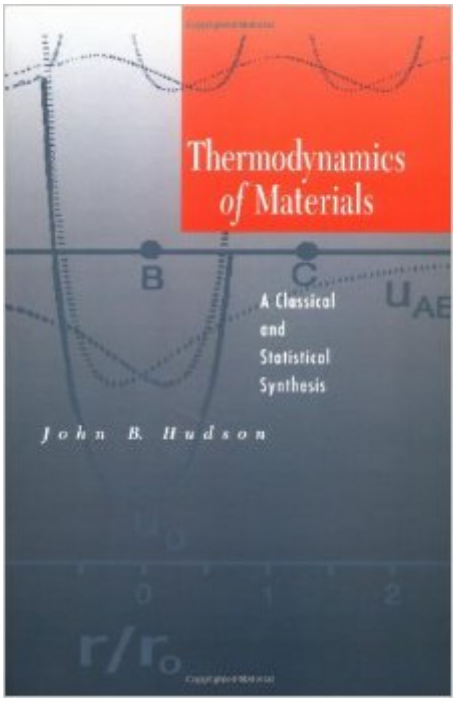
Thermodynamics Of Materials: A Classical And Statistical Synthesis



Synopsis

Thermodynamics of Materials A Classical and Statistical Synthesis Designed as a reference resource for practicing professionals as well as a text for advanced students, Thermodynamics of Materials offers a lucid presentation that ties together classical and statistical treatments of thermodynamics within the framework of materials science. Unlike most books in the field, it emphasizes the natural connection between these two approaches, both as a way of obtaining useful information about real systems, and as a way of showing the relations between the molecular-level properties of systems, and their properties on a macroscopic scale. In this regard, the author’s aim throughout the text is to introduce the rigorous, general relations that arise from classical thermodynamics, which are system independent, and then to use statistical thermodynamic relations to calculate the expected values of the macroscopic thermodynamic parameters of the systems. Thermodynamics of Materials includes a review of classical thermodynamics, an introduction to statistical thermodynamics, and numerous practical problems in thermodynamics, especially those involving phase and chemical equilibrium. Handy appendices enhance the value of this outstanding text.

Book Information

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Customer Reviews

This books is used at a Graduate Student level.The Grad students using this for a course either should have taken undergraduate thermodynamics or will need to fill in their gaps of knowledge.Also, the first five chapters, rightfully labeled "Part I Review of Classical

Thermodynamics" give a pretty good review of the basic thermodynamics any student using this book would need to know.The book is also very concise, getting straight to the meat of the theory and knowledge you need, instead of being overly wordy. It was a difficult but good class when I took it.-Former Material Science Undergrad and Graduate student

This book assumes you have a very good working knowledge of thermodynamics. Otherwise there are many web site that provide better examples, clarity and examples.