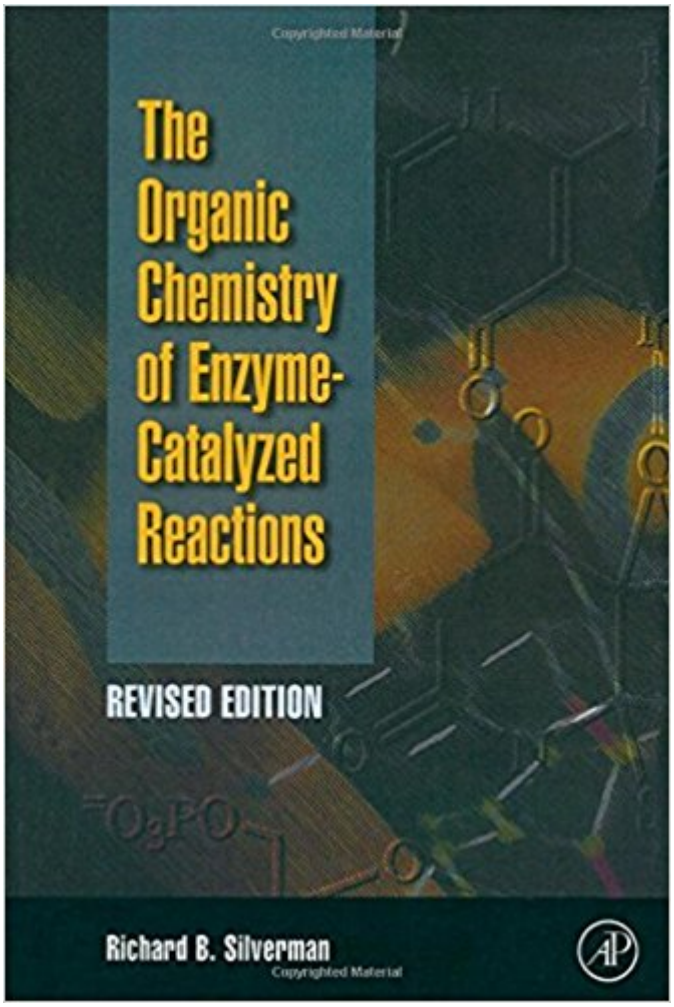
Organic Chemistry Of Enzyme-Catalyzed Reactions, Revised Edition, Second Edition



Synopsis

The Organic Chemistry of Enzyme-Catalyzed Reactions is not a book on enzymes, but rather a book on the general mechanisms involved in chemical reactions involving enzymes. An enzyme is a protein molecule in a plant or animal that causes specific reactions without itself being permanently altered or destroyed. This is a revised edition of a very successful book, which appeals to both academic and industrial markets.Illustrates the organic mechanism associated with each enzyme-catalyzed reactionMakes the connection between organic reaction mechanisms and enzyme mechanismsCompiles the latest information about molecular mechanisms of enzyme reactionsAccompanied by clearly drawn structures, schemes, and figuresIncludes an extensive bibliography on enzyme mechanisms covering the last 30 yearsExplains how enzymes can accelerate the rates of chemical reactions with high specificityProvides approaches to the design of inhibitors of enzyme-catalyzed reactionsCategorizes the cofactors that are appropriate for catalyzing different classes of reactionsShows how chemical enzyme models are used for mechanistic studiesDescribes catalytic antibody design and mechanismIncludes problem sets and solutions for each chapter Written in an informal and didactic style

Book Information

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Customer Reviews

Praise for the First Edition:"Silverman’s newest contribution will serve as an outstanding text and reference on the reaction mechanisms of enzymes. ... His treatment of the topic should also appeal to a broad range of organic, medicinal, and biological chemists who desire an up-to-date and

succinct overview of the field. Silverman should be congratulated ... should quickly become the standard for mechanistic studies." --JOURNAL OF THE AMERICAN CHEMICAL SOCIETY

KEY FEATURES Shows how enzyme-catalyzed reactions are simply efficient organic reactions Emphasizes the connection between organic reaction mechanisms and enzyme mechanisms Explains how enzymes can accelerate the rates of chemical reactions with high specificity Uses selected enzymes to demonstrate general mechanisms of enzyme-catalyzed reactions Compiles the latest information about molecular mechanisms of enzyme reactions Illustrated with a vast array of clearly drawn structures, schemes, and figures Includes an extensive bibliography on enzyme mechanisms Describes approaches to the design of enzyme inhibitors Covers catalytic antibody design and mechanisms Provides problem sets and solutions for each chapter --This text refers to the Digital edition.

The index for this book .... For example, there are a fair number of examples of the epoxidation reaction, but not a single pointer toward that in the index of the book. And much the same thing for other types of reactions.It would also be nice if there was a more clear transfer between basic organic principles and then biological applications.He does do a good job showing this is some cases (i.e., the benzoin condensation), but a few more parallel examples would have been very useful.

Brilliant book, both for understanding the fundamentals and for scientists working on a problem...If you want a quick glance for solutions to problems at hand without having to dig through literature which, at times, can get unwieldy, this is the book...you will definitely enjoy the book, no matter what stage of your career you are at...

Are you an aspiring chemist or biochemist wasting your 20’s studying the chemical reactions involved in a biological pathway? If so, buy this book. Alright, >$100 is a lot of money for a grad student or postdoc, but seriously you won’t mind eating cup-o-noodle for an entire month once you begin to absorb the knowledge from this book. Tasty, tasty knowledge. It’s full of figures, great references, and is easy to read. This book is never on my shelve, it has a permanent home next to my computer. I use it that often.

This book is an excellent resource for undergraduate and graduate students studying enzyme

chemistry and organic mechanisms. Prof. Silverman does a fine job of giving many different examples of enzyme mechanisms. By not focusing totally on one kind of enzyme or catalysis, he succeeds in painting a broad picture for the reader, while not sacrificing content. The only drawback to this edition is the large amount of typographical errors that appear throughout. Perhaps better editing is in order for future editions.

Organic Chemistry of Enzyme-Catalyzed Reactions, Revised Edition, Second Edition Organic Chemistry of Enzyme-Catalyzed Reactions, Revised Edition The Organic Chemistry of Enzyme-Catalyzed Reactions Study Guide: Ace Organic Chemistry I - The EASY Guide to Ace Organic Chemistry I: (Organic Chemistry Study Guide, Organic Chemistry Review, Concepts, Reaction Mechanisms and Summaries) Simulating Enzyme Reactivity: Computational Methods in Enzyme Catalysis (Theoretical and Computational Chemistry Series) Cycloaddition Reactions in Organic Synthesis, Volume 8 (Tetrahedron Organic Chemistry) Strategies for Palladium-Catalyzed Non-directed and Directed C-H Bond Functionalization (Latest Trends in Palladium Chemistry) Metal Catalyzed Reductive C-C Bond Formation: A Departure from Preformed Organometallic Reagents (Topics in Current Chemistry) Experimental Organic Chemistry: A Miniscale & Microscale Approach (Cengage Learning Laboratory Series for Organic Chemistry) The Organic Chemistry of Drug Synthesis, Volume 3 (Organic Chemistry Series of Drug Synthesis) ADVANCED ORGANIC CHEMISTRY REACTIONS MECHANISMS AND STRUCTURE FOURTH EDITION Organic Chemistry Reactions: An Overview (Quick Review Notes) Organic Chemistry Reactions (Quick Study Academic) Organic Chemistry Reactions (Quickstudy: Academic) March's Advanced Organic Chemistry: Reactions, Mechanisms, and Structure Organic Chemistry by Inquisition, 1. General Reactions Advanced Organic Chemistry: Reactions, Mechanisms, and Structure Foundations of Organic Chemistry: Unity and Diversity of Structures, Pathways, and Reactions Reactions and Syntheses: In the Organic Chemistry Laboratory CHEMISTRY 14D THINKBOOK (Organic Reactions and Pharmaceuticals)