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Principles Of Chemical Kinetics





Synopsis

Designed to allow students to move quickly from theoretical concepts to concrete applications, this textbook takes a balanced approach to the study of kinetics. It stresses not only gas kinetics, but solution and solid state kinetics also.

Book Information

Hardcover: 256 pages Publisher: William C Brown Pub (August 2, 1996) Language: English ISBN-10: 0697328813 ISBN-13: 978-0697328816 Product Dimensions: 0.5 x 6.2 x 9.5 inches Shipping Weight: 1.2 pounds Average Customer Review: 3.8 out of 5 stars Â See all reviews (4 customer reviews) Best Sellers Rank: #2,060,365 in Books (See Top 100 in Books) #590 in Books > Science & Math > Chemistry > Physical & Theoretical > Physical Chemistry #4818 in Books > Science & Math > Chemistry > General & Reference #5192 in Books > Textbooks > Science & Mathematics > Chemistry

Customer Reviews

My kinetics professor primarily used this as the main textbook for the course because of the price; it was affordable for starving graduate students and contained practice problems. However, I think the saying "You get what you pay for" really stands out in this case. Normally you see Chemistry or Materials Science textbooks costing at least \$60-\$100 dollars, but this guy only costs \$36 here on . Mixed blessing, obviously....This book has an unacceptable amount of errors (for a 2nd Edition!!), especially in the beginning chapters when it is crucial for the student/reader to understand fundamental concepts. It does a good job of going through mathematical steps when deriving something, but often times the initial concepts it uses for the derivation are flawed and not consistent with previous information given. There are also a lot of relatively minor errors in the practice problems that I am just astounded did not get caught during editing. Overall I would definitely not recommend this book on its own to learn Kinetics; you must use this book in conjunction with more reliable references at the library (to save money!) to really get a good grasp of the concepts.

This book is at an extremely low level, unacceptable for a graduate text. Graduate level concepts, like partition functions and phase-space, are given mention but not developed at all. Even worse often such concepts are given a couple of pages of fluffy introductory discussion before the reader realizes that the author isn't really headed anywhere and the concept will never be used again in the text. Even worse, many of the derivations that are presented leave the reader puzzled at why the author seems to selectively and inconsistently applying concepts. Part of the answer may be that the book also contains a sizable number of typographical errors, several of which were found in the problems during the course, usually after hours of puzzling over seemingly insolvable problems. As far as I'm concerned, anyone who understands the following would be better off moving on to a proper text.1) When things are in dynamic equilibrium, their forward and backward rates are equivalent.2) Rate constants in chemical reactions are usually governed by Arrhenius relationships.3) First order linear differential equations can be solved using integrating factors.4) When some things happen really fast and other things happen really slow, you can simplify by assuming that the really fast things are in equilibrium all the time. See 3 if this makes things linear and first order, otherwise iterate (this assumption or the equation... you pick). If you don't understand these things, ponder the question: "Why am I taking a graduate class on Chemical Kinetics?"

Unlike most books on chemical kinetics, this text presents a balanced treatment of kinetics of reactions in gas phase, solutions and solids. A chapter on enzyme kinetics in included as well. A readable book that is ideal for self-teaching. Clearly written with details of derivations shown.

This text provides a clear and logical description of chemical kinetics. This book presents this somewhat complicated subject in a manner that is unlike any other book of its kind. The structure and content of this book will appeal to anybody interested in the study of chemical kinetics, no matter how much knowledge of this topic they may have. Excellently written and is a "must have" for those interested in this subject.

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