

Buchbesprechungen · Book Reviews

C. Arnaud, Chimie Organique, Collection des Mémo-Guides, 3ème édition revue et corrigée. Broche, 144 pages, 135 × 210. Nombreux schémas et tableaux, Masson, Paris, 1995, 96 F prix T. T. C. au 1.02.1995. ISBN 2-225-84686-3

The book is intended first to present the vast domain of basic knowledge in a concise and logical way: General principles (orbitals, electronic effects, stereochemistry, energetic aspects of reactions, oxydo-reduction, acidity of C-H).

Approach to synthesis by the systematic treatment of most important substituents. Furthermore: Help is offered for the student to understand, memorise and visualise by the condensed and panoramic presentation, supported by many documentary tables.

This is neither a textbook nor intended for exercises but complementary and addressed to students following courses of organic chemistry in their first or second year. It is clearly intended also as a help for preparing exams.

The detailed inventory and the alphabetic index facilitate retrieval but also show some differences from usual naming of matter. For example, erythrenes stands for 1,3 dienes: the name reactions of Simpnini, Senderens, Piria, Van Slyke, Zeisel are reported and also the reactions of electrocycloislation and of sigmatropic shifts, but these without the usual attribution to Woodward-Hoffmann. However: The book is in its third edition and this fact alone should draw attention! To communicate organic chemistry especially for beginners is a problem and this booklet contributes usefully to the solution.

H. G. Viehe (Louvain)

Ch. Arnaud, Exercices de synthèses organiques (Collection Enseignement de la Chimie), 2. Aufl, 321 S., Format 16 × 24 cm, Masson, Paris, Mailand, Barcelona, 1995, Paperback, ISBN 2-225-84709-6

The revised and updated second edition of the book, "Exercices de synthèses organiques", written by Christian Arnaud, has been published very recently by Masson's publishers. This exercise book, designed for engineering schools or university students, contains new exercises in organic chemistry as well as the correct solutions. The numerous exercises (more than 150!) are arranged according to organic functions (alkanes, alkenes, alkynes...). Problems of stereochemistry and general retrosynthetic analysis are presented as well as studies of transition states. The exercises are divided into three levels of difficulty. The first level demands only fundamental understanding of organic chemistry and is designed for students starting to learn organic chemistry. The numerous exercises of the second level complete and expand the knowledge already acquired in the first class. Finally, the exercises of the third

level demand deeper knowledge and prepare the student for specialisation in organic synthesis. The exercises are clearly presented in the shape of successive reactions or in the form of text. The student must find the structures of the intermediate products, the reagent and the experimental conditions for each step of the synthesis, or must propose a synthesis or a retrosynthetic analysis of a compound. The problems, mostly extracted from the literature, are followed by references concerning the synthesis or the key step of the synthesis which permit the curious student to obtain further information.

The correct solutions are also clear and concise. They are generally completed by the mechanism of the key reactions and by explanations concerning the stereochemistry of the products and the regio- and the stereoselectivity of the reaction. Additional comments (others possible experimental conditions, other possible synthesis, properties of the solvent or of the reagents...) are also given which provide the student with a good background of the studied synthesis.

A list of key words summarizing the content of each presented exercise is given at the beginning of the book. These key words make the search for an exercise based on a precise theme easier.

The exercises concerning the study of organic functions permit the student to acquire solid knowledge through repetition of the fundamental reactions and mechanisms of organic chemistry. These are followed by some problems of retrosynthetic analysis (the general idea of synthetic equivalents...) and of the study of transition states (Diels-Alder reaction, diastereoselective reduction of a keton by a sterically hindered trialkylborane...). These latter exercises require advanced knowledge of organic synthesis and are designed for students working on a superior level.

This book of practical exercises is a good tool for students during their studies of organic chemistry. With its help they can apply their theoretical knowledge, but they can also obtain a good understanding of the techniques of organic synthesis.

Sandrine Deloisy (Mainz)

K. Pihlaja, E. Kleinpeter, Carbon-13 NMR Chemical Shifts in Structural and Stereochemical Analysis, A.P. Marchand, Ed., 1. Aufl., 379 S., 30 Abb., 95 Tab., 24 × 16 cm, New York, Weinheim, Cambridge, VCH Weinheim, 1994, Methods in Stereochemical Analysis, gebunden, 150,00 DM, ISBN 0-89573-332-3

In den letzten 2 Jahrzehnten hat sich die ¹³C NMR- Spektroskopie zu der vielleicht wichtigsten Methode der spektroskopischen Strukturaufklärung entwickelt, wobei die Lösung ste-