Book Reviews

AUTONOM (Version 1.0). Beilstein Institute. Springer-Verlag, New York. 1991. ISBN-3-54014111-1. $1980.00 (academic pricing available).

AUTONOM is an automatic nomenclature program developed by the Beilstein Institute for naming organic compounds. The program is supplied both on 3.5 and 5.25 in. disks and comes with a spiral-bound 120-page Users' Guide. System requirements for running AUTONOM include (a) an IBM or compatible PC with DOS 3.1 or higher, (b) 640 KB RAM, of which 500 KB is available, (c) a hard disk with at least 5 MB free, (d) a graphics card, and (e) a mouse. The program also supports a number of dot matrix and laser printers, but printing of names–structures is optional.

Once the program has been installed, it is fairly simple to run. In fact, we were up and running without reference to the manual (however, careful reading of the manual does provide useful information and a number of helpful tips). Approximately 30 pages of the Users' Guide are devoted to an explanation of how AUTONOM implements IUPAC nomenclature rules. Also included in this section is a description of the program's limitations. For example, one of the programs more important limitations is its inability to handle stereochemistry; this is freely acknowledged (and it is implied that subsequent versions will correct this problem). The program is also unable to handle charged species, inorganic compounds, compounds with more than 100 heavy atoms, and rings and chains of more than 44 atoms. For most chemists, these will not constitute severe drawbacks.

The program consists essentially of a single screen, the Main Screen, with multiple pull-down menus. Structures are easily drawn and modified with the aid of a mouse; numerous templates are also available. Once the structure has been constructed, it can be named, saved, or made available as hard copy. The simple selection of "Generate Name" provides a name in a matter of seconds. This process is aided by a ring dictionary that contains thousands of names of fused and trivial rings.

The program has several bothersome, albeit trivial quirks. For example, it tends to insert an occasional hyphen where it doesn't belong. More problematic (?) is the program's strict adherence to IUPAC nomenclature rules; most chemists would readily recognize the term phenylbiguanide whereas the AUTONOM-generated name, "*N*-(imino-phenylamino-methyl)-guanidine", would require a bit more thought. On the other hand it is probably not justifiable to fault a program for faithfully doing what it is designed to do. Finally, AUTONOM frequently uses carbocyclic replacement nomenclature (for example: "3-oxa-6-thia-1,4-diazapentalene") for naming fused heterocycles (and one can never be certain when the program will excercise this prerogative). When this technique is applied, AUTONOM provides a message that fusion nomenclature may be more appropriate, but does not supply the fusion name.

Nevertheless, AUTONOM is convenient, quick, and easy to use. It might serve as a teaching tool, but it is probably best reserved for use by those who already have some familiarity with nomenclature. We have found its most useful application is for checking an already named structure (named the old-fashioned way) for accuracy, and for naming very complex ring systems. It has saved many a trip to the library to check with the Ring Index. The impressive program is recommended, and this reviewer eagerly awaits the next version which promises to deal with stereochemistry.

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Sequential Simplex Optimization: A Technique for Improving Quality and Productivity in Research, Development and Manufacturing. By Frederick H. Walters, Lloyd R. Parker, Jr., Stephen L. Morgan, and Stanley N. Deming. CRF Press, Inc., Boca Raton, FL. 1991. xix + 325 pp. 16 × 24 cm. ISBN 0-8493-5894-9. $49.95.

Sequential simplex optimization is an innovative evolutionary technique which can be applied to a variety of problems in chemistry. It is an attractive technique which leans on experimental results without any prior mathematical model. This book is the first volume in the chemometric series published by CRF press. It is a well-written treatment of this subject by authors who are actively involved in application of such optimization techniques to their area of research interest. The book has been divided into 11 chapters. Each chapter is written with clarity, subject development, and adequate details. Chapter 1 justifies the need for optimization in experimentations and is followed by an account of system theory as related to the development of the evolutionary techniques. The next chapter provides an excellent treatment of simplex theory and various aspects of simplex technique. In addition, it offers several examples that illustrate the usefulness of the technique and its simplicity. Chapter 4 deals with the variable-size simplex algorithm and its rules. Again there is a completed example which illustrates the application of variable-size simplex to a practical problem. Following this is a chapter that offers further discussion of fixed and variable simplex and strategies needed for using these. Chapter 6 deals with the most important topic, i.e. the development of initial simplex. After discussing general considerations, it explains the various designs and boundary conditions, convergences, etc. The next chapter addresses various concerns as related to development of an application of simplex and other modifications that are currently available. Chapter 8 treats desirability functions, particularly the criteria for optimizations. Chapter 9 explains how one can use the information derived from simplex optimization for experimental design using models and other techniques such as regression analysis. Again a worked example is provided to explain their usefulness. This is followed by a chapter that discusses the real-life application of simplex to a wide

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variety of areas including analytical applications, chemical optimization, design of new drugs, industrial processes, and biochemical recovery processes. Application of simplex to nonlinear models to fit data is also discussed. Chapter 11, which gives a compilation of all the simplex papers published from 1962 to 1990, is one of the most useful chapters for students and scientists who want to develop innovative applications of simplex to their area of interest. In addition, each chapter is followed by references to further details of the subject.

The book is recommended for all chemists, research investigators, and students of chemometrics. It will be a valuable addition to libraries. The book has a good subject index and the price is reasonable.

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Annual Reports in Medicinal Chemistry. Volume 27. Editor-in-Chief, James A. Bristol. Academic Press, Inc., San Diego, CA. 1992. xi + 373 pp. 17 × 25 cm. ISBN 0-12-040527-X. $65.00.

Volume 27 of *Annual Reports in Medicinal Chemistry* continues the tradiation of its predecessors in providing timely updates of important areas of medicinal chemistry in conjunction with introductions to emerging biological science anticipated to be significant in future drug research. The format of this volume is similar to earlier ones. There are 33 chapters divided among seven sections; these are (I) CNS Agents, (II) Cardiovascular and Pulmonary Agents, (III) Chemotherapeutic Agents, (IV) Immunology, Endocrinology and Metabolic Diseases, (V) Topics in Biology, (VI) Topics in Drug Design and Discovery, and (VII) Trends and Perspectives. In addition, a compound name, code number, and subject index for the present volume and a keyword index of cumulative chapter titles for all 27 volumes are included. Finally, useful cumulative NCE introductions for 1983–1991 are indexed first alphabetically and then according to therapeutic indication.

The first four sections summarize the most important new results relating to antipsychotics, antiallergy agents, vasoactive peptides, and antibacterials. The initial chapter in section I is entitled the Decade of the Brain and focuses on emerging new areas of neuroscience. Other chapters update topics such as sleep, ischemia/reperfusion, trophic factors, antithrombic agents, angiogenesis inhibitors, antifungals, monoclonal antibodies, and diabetes. For several other chapters, e.g. serotonergics, angiotensin/renin, EDRF, potassium channels, cytokines, and complement cascade, biological mechanisms are the primary theme. In section V are included chapters on homeobox genes, guanylyl cyclases, cystic fibrosis, vaccines for AIDS, and inositol triphosphate receptors. Chapters in section VI, Topics in Drug Design and Discovery, illustrate the current emphasis on mechanism-based drug discovery and the application of newer technologies, e.g. macromolecular X-ray crystallography and NMR, in the design of potential new drugs. G-protein-coupled receptors, glycobiology, and sequence-specific DNA binding and regulation of eucaryotic gene transcription are also included in this section. The final section contains the traditional chapter on NCE introductions, which totalled 36 in 1991.

The objectives of this series, sponsored by the Division of Medicinal Chemistry of the American Chemical Society, have again been achieved. Like its predecessors, volume 27 is an essential addition to the personal libraries of all medicinal chemists. Researchers from various other disciplines concerned with the discovery and development of new drug products will likewise find this volume an invaluable source of remarkably up-to-date information.

Staff

Mass Spectrometry in the Biological Sciences. A Tutorial. Edited by Michael L. Gross. Kluwer Academic Publishers, Dordrecht. 1992. xxi + 461 pp. 16.5 × 24 cm. ISBN 0-7923-1539-1. $146.00.

Organized into three sections, this book is designed as a tutorial that covers mass spectrometric instrumentation, methods, and applications for the analysis of biological molecules. The first section, "Instrumentation for Mass Analysis and Detection", discusses the theory and design of mass analyzers and ion detectors with an emphasis on tandem mass spectrometers. Topics include magnetic sector and tandem sector mass spectrometers, hybrid tandem instruments, triple quadrupoles, ion traps, Fourier transform mass spectrometers, time-of-flight instruments, and ion detectors. Although all important types of mass spectrometers were discussed, the theory and operation of the single quadrupole mass spectrometer should have received more attention in this section.

Part two, "Methods in Mass Spectrometry", focuses on ionization techniques for biological molecules such as laser desorption, plasma desorption, continuous-flow fast atom bombardment, and liquid chromatography–mass spectrometry techniques. Because of the emphasis on desorption ionization methods and their applications to the analysis of nonvolatile biological molecules, the classical methods of electron-impact ionization and gas chromatography–mass spectrometry have been omitted. The third and final section, "Applications to Biomolecules", discusses analysis of peptides, post-translationally modified proteins, glycopeptides, nucleosides and oligonucleotides, and lipids and phospholipids. Except for the minimal discussion of carbohydrate analysis, the breadth of biological molecule applications is unusually good in this section.

The references at the end of each chapter vary from extensive lists exceeding 100 to less than five citations. In some chapters, 1991 references are cited, although the most recent references are usually from 1990. There is a nine-page subject index, which is helpful but not exhaustive, and an index providing the names and addresses of all contributing authors as well as participants in the 1990 NATO Advanced Study Institute.

Because of the large number of chapters (29) and contributing authors (52), the background and depth of coverage provided in each chapter is understandably uneven. Therefore, novices to mass spectrometry will find some chapters easily accessible and others difficult to understand. However, the breadth of this text is substantial. The latest and most widely used desorption ionization techniques, most important types of mass spectrometers, and applications covering almost all the main classes of biological molecules are included in this

up-to-date book, which makes it a good textbook for a graduate-level course in biochemical and biomedical mass spectrometry. Since the list price discourages classroom use, NATO ASI Series volumes are available at $40 each for tutorial purposes by writing to the Publication Coordination Office, Elcerlyclaan 2, B-3090 Overijse/Belgium.

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Nucleic Acid Targeted Drug Design. Edited by C.L. Propst and Thomas J. Perun. Marcel Dekker, Inc., New York. 1992. xvi + 619 pp. 15.5 × 23.5 cm. ISBN 0-8247-8662-9. $165.00.

In 1989 the editors of this book published a volume *Computer-Aided Drug Design (CADD)* describing the design of drugs that modulate proteins, e.g. enzymes and receptors. The present book *Nucleic Acid Targeted Drug Design (NATD)* complements the first publication by addressing the design of drugs targeted against nucleic acids, i.e. DNA and RNA. Technology in this field has progressed very rapidly in recent years in a variety of disciplines, and to a large extent the information has remained relatively compartmentalized among the specialists. In this book experts from various scientific disciplines involved in nucleic acid-related research have lucidly presented descriptions of specialized topics which should facilitate a crossover of information relative to nucleic acids as targets for drug design. Following an introductory chapter, Designing Drugs that Interact with Nucleic Acids, are five methods chapters, Structural Studies of Drug-DNA Interactions by X-ray Crystallography and NMR Spectroscopy, Modeling Drug-Nucleic Acid Interactions: An Exercise in Computer Graphics and Computational Chemistry, Sequence Specificity of Drug-DNA Interactions, Construction of Quantitative Structure-Activity Relationships (QSARs) from Ligand–DNA Molecular Modeling Studies, and The Molecular Basis of Sequence Specific DNA-Protein Interactions. The next seven chapters are directed toward applications. These are entitled Netropsin and the Lexitropsins: The Search for Sequence-Specific Minor-Groove-Binding Ligands; Pyrrolo(1,4)benzodiazepines: Unraveling the Complexity of the Structures of the Tomaymycin–DNA Adducts in Various Sequences Using Fluorescence, ^{1}H-NMR, and Molecular Modeling; A Cooperative Quinolone-DNA Binding Model for DNA Gyrase Inhibition: Implications in Drug Design; Mechanism of DNA Damage by Neocarzinostatin and Other Bicyclic Enediyne Antibiotics, Comparative Studies of Intercalative DNA-Drug Interactions Using Molecular Modeling and Biophysical Techniques; Catalytic Antisense RNAs: Principles and Design; and Oligonucleotide-Based Therapeutics. Each chapter is well-referenced and the book includes an adequate index.

Nucleic Acid Targeted Drug Design clearly presents much information which should be of value to all scientists, particularly medicinal chemists, concerned with the design of new therapeutic agents. The two-section format, "Methods" and "Applications", should be beneficial to those involved in drug research as well as to students planning to enter the field of drug design.

Staff

Antilipidemic Drugs. Medicinal, Chemical and Biochemical Aspects. Edited by D. T. Witiak, H. A. I. Newman, and D. R. Feller. Elsevier Science Publishers B.V., Amsterdam. 1991. xvi + 620 pp. 17 × 24 cm. ISBN 0-444-89188-9. $202.50.

Although the number of deaths from coronary heart disease (CHD) has decreased during recent years, more than one million new heart attacks occur every year in the United States and CHD remains the greatest cause of fatalities in this country. Our understanding of the biochemistry of this multifaceted disease of lipid and lipoprotein metabolism, as well as the medicinal chemical basis of antilipidemic and antiatherogenic agents, has advanced significantly over the past several decades. These advances, major epidemiological studies, and drug trials, together with information demonstrating the effectiveness of dietary control and drug products, and a mechanism-based understanding of these treatment modalities are clearly detailed in the various chapters contributed by leading researchers in the field. Thus, following an introductory chapter describing the physiology and pathophysiology of lipid and lipoprotein metabolism are a number of chapters that address important metabolic events, and therapeutic modalities, e.g., molecular biological approaches to the understanding of lipoprotein metabolism, HMG-CoA inhibitors of the rate-limiting step in cholesterol biosynthesis, acyl-CoA:cholesterol acyltransferase (ACAT) inhibitors, clofibrate and other phenoxyacetic acid lipid regulating agents, nicotinic acid analogs as hypolipidemics, probucol and its analogs, and effects of dietary regulation of lipid–lipoprotein metabolism on atherosclerosis. Other chapters describe the epidemiological significance of lipoproteins in CHD, the biochemistry of atherosclerotic lesions, bile salt sequestrants, the significance of α- and β-adrenoceptors on lipids and lipoproteins, drugs affecting lipoprotein oxidation and modification, drug-induced hepatic peroxisome proliferation, the effect of antilipidemic agents on lipoprotein-platelet interactions, and hormonal regulation of lipoproteins and lipoprotein metabolism. A separate chapter describes noninvasive imaging methods for monitoring the in vivo fate of lipoprotein constituents. The final chapter critically evaluates the current status and utility of drugs used for treating dyslipidemias. Each chapter is thoroughly referenced; however, neither a subject nor an author index is included.

This 17th volume in the well-known *Pharmacochemistry Library* series provides thorough and current coverage of the medicinal, chemical, and biological aspects of antilipidemic drugs. It will serve as an excellent initiation for beginning researchers and a superb information source for those already involved in this most important and productive area of research.

Staff

Progress in Drug Research. Volume 38. Edited by Ernst Jucker. Birkäuser Verlag, Basel, Boston, Berlin. 1992. 377 pp. 16.5 × 24 cm. ISBN 0-8176-2582-8. $192.00.

This is the third of three volumes in this series to have been reviewed in the *Journal of Medicinal Chemistry*.

Others are Vol. 25, 1982, p 1267 of issue 10 and Vol. 36, 1992, p 2500 of issue 13. General comments made previously more or less remain the same, and unfortunately, the index of titles for vol. 1–38 continues to be *incomplete*. These volumes would be much more useful to the readers if all chapter titles were included and/or all therapeutic categories listed. Often, more than one therapeutic category is needed for certain organic chemicals found in the various chapters.

Volume 38 contains four reviews: (1) Fluorinated quinolones—new quinolone antimicrobials, by S. Mitsuhashi, T. Kojima, N. Nakanishi, T. Fujimoto, S. Goto, S. Miyusaki, T. Uematsu, M. Nakashima, Y. Asahina, T. Ishisaki, S. Susue, K. Hirai, K. Sato, K. Hushino, J. Shnimada, and S. Hori; (2) Immunoregulatory role of neuropeptides, by V. K. Singh; (3) the new generation of monoamine oxidase inhibitors, by A. M. Cesura and A. Pletscher; and (4) Alternative approaches to the discovery of novel antipsychotic agents, by M. D. Tricklebank, L. J. Bristow, and P. H. Hutson.

The multiauthored quinolone review has sections on history; antimicrobial properties in vitro; activity in vivo; pharmacokinetics, including distribution, metabolism, and excretion; advances in SAR including stereo-SAR and QSAR studies; DNA gyrase and membrane permeability mechanisms of resistance; modes of action and DNA gyrase with discussions on selective toxicity, mammalian topoisomerase II, and the alteration of DNA gyrase as related to resistance mechanisms; adverse side effects; and future prospects. Over 40% of volume 38 (139 pages) relates to this specialized topic. The review reads well; the DNA gyrase and topoisomerase II discussions are of general interest as are CNS toxicities owing, in part, to inhibition of α-aminobutyric acid binding to its receptor.

The immunoregulatory neuropeptide review (19 pages) summarizes roles of such substances found in the central and peripheral nervous systems. The immune and nervous systems express numerous common antigens and likely are functionally interactive. Very concise discussions on neuroimmune interactions, substance P, somatostatin, vasoactive intestinal peptide, endorphins, growth hormone, α-melanocyte-stimulating hormone, and corticotropin-releasing factor are included. Few, if any, of the many medicinal chemical (drug discovery) advances are summarized in any of these areas, but a knowledge of the information presented is important to the modern medicinal chemist.

In contrast, the monoamine oxidase (MAO) inhibitor review (127 pages) is relatively comprehensive (two independently referenced sections of 518 and 291 citations) and includes well-organized discussions on receptor subtypes, MAO inhibitors, clinical profiles, and modes of action. Although there are numerous typographical errors, this review is an excellent source of graduate and undergraduate lecture material and very good reading for all medicinal chemists. MAO molecular structure, genetics, enzyme kinetics, and reaction mechanisms coupled with discussions of MAO inhibitors of the irreversible (mechanism-based) type (hydrazines, cyclopropylamines, propargylamines, allylamines) and the reversible type (morpholines, 2-aminocarboxamides, oxazolidinones, etc.) are nicely integrated. The last portion of the review concludes with the independently referenced section on clinical profiles and modes of action. This is a timely review of interest to medicinal chemists.

The concise review on antipsychotic agents (37 pages, 262 references) focuses on a discussion of strategies possibly useful in new drug discovery. Subsections involve postsynaptic D_2 receptor antagonists (clozapine and remoxipride), dopamine receptor subtypes (D_1, D_3, D_4, D_5, partial agonists), dopamine-5-HT interactions (mixed dopamine-5-HT_2 receptor antagonists, 5-HT_3 receptor antagonists), glutamate–dopamine interactions (NMDA receptor antagonists, non-NMDA excitatory amino acid receptor antagonists), the putative σ receptor and psychosis, and neuropeptides (neurotensin, cholecystokinin, and tachykinins). Unfortunately, many compounds are identified by company number and/or generic name; structures are omitted. Also *not* presented is structure–activity data within a series of related compounds. Even so, this review will be of interest to medicinal chemists designing novel therapies for the treatment of schizophrenia and other neurological disorders.

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Journal of Chromatography Library. Volume 52. Capillary Electrophoresis. Principles, Practice and Applications. By S. F. Y. Li. Elsevier Science Publishers B.V., Amsterdam. 1992. xxvi + 586 pp. 17 × 24.5 cm. ISBN 0-444-89433-0. $225.50.

Capillary electrophoresis (CE) is an analytical technique capable of very high resolution separations using only small amounts of samples and reagents. This method has proved useful for rapid, reproducible separations of extremely small amounts of chemicals and biochemicals, including peptides, proteins, nucleotides, DNA, enantiomers, carbohydrates, vitamins, inorganic ions, pharmaceuticals, and environmental pollutants. The eight chapters in this book treat all aspects of CE, from the principles and technical details to the most important applications.

Both the experienced analyst and student will find this a useful text. It serves as a comprehensive reference work; however, it might also be employed as a textbook for advanced undergraduate and graduate courses in analytical chemistry and pharmaceutical analysis.

Staff

Organic Reactions. Volume 41. Editor-in-Chief Leo A. Paquette. John Wiley & Sons, Inc., New York. 1992. xvii + 645 pp. 16 × 23 cm. ISBN 0-471-54409-4. $90.00.

The well-known volumes of *Organic Reactions* are collections of chapters devoted to a particular reaction of wide applicability in organic chemistry. Following an introductory section, the reaction mechanism, the scope of the reaction, and its limitations are described. Several detailed procedures illustrating significant modifications of the method are presented. This is followed by exhaustive tables that include all the examples of the reaction that are known to the author. These include a tabulation

of reactant(s), conditions, product(s), yield(s), and reference(s) that locate the specific experimental description of synthesis of individual compounds. In the present volume there are two chapters. The first one deals with "Divinylcyclopropane–Cycloheptadiene Rearrangement". The second chapter reviews "Organocopper Reagents: Substitution, Conjugate Addition, Carbo/Metallocupration, and Other Reactions". Both chapters are concluded by exhaustive lists of references, 218 and 1695, respectively. The volume concludes with author and chapter and topic indexes to volumes 1–41.

The *Organic Reactions* series is well-known to all organic chemists. This volume continues the thorough and excellent review of topics that characterize its predecessors. All chemistry libraries will want to add this volume to their series collection.

Staff

Nucleic Acid Chemistry. Improved and New Synthetic Procedures, Methods and Techniques. Part Four. Edited by Leroy B. Townsend and R. Stuart Tipson. John Wiley & Sons, Inc., New York. 1991. xii + 411 pp. 16 × 23.5 cm. ISBN 0-471-88090-6. $69.95.

This is part 4 in a continuing series, the first volume of which was published in 1978. This volume presents new or improved synthetic procedures, methods, and techniques in nucleic acid chemistry. These are divided into seven principal sections: (I) Heterocyclic compounds, (II) Carbohydrates, (III) Nucleosides, (IV) Nucleotides and Polynucleotides, (V) Isotopically Labeled Compounds, (VI) Reagents, Intermediates, and Miscellaneous Compounds, and (VII) Instrumental or Analytical Techniques and Applications. Each section is comprised of specific journal-style contributions with introductions, experimental procedures, and references. All of the contributions were written by experts in the field and are intended to guide the researcher with amply detailed, referenced experimental descriptions. An excellent subject index concludes the book.

The detailed information presented in this book should make it possible for all involved in the rapidly expanding field of nucleic acid research to select an appropriate procedure for the most modern approach to a variety of problems that might be encountered.

Staff

Advances in Enzymology and Related Areas of Molecular Biology. Volume 65. Edited by Alton Meister. John Wiley & Sons, Inc., New York. 1992. v + 436 pp. 16 × 23 cm. ISBN 0-471-52760-2. $89.95.

This is the 65th volume of this well-known series founded by F. F. Nord. As usual, authorities in the field have comprehensively reviewed various aspects of enzymes of topical interest in a clearly presented and thoroughly referenced fashion. Specific topics reviewed in the present volume are "Traffic ATPases: A Superfamily of Transport Proteins Operating from *Escherichia coli* to Humans", "The Respiratory Burst Enzyme", "Pro- and Antioxidant Functions of Quinones and Quinone Reductase in Mammalian Cells", "The Redox Center of Ribonucleotide Reductase of *Escherichia coli*", "Long Range Intramolecular Linked Functions in the Calcium Transport ATPase", "Hydrogen-Bonding in Carbohydrates and Hydrate Inclusion Compounds", "Methylation of mRNA", and "Mammalian Nitric Oxide Synthases". The book includes comprehensive author and subject indexes plus cumulative author and subject indexes for reviews covered in the entire 65 volume set.

The excellent reviews presented in this volume will be of special interest to researchers focused on the specific enzymes that are covered. The entire set will be of value in biologically-oriented institutional libraries.

Staff

Books of Interest

Prostaglandins in the Cardiovascular System. Agents and Actions Supplements. Volume 37. Edited by H. F. Sinzinger and K. Schror. Springer-Verlag, Inc., Secaucus, NJ. 1992. x + 381 pp. 16.5 × 23.5 cm. ISBN 3-7643-2701-4. $82.50.

Lange's Handbook of Chemistry. Fourteenth Edition. Edited by John A. Dean. McGraw-Hill, Inc., New York. 1992. xv + 1456 pp. 19 × 24 cm. ISBN 0-07-016194-1. $79.50.

General and Synthetic Methods. Volume 14. A Specialist Periodical Report. A Review of the Literature Published in 1989. Senior Reporter G. Pattenden. Royal Society of Chemistry, Cambridge, U.K. 1992. xii + 492 pp. 14 × 22 cm. ISBN 0-85186-954-8. £147.50.

Homogeneous Transition Metal Catalyzed Reactions. Advances in Chemistry Series 230. Edited by William R. Moser and Donald W. Slocum. American Chemical Society, Washington, DC. 1992. xiii + 625 pp. 15 × 23 cm. ISBN 0-8412-2007-7. $139.95.

Phenolic Compounds in Food and Their Effects on Health. I. Analysis, Occurrence, and Chemistry. ACS Symposium Series 506. Edited by Chi-Tang Ho, Chang Y. Lee, and Mou-Tuan Huang. American Chemical Society, Washington, DC. 1992. xiv + 338 pp. 15.5 × 23 cm. ISBN 0-8412-2476-7. $74.95.

Phenolic Compounds in Food and Their Effects on Health. II. Antioxidants and Cancer Prevention. ACS Symposium Series 507. Edited by Mou-Tuan Huang, Chi-Tang Ho and Chang Y. Lee. American Chemical Society, Washington, DC. 1992. xiv + 402 pp. 15.5 × 23 cm. ISBN 0-8412-2476-5. $84.95.

Thermodynamic Properties of Isomerization Reactions. By M. L. Frenkel, G. Ya. Kabo, and G. N. Roganov. Translated by P. Rapport. Hemisphere Publishing Group, Bristol, PA. 1993. viii + 229 pp. 15.5 × 23 cm. ISBN 1-56032-111-3. $85.00.

The Biochemistry of the Nucleic Acids. Eleventh Edition. By Roger L. P. Adams, John T. Knowler and David P. Leader. Routledge, Chapman and Hall, New York. 1992. xxii + 675 pp. 18.5 × 24 cm. ISBN 0-412-39940-7. $45.00 (Pbk).