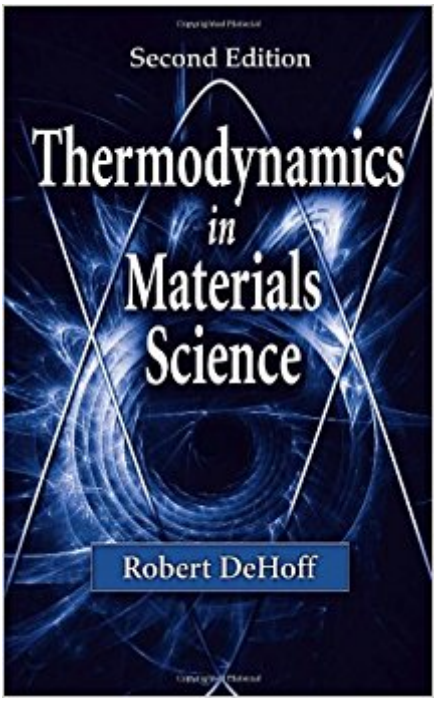
Thermodynamics In Materials Science, Second Edition



Synopsis

Thermodynamics in Materials Science, Second Edition is a clear presentation of how thermodynamic data is used to predict the behavior of a wide range of materials, a crucial component in the decision-making process for many materials science and engineering applications. This primary textbook accentuates the integration of principles, strategies, and thermochemical data to generate accurate Ã¢â ¬Å“mapsÃ¢â ¬Â• of equilibrium states, such as phase diagrams, predominance diagrams, and Pourbaix corrosion diagrams. It also recommends which maps are best suited for specific real-world scenarios and thermodynamic problems. The second edition yet. Each chapter presents its subject matter consistently, based on the classification of thermodynamic systems, properties, and derivations that illustrate important relationships among variables for finding the conditions for equilibrium. Each chapter also contains a summary of important concepts and relationships as well as examples and sample problems that apply appropriate strategies for solving real-world problems. The up-to-date and complete coverage ofthermodynamic data, laws, definitions, strategies, and tools in Thermodynamics in Materials Science, Second Edition provides students and practicing engineers a valuable guide for producing and applying maps of equilibrium states to everyday applications in materials sciences.

Book Information

Hardcover: 624 pages

Publisher: CRC Press; 2 edition (March 13, 2006)

Language: English

ISBN-10: 0849340659

ISBN-13: 978-0849340659

Product Dimensions: 9.6 x 6.3 x 1.3 inches

Shipping Weight: 2.2 pounds (View shipping rates and policies)

Average Customer Review: 3.6 out of 5 stars 21 customer reviews

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Customer Reviews

This is in reference to the 1st edition.What a great book.This is the way thermo should be taught!! Don’t you hate how thermo is boring and doesn’t make any sense? I took a thermo class as an

undergrad using a different textbook, and it didn’t make any sense. I was constantly lost, trying to catch up by learning things backwards. Most thermo books try to teach you thermo by either one of two horrible methods:1. reverse-engineer the phase diagram, or some other example.2. memorize the equations and apply them.Instead, this book walks you through the derivation of the equations that people use in thermo. It even spells out the mathematics you need to work through the concepts. You don’t have to memorize anything. The gradual buildup of knowledge and principles, as ordered in this book, is the only way people like me can learn thermodynamics. I used this textbook in grad school and thermodynamics finally made sense.YOU MUST endure through the first few chapters before you begin to appreciate the book. If you stop midway, it will be a total waste of your time.My only grip is that there were numerous typos in the 1st edition, and each reprint had different typos in different places. My version had a typo in one of the state functions which really messed me up. I hope the 2nd edition does not have any of those problems.Since it is primarily focused on teaching you thermodynamics, I don’t think it is very useful as a "quick" reference material. In other words, it teaches you how to fish, but doesn’t give you the fish. If you want a reference, I believe there are books with more depth and breadth out there.I don’t think it is worth buying unless you intend to sit down and read through the first ten chapters. The latter chapters are all optional and add some breadth. But really, you are not going to buy this book for its treatment of electrochemistry.

I have to give this book a bad review, mainly for the errors. We are only halfway through our thermodynamics class and we have found over 30 errors so far. A lot of errors are in equations and solutions to example problems. This is very confusing for students who are just learning the subject, as it can make the student believe he is wrong and missing some underlying concept when the equation he derives does not agree with the book. This book can only be used if you carefully derive every equation on your own or use it in a class where an errata is given.As the book progresses, the errors become increasingly frequent and the examples become more vague.This is the 2nd edition, maybe the 3rd will correct the errors.

Thank you.

Straight forward but incredibly dry. Not sure how you would spice this up but it does it’s job.

Book was in perfect condition. Seller did great how ever this book is a terrible learning tool, but what

can be expected as it is a text book.

excellent coverage of the most important stuff

These books were great. They arrived on time and in great shape. The content within the books is excellent so far. I would recommend these to anyone entering the field of materials science!

it looks new.However, this is first edit which has different parts with the second edit.But, totally speaking, it is worth such price.

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