

A vague discomfort at the thought of the chemical potential is still characteristic of a physics education. This intellectual gap is due to the obscurity of the writings of J. Willard Gibbs who discovered and understood the matter 100 years ago.

C. Kittel; Preface to his book: Introduction to Solid State Physics

Basics

The Chemical Potential

- ▶ This module is registered in the "basic" part of the **Semiconductor** course, because the chemical potential belongs to basic thermodynamics. However, people with a mostly *physics background* (like me) may often have learned exciting things like Bose-Einstein condensations and the Liouville theorem in their thermodynamics courses, but not overly much about chemical potentials and, most importantly, **chemical equilibrium**.
- ▶ If you want to refresh your memory, the following link will take you to the hyperscript "**Defects in Crystals**" which contains a detailed [discussion of the chemical potential](#) in its "Advanced" part.