Additions and Corrections

The First Optically Active BINOL−BINAP Copolymer Catalyst: Highly Stereoselective Tandem Asymmetric Reactions [*J. Am. Chem. Soc*. **2000**, *122*, 6500−6501]. HONG-BIN YU, QIAO-SHENG HU, AND LIN PU*

The following two papers describing the reaction of ketoaldehydes with diethylzinc in the presence of chiral amino alcohols to generate hydroxyketones enantioselectively should have been cited: Soai, K.; Watanabe, M.; Koyano, M. *J. Chem. Soc., Chem. Commun.* **1989**, 534−536. Watanabe, M.; Soai, K. *J. Chem. Soc., Perkin Trans. 1* **1994**, 3125−3128.

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Isospecific Living Polymerization of 1-Hexene by a Readily Available Nonmetallocene C_2-Symmetrical Zirconium Catalyst [*J. Am. Chem. Soc*. **2000**, *122*, 10706−10707]. EDIT Y. TSHUVA, ISRAEL GOLDBERG, AND MOSHE KOL*

In this paper the authors used the term "metallocene" to refer to compounds containing at least one Cp-type ligand. This paper reports the first Cp-type free catalyst for living and isotactic polymerization of 1-hexene. Two other catalysts for living and isotactic 1-hexene polymerization were reported previously, which were cited in ref 10. Reference 10 also should have been cited after the last sentence of the first paragraph.

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Book Reviews *

Encyclopedia of Analytical Chemistry. Applications, Theory and Instrumentation. Edited by R. A. Meyers (RAMTECH, Ltd., USA). Wiley: New York (www.wiley.co.uk/eac). 2000. 4344 pp. $4800.00 (15 volume set). ISBN 0-471-97670-9

This encyclopedia comprises 15 volumes, over 600 articles written by leading experts in the field, and more than 6500 illustrations, 200 of which are in color. Volumes 1−10 make up the applications section, volumes 11−14 cover theory and instrumentation, and the final volume features general articles related to analytical chemistry as well as appendices of reference tables and a list and index section. This high-quality reference took 3 years to prepare and boasts many internationally known scientists among its over 800 authors, section editors, and advisory board members. The articles, each of which was peer reviewed, are extensively referenced and feature a list of related articles within the Encyclopedia.

JA0048735

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Preparation of Solid Catalysts. Edited by G. Ertl (Fritz-Haber-Institute of the Max Planck Society), H. Knozinger (Ludwig-Maximilian-University), and J. Weitkamp (University of Stuttgart). Wiley-VCH: Weinheim. 1999. xviii +622 pp. $175.00. ISBN 3-527-29826-6

The material in this book was originally published in the five-volume set *Handbook of Heterogeneous Catalysis* in 1997. The publishers and editors decided to publish this more narrowly focused monograph to make it more accessible to scientists in this particular field (the Handbook is only available as a full set). Such topics as the development of industrial catalysts and the preparation of bulk and supported catalysts are covered, as are other areas and techniques, including interface chemistry and grafting and heterogenization techniques, that play an important role in the synthesis of solid catalysts. The chapters are organized under the following headings: Developing Industrial Catalysts, Bulk Catalysts and Supports, Supported Catalysts, From the Precursor to the Final Catalyst, and Computer-Aided Catalyst Design.

JA004861J

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Prostaglandins, Leukotrienes and Other Eicosanoids. From Biogenesis to Clinical Application. Edited by F. Marks and G. Furstenberger (Deutsches Krebsforschungszentrum). Wiley-VCH: Weinheim. 1999. xx + 388 pp. $154.95. ISBN 3-527-29360-4

This useful resource provides a comprehensive overview of recent developments in the field of prostaglandins, leukotrienes, and other eicosanoids, together with information on some of the clinical applications of this important group of compounds. The volume is organized into 12 chapters written by individuals, or groups of individuals, who are actively involved in research in the particular areas that they cover.

*Unsigned book reviews are by the Book Review Editor.

Consequently, the material in the majority of the chapters will be most useful to specialists in the eicosanoid field. However, several chapters, including a comprehensive introductory chapter, entitled "Arachidonic Acid and Companions: an Abundant Source of Biological Signals", and Chapter 3, which outlines the molecular biology and basic enzymology of the cyclooxygenases, will appeal to a wider audience. Other sections will appeal to more specialized groups, such as those with interests in the fields of signal transduction, hormonal regulation, immuno-modulation, and anti-inflammatory drug development. Readers with a more general interest in the role of eicosanoids in our daily lives may also want to know, for example, how low-dose aspirin prevents heart attacks, why aspirin reduces the incidence of colon cancer, and what new evidence indicates that certain nonsteroidal antiinflammatory drugs appear to slow the progression of Alzheimer's disease.

Part I of the book consists of six chapters devoted to the basic chemistry, biochemistry, enzymology, and metabolic control of eicosanoid production. This includes reviews on mechanisms of arachidonic acid release and comprehensive chapters on the cyclooxygenases, the prostanoid synthases, the lipoxygenases (5-, 12-, and 15-), and the oxygenation of arachidonic acid by cytochrome P-450. The six remaining chapters of the book focus on the clinical implications and applications of eicosanoids. They include chapters on renal eicosanoids, the function of eicosanoids in reproduction, the role of eicosanoids in inflammation and allergy, prostanoids in the cardiovascular system, eicosanoids in cancer, and a concluding chapter on synthetic eicosanoids and their clinical applications.

Taken as a whole, the contents of the book are well-chosen and evenly balanced between biochemical and clinical material. The volume is well-organized and has a particularly comprehensive and functional index that serves as a cross-reference to individual chapters. There is also a useful section that defines over 150 abbreviations in common use in the prostaglandin field. The individual chapters are independently referenced with comprehensive bibliographies that are current as of the June 1999 publication date. The chapters are fairly uniform, averaging 30−40 pages in length, and each constitutes, in effect, a short, independent review of the subject matter. Consequently, there is some inevitable duplication of material, especially of the introductory type, although this does not detract from continuity. The chapters are extremely well-referenced. The book contains over 2500 citations, including a heroic 359 and 395 references, respectively, for the chapters on inflammation and allergy, and synthetic eicosanoids.

As with any book that reviews a rapidly developing and expanding field like that of the prostaglandins and other eicosanoids, the information contained soon becomes dated. However, because of the well-chosen topics of the book, together with the historical overview given in many of the chapters, this volume should serve for a reasonable period as a useful review and reference source for both specialists and generalists in the field.

J. Martyn Bailey, *The George Washington University School of Medicine and Health Sciences*

JA015223J

10.1021/ja015223j

Chemical Aspects of Photodynamic Therapy. By Raymond Bonnett (University of London). Gordon and Breach Science Publishers: London and Newark. 2000. xi + 305 pp. $48.00. ISBN 90-5699-248-1

Chemical Aspects of Photodynamic Therapy contains a plethora of photochemical knowledge and gives an authoritative and in-depth description of the chemical fundamentals that form the basis of photodynamic therapy. Photodynamic therapy (PDT) is a treatment regimen that relies on the selective partitioning of a photosensitizer in diseased tissue. Subsequent illumination of the diseased area causes selective and irreversible cytotoxic destruction through the generation of reactive oxygen species. PDT has been traditionally applied to cancer treatment but is finding success for other medical treatments, most notably age-related macular degeneration, psoriasis, arthritis, and arterial disease. PDT encompasses many disciplines, and Bonnet displays an interconnective understanding among the fields.

An optimal therapeutic regimen must incorporate the sensitizer's chemistry, photophysical properties, and biology. The first-generation sensitizer, hematoporphyrin derivative (HpD), is discussed in detail, and an intriguing historical account is given of the elucidation of the various chemical structures contained in this complex mixture. To overcome the limitations of HpD, such as inadequate depth of penetration produced by illumination with 630 nm light and prolonged cutaneous photosensitization, second-generation compounds are continually being synthesized. Bonnett elegantly details the photophysical and biological consequences of porphyrin macrocyclic ring reduction, oxidation, and expansion leading to second-generation PDT candidates. Peripheral functional group modifications within different molecular subclasses, such as chlorins, bacteriochlorins, texaphyrins, and phthalocycanines, and their ensuing biological ramification are also addressed, as are the different stages of preclinical and clinical development of the second-generation candidates.

Chemical Aspects of Photodynamic Therapy is recommended for students and researchers entering the field, as the basic concepts are clearly explained. It is also a highly useful tool for nonchemists already in the field.

Kathryn Woodburn, *Pharmacyclics*

JA0048228

10.1021/ja0048228

Organic Synthesis Highlights IV. Edited by Hans-Günther Schmalz (Universität zu Köln). Wiley-VCH: Weinheim. 2000. xii + 364 pp. $75.00. ISBN 3-527-29916-5

This book presents over 40 articles on recent developments and achievements in organic synthesis. Some of the topics covered include stereoselective synthesis, transition metal organometallic methods, and enantioselective catalysis, as well as applications in the total synthesis of natural products and non-natural compounds and materials. There are also articles on solid-phase synthesis and combinatorial chemistry. Most of the articles already appeared elsewhere, either in the review section "Synthese im Blickpunkt" of *Nachrichten aus Chemie, Technik und Laboratorium* (1994−1998) or in "Highlights" of *Angewandte Chemie* (1997−1998). Those articles that were taken from "Synthese im Blickpunkt" were updated and translated by the authors.

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