Thermodynamics and Kinetics for the Biological Sciences

Gordon G. Hammes
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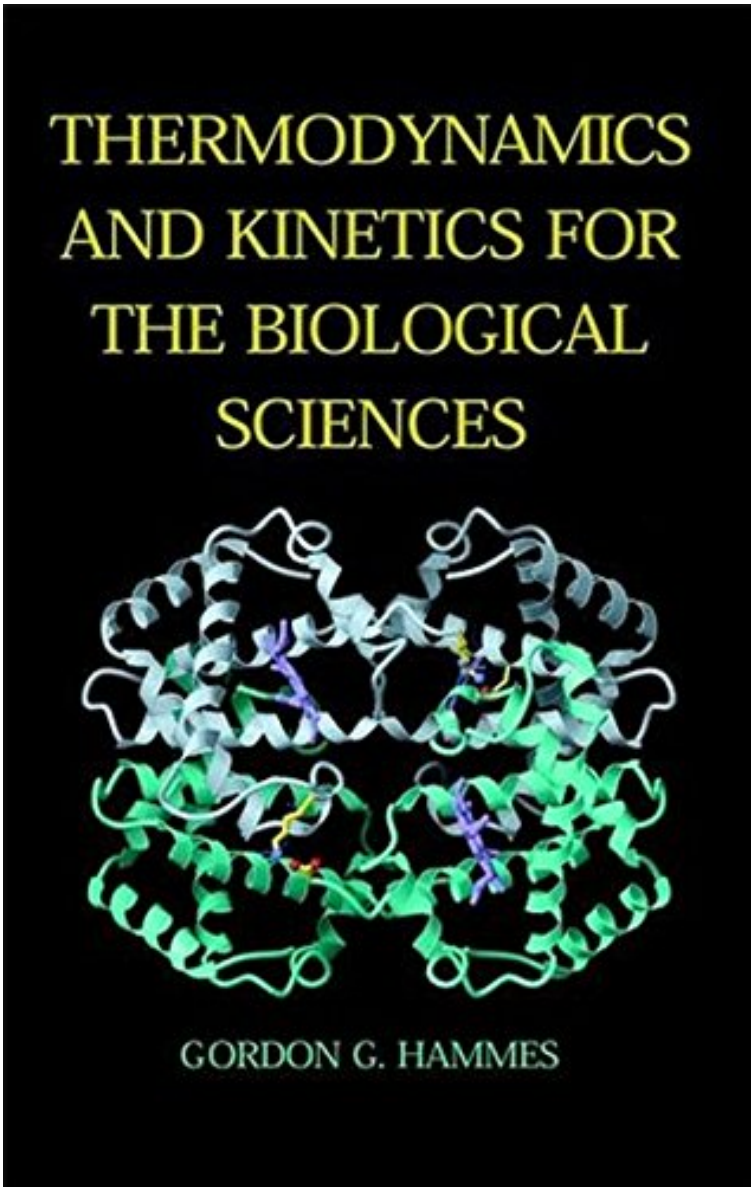

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Gordon G. Hammes : Thermodynamics and Kinetics for the Biological Sciences before purchasing it in order to gage whether or not it would be worth my time, and all praised Thermodynamics and Kinetics for the Biological Sciences:

0 of 0 people found the following review helpful. Five StarsBy CustomerExcellence!13 of 13 people found the following review helpful. ExcellentBy Prof.I used this book as a supplement in a 4th semester chemistry course

targeted for biology and premedical students this past term. It has excellent up-to-date examples and good problems. Hammes does a nice job of presenting at an appropriate level topics from thermodynamics and kinetics needed to read and understand biochemical articles. Such things as the meaning of the biochemical (as opposed to the chemical) standard state are particularly well done -- better than in other books I have seen for this audience.But why does Wiley price [it at its cost]? Perhaps it is the nice color plates --- but at a lower price I would have had everyone in my class buy this as a suppplement to the text. At this price I am reluctant to do so.1 of 2 people found the following review helpful. provides a brief overview of the subjectBy Elia ZumotIncludes the basic equations and concepts in the field but everything is presented in brevity. I do not recommend it for those interested in a thorough study of the field or the derivation of all the concepts and variables (entropy, work, etc.).Problems at the end of every chapter do not have the answers.

Gain a working knowledge of thermodynamics and kinetics with a minimum of mathematics-a guide for individuals in the biological sciences An understanding of thermodynamics and kinetics is essential for researchers investigating molecular phenomena in diverse disciplines, including bioorganic chemistry, medicinal chemistry, biochemistry, pharmaceuticals, and biology. The use of these physical chemistry tools in the biological sciences has exploded over the past fifteen years, but the majority of works on thermodynamics and kinetics require mathematical expertise beyond that of many researchers in the field. Presenting a highly accessible introduction to thermodynamics and kinetics, Thermodynamics and Kinetics for the Biological Sciences employs a minimum of mathematics, assuming only a basic calculus background, while treating a wide range of topics in a logical and easy-to-follow style. All principles and concepts are clearly illustrated through the use of relevant applications and examples from the biological sciences, and explanations are further enhanced with problems and up-to-date references. Written by a world-renowned authority on biochemical kinetics, this remarkable book also features an easy-to-understand statistical development of entropy and a more extensive coverage of chemical kinetics and ligand binding to macromolecules than is usually found in books of this kind. Readers will acquire a working knowledge of thermodynamics and kinetics that they can readily apply to biological systems and use for exploring the scientific literature.

"If you are not a biochemist, I would strongly recommend this book for inclusion in you r personal library, particularly if you teach general chemistry...examples are wonderful and easy to find and grasp...If you are a biochemist...I recommend buying this book because of the problems at the end of the chapters and...the chapters on ligand binding and applications of kinetics provide examples and data treatment not often found in biochemistry textbooks..."(Journal of Chemical Education, Vol. 78, No. 4, April 2001) "...reveals to first year graduate students...the physical chemistry tools they need to investigate molecular phenomena..." (SciTech Book News, March 2001)From the Back CoverGain a working knowledge of thermodynamics and kinetics with a minimum of mathematics-a guide for individuals in the biological sciences An understanding of thermodynamics and kinetics is essential for researchers investigating molecular phenomena in diverse disciplines, including bioorganic chemistry, medicinal chemistry, biochemistry, pharmaceuticals, and biology. The use of these physical chemistry tools in the biological sciences has exploded over the past fifteen years, but the majority of works on thermodynamics and kinetics require mathematical expertise beyond that of many researchers in the field. Presenting a highly accessible introduction to thermodynamics and kinetics, Thermodynamics and Kinetics for the Biological Sciences employs a minimum of mathematics, assuming only a basic calculus background, while treating a wide range of topics in a logical and easy-to-follow style. All principles and concepts are clearly illustrated through the use of relevant applications and examples from the biological sciences, and explanations are further enhanced with problems and up-to-date references. Written by a world-renowned authority on biochemical kinetics, this remarkable book also features an easy-to-understand statistical development of entropy and a more extensive coverage of chemical kinetics and ligand binding to macromolecules than is usually found in books of this kind. Readers will acquire a working knowledge of thermodynamics and kinetics that they can readily apply to biological systems and use for exploring the scientific literature.About the AuthorGORDON G. HAMMES, PhD, is University Distinguished Service Professor of Biochemistry at Duke University Medical Center, Durham, North Carolina, and Editor-in-Chief of the journal Biochemistry.