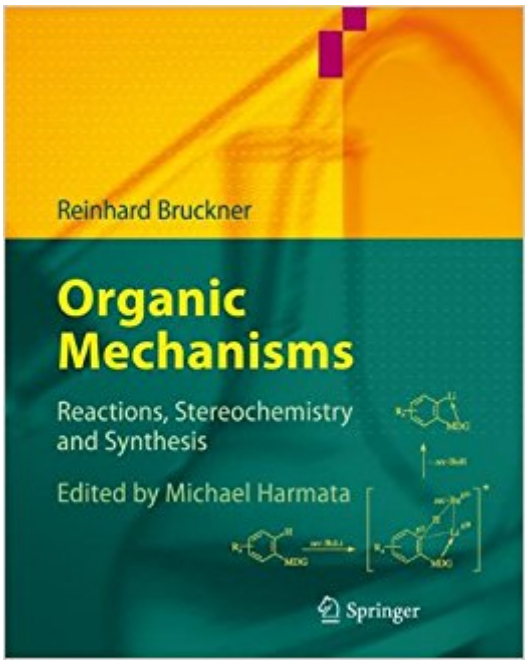
Organic Mechanisms



Synopsis

â œMuch of life can be understood in rational terms if expressed in the language of chemistry. It is an international language, a language without dialects, a language for all time, a language that explains where we came from, what we are, and where the physical world will allow us to go. Chemical Language has great esthetic beauty and links the physical sciences to the b- logical sciences. â • from The Two Cultures: Chemistry and Biology by Arthur Kornberg (Nobel Prize in Physiology and Medicine, 1959) Over the past two centuries, chemistry has evolved from a relatively pure disciplinary pursuit to a position of central importance in the physical and life sciences. More generally, it has p- vided the language and methodology that has unified, integrated and, indeed, molecularized the sciences, shaping our understanding of the molecular world and in so doing the direction, development and destiny of scientific research. The â œlanguage of chemistryâ • referred to by my former Stanford colleague is made up of atoms and bonds and their interactions. It is a s- tem of knowledge that allows us to understand structure and events at a molecular level and increasingly to use that understanding to create new knowledge and beneficial change. The words on this page, for example, are detected by the eye in a series of events, now generally understood at the molecular level.

Book Information

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Customer Reviews

From the reviews:"The new edition of the textbook of R. Bruckner is accurate, all important modern mechanistic and synthetic concepts of organic chemistry are presented in a very didactic fashion, a superb book to put in the hands of all who would want to learn synthetic organic chemistry or refresh

their knowledge."Paul Knochel, Ludwig-Maximilians-University MunichÂ "Over its three editions, Professor Bruckner has significantly fine-tuned his outstanding textbook titled â ˆOrganic Mechanismsâ ™, now available in English.Â This text is aimed squarely at students that have completed a typical one-year introductory course in organic chemistry and now wish to continue refining their understanding of the subject.Â At this level, the text is appropriately focused on providing the reader with an enhanced fundamental understanding of an ambitious range of organic reactions. Along with reminding the reader about fundamental principles necessary to understand the topic, Brucknerâ ™s updated edition also provides a solid physical organic perspective on a wide range of processes.Â The text is not meant to be an exhaustive survey of reactions, but more of a sound introduction to the underlying principles that control reactivity in variety of transformations that chemistry students should be familiar with. The book, therefore, is particularly well suited for â œintermediateâ • and â œadvancedâ • classes in organic chemistry, usually found in upper class electives and introductory graduate classes. The book will also serve as a valuable starting point for the more experienced chemist wishing to brush-up on organic transformations that they might be less familiar with.â • Marc L. Snapper, Boston CollegeThis updated version of Professor BrÃ cknerâ ™s â ˆOrganic Mechanismsâ ™ provides a thorough overview of modern organic synthesis that is both comprehensive and accessible to chemists with all levels of experience. Detailed reaction mechanisms are illustrated with clear schemes that effectively convey the electronic and structural principles influencing reactivity and selectivity for the most common transformations used in organic synthesis. The pragmatic division of the material into introductory and more advanced sections enables the text to be used both as a teaching resource for both undergraduate chemistry students and researchers from allied disciplines and as a valuable text for experienced researchers. The book prompts the reader to readily grasp important concepts, while providing ample scope for extension and development of more advanced students of organic chemistry. â ˆOrganic Mechanismsâ ™ is also a valuable resource for those involved in the application and practice of organic synthesis on a professional level. The range of topics discussed provides an up-to-date compendium of current methods, of relevance to both academia and industry, with the references at the end of each chapter providing a useful starting point for more detailed further reading. Overall, the new English edition of â ˆOrganic Mechanismsâ ™ is an excellent single reference for those wishing to learn or better understand the complex practice of modern synthetic organic chemistry. It is long overdue and I look forward to having a copy readily available for my students. Margaret Brimble, The University of AucklandHaving held in high regard the 1st English edition of BrucknerÂ´s textbook Organic Reaction Mechanisms I have been waiting

for years for an updated version to appear. This long-expected textbook is now available. It has been completely revised and considerably expanded and is a meticulously composed treatise at the interface between synthetic organic chemistry and mechanistic analysis. Every student of advanced organic chemistry will benefit from this book." Koichi Narasaka, Nayang Technical University, Singapore.â œThis English edition of the German textbook by Bruckner â | is an excellent resource for advanced academic students. â | The presentation is impressive, and clear illustrations appear throughout the book. â | This makes the work a very interesting read and offers abundant opportunities for students to create new problem sets. â | For graduate students and instructors, this work offers a wealth of information. The end-of-chapter references are comprehensive and thorough. Summing Up: Highly recommended. Graduate students, researchers/faculty, and professionals.â • (S. Rajaraman, Choice, Vol. 48 (3), November, 2010)

Professor Dr. Reinhard BrÃ ckner arbeitet seit 1998 am Institut fÃ r Organische Chemie und Biochemie der UniversitÃ¤t Freiburg. Seine Forschungsgebiete sind Naturstoffsynthese und die Entwicklung neuer Methoden im Bereich der Stereoselektiven Synthese. Zuvor war er Professor fÃ r Organische Chemie an den UniversitÃ¤ten WÃ rzburg und GÃ¶ttingen bzw. Gastprofessor an der University of Wisconsin in Madison (USA), der Universidade de Santiago de Compostela (Spanien), der Indiana University Bloomington (USA) und der Tokyo University (Center of Excellence Program).

Ever get confused as to what goes where? When? And why? This book helps to answer some of those questions and leads to deeper understanding of mechanisms if that is what you need to succeed. Some of us need a more in-depth explanation, and that is what this book does. As a stand-alone text, I would caution against using it exclusively if you are not an advanced student. For reference, the beginning organic chemistry student may find it helpful if you do a lot of mechanisms or if you are like me and need to know what the whole picture looks like.

I’m not too far in yet but it seems like good reading. It’s referencing back to previous points forcing use of learned knowledge as I go forward.I did find an error on page 27 where the equation was not properly balanced but given the depth of information in the text, I can forgive minor errors.

I would recommend waiting for a revised edition of this book if you are interested in the material covered by Bruckner.This 1st edition unfortunately contained a large number of typographical errors

in the text and in the figures. While some of these errors were minor and had little effect on the overall meaning, other printing mistakes caused significant confusion for the students, including misnamed reagents and figures with mislabeled footnotes. This led to frustration for those trying to understand the material and caused students to lose confidence in the text; the book was consequently difficult to use as a teaching resource.Several students also commented that some of the reaction mechanism figures were hard to follow. The criss-crossing of reaction arrows and organization of structures (for example, Fig. 2.37 and Fig. 6.34) were more distracting than they were clear. A left to right, top to bottom organization of schemes seems to make more sense than ones that split into multiple pathways that go in various directions and cross other arrows or pathways that may or may not be related.The text did cover many good topics and models for understanding organic reactions, and used limited coloring (red arrows and text) to highlight mechanisms in a simple and clear manner. However, an edition that addresses the typographical mistakes would probably be better received.

Look at the cover of the book. The title is "Organic Mechanisms", not "Advanced Organic Chemistry". Overall it is a nice book. If you have specific concerns, the editor provided a mechanism through which you can improve the book. See his preface. I am he. Thanks!!March 20, 2010:There was a title change from "Advanced Organic Chemistry" to "Organic Chemistry". Well, we are almost there!! Change it to "Organic Mechanisms" and I will stop writing here. Give this book a chance my friends. But note that it is a book for thinkers!! Organic chemistry rocks!

Mechanisms Organic Chemistry: Principles and Mechanisms Organometallic Mechanisms and Catalysis: The Role of Reactive Intermediates in Organic Processes Organic Reaction Mechanisms: Selected Problems and Solutions Reaction Mechanisms At a Glance: A Stepwise Approach to Problem-Solving in Organic Chemistry March’s Advanced Organic Chemistry: Reactions, Mechanisms, and Structure Advanced Organic Chemistry: Reactions, Mechanisms, and Structure Determination of Organic Reaction Mechanisms Reaction Mechanisms in Environmental Organic Chemistry Organic Reaction Mechanisms: A Step by Step Approach, Second Edition ADVANCED ORGANIC CHEMISTRY REACTIONS MECHANISMS AND STRUCTURE FOURTH EDITION