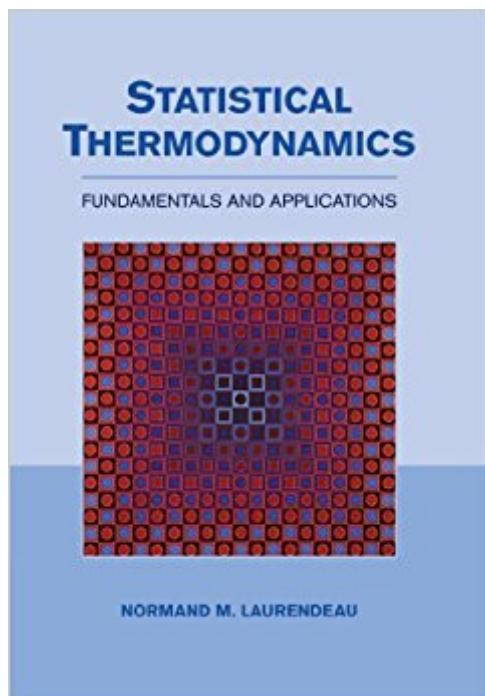


The book was found

Statistical Thermodynamics: Fundamentals And Applications



Synopsis

Building on the Maxwell-Boltzmann method of step-by-step development of the subject, this book makes few presumptions concerning students' previous exposure to statistics, quantum mechanics, or spectroscopy. The book begins with the fundamentals of statistical thermodynamics, pauses to recover needed knowledge from quantum mechanics and spectroscopy, and then moves on to applications involving ideal gases, the solid state, and radiation. A full introduction to kinetic theory is provided, including its applications to transport phenomena and chemical kinetics. Modern applications, such as laser-based diagnostics, are also discussed.

Book Information

Paperback: 466 pages

Publisher: Cambridge University Press; 1 edition (November 22, 2010)

Language: English

ISBN-10: 0521154197

ISBN-13: 978-0521154192

Product Dimensions: 8.5 x 0.9 x 10 inches

Shipping Weight: 2.3 pounds (View shipping rates and policies)

Average Customer Review: 4.6 out of 5 stars See all reviews (8 customer reviews)

Best Sellers Rank: #540,449 in Books (See Top 100 in Books) #228 in Books > Science & Math > Physics > Dynamics > Thermodynamics #847 in Books > Textbooks > Engineering > Mechanical Engineering #1597 in Books > Textbooks > Science & Mathematics > Physics

Customer Reviews

Great book! It is a little dense at some points and can be hard to read (for reference I'm a PhD student in mechanical engineering). The author is a legend in the laser diagnostics field so if you are looking for rovibronic models for use with Raman scattering or LIF, this book has lots of good information. Note: If you are an optical diagnostics beginner check out Introduction to Optics and Lasers in Engineering (Laufer), Spectra of Atoms and Molecules (Bernath), or Laser Diagnostics for Combustion Temperature and Species (Eckbreth).

I use this text for my graduate intermediate thermodynamics course for Mechanical Engineers. It's a superb text for this group, well written, understandable, and approachable, without compromise on significant detail. It is especially good as a preparatory text for those interested in making optical diagnostic measurements. Good introductory material on kinetic theory as well as statistical

thermodynamics. I highly recommend it.

This book is a great introduction! It clearly explains the linkages between classical concepts and the statistical/quantum concepts. Entropy, work, temperature, heat transfer et al become much clearer as a result. Note that this book does not just spellout facts. it gives both qualitative and quantitative derivations to help you understand how everything fits together. The problem sets are well chosen to further enhance your understanding.

This is a pretty good book, if you're into this kind of stuff. Good explanations and examples. Mildly interesting material.

[Download to continue reading...](#)

Statistical Thermodynamics: Fundamentals and Applications
Fundamentals of Engineering Thermodynamics Fundamentals of Engineering Thermodynamics, 7th Edition
Fundamentals of Classical Thermodynamics Thermodynamics of Pharmaceutical Systems: An introduction to Theory and Applications
An Introduction to Statistical Learning: with Applications in R (Springer Texts in Statistics)
Physics for Scientists and Engineers, Vol. 1: Mechanics, Oscillations and Waves, Thermodynamics (Physics for Scientists & Engineers, Chapters 1-21)
Essays On Thermodynamics.: Architecture and Beauty Thermodynamics and an Introduction to Thermostatistics
Mechanics and Thermodynamics of Propulsion (2nd Edition) Introduction to Thermodynamics and Heat Transfer + EES Software
A History of Thermodynamics: The Doctrine of Energy and Entropy Thermodynamics and the Kinetic Theory of Gases: Volume 3 of Pauli Lectures on Physics (Dover Books on Physics)
Thermochemistry and thermodynamics (Physical chemistry, series one)
Nonequilibrium Thermodynamics in Biophysics Thermodynamics: An Engineering Approach with Student Resources DVD Thermodynamics (Dover Books on Physics)
Thermodynamics: An Engineering Approach Engineering Thermodynamics Basic Engineering Thermodynamics

[Dmca](#)