

Soft Matter Physics

Problems 1: Solutions

1. Describe and discuss the double tangent construction to the Helmholtz free energy and show that it is equivalent to imposing chemical and mechanical equilibrium between two coexisting phases. Consider single component systems and incompressible binary mixtures. How do you distinguish the binodal from the spinodal, mathematically and/or experimentally ?
2. Solve either problem 2.4 or 2.7 of the Textbook by Doi (Beware of the Erratum).