ideal solution?
2. What is a sub regular solution model? Under what conditions it need to be evoked?
3. Under what conditions none of the above three models are valid?
4. From thermodynamic principles, how do you prove that a pure metal is not thermodynamically possible.
5. What is the concept of equilibrium in a multi-component system and how does it differ from that in unary system?
6. How does the chemical potential of an element in a solution get influence by the presence of a third element? How does this influence the diffusion of elements?