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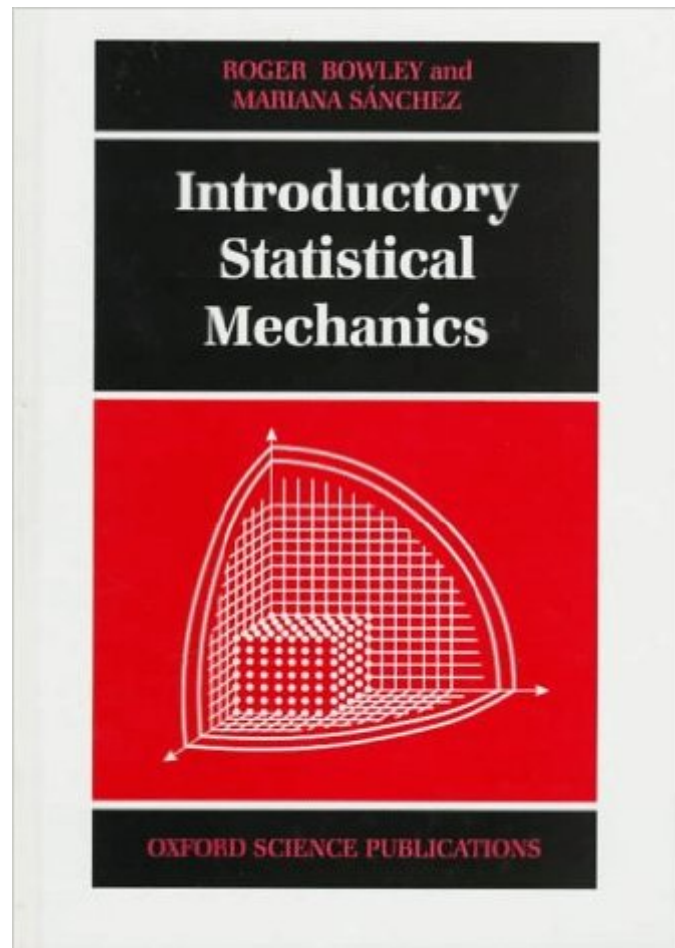
ROGER BOWLEY and
MARIANA SÁNCHEZ

**Introductory
Statistical
Mechanics**

OXFORD SCIENCE PUBLICATIONS

Synopsis

The aim of this book is to explain the ideas and techniques of statistical mechanics in a simple and progressive way, starting from the laws of thermodynamics and simple ideas of quantum mechanics. The reader is led through progressively more complex problems with all the mathematical detail explained. This work should be of interest to second or third year undergraduate students of physics or chemistry.

Book Information

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Customer Reviews

I recommend this book to anyone who is taking an undergraduate course in stat mech. I also recommend it to beginning GRADUATE students of stat mech. I used it for my own graduate coursework and I found it to be extremely helpful.This book provides a clean, uncluttered presentation of the principles of stat mech; does not lose sight of the physical reasons behind the mathematical manipulations; and most helpful of all, contains a good set of problems WITH SOLUTIONS! It has been more helpful to me in my graduate work than any graduate-level book!In a next edition, maybe the authors can include a gentle introduction to the new renormalization group theory of phase transitions, and also increase the number and depth of problems.If you plan on studying stat mech, get this book.

I found this book to be a great introduction to statistical mechanics. The thermodynamic chapters (which are mostly at the very beginning and very end of the book) left a lot to be desired. The

authors did, however, relate stat mech ideas back to thermo topics, which helped motivate the subject. Finally, I would not recommend this book to be used as a self-study book. I read the chapters before the lectures and found that I repeatedly needed the lecture information (i.e. info not in the book) in order to the do the homework problems.

You cannot beat this book for help reviewing for prelims or comps. The problems are typical of what you would find on a stat mech prelim, and the answers are in the back of the book. Combine this with Schoeder's An Introduction to Thermal Physics for a total Thermo + Stat Mech course.The book is also very helpful during grad-level Stat Mech courses. It makes a great companion to Pathria's Statistical Mechanics, Second Edition.

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