

Publications

Book reviews

Essential Fatty Acids and Prostaglandins—Progress in Lipid Research Vol. 20, edited by R.T. Holman (Pergamon Press, Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, 1982, 911 + LIV pp. \$135).

At one time *Progress in the Chemistry of Fats and Other Lipids* was an irregularly appearing book series which was frequently published in bits and pieces with parts of 2 or 3 different volumes overlapping an issue. Currently it is actually a journal under a slightly abbreviated title. Since all of the papers in volume 20 are derived from the "Golden Jubilee International Congress on Essential Fatty Acids and Prostaglandins" held at the University of Minnesota May 5-7, 1980, the result is an extremely heavy 7-3/4" x 11" hard cover book. Included are brief biographies of George Burr and von Euler, classic papers, several plenary sessions, 7 poster sessions, 9 minisymposia, banquet speeches, a soliloquy, and Hiawatha lipid poetry. The Plenary Sessions were entitled Historical Perspectives and Fundamentals; Cardiovascular Disease; Immunity and Dermatoses; and a concluding plenary session includes "Hot Stuff and Torrid Topics." The minisymposia include: EFA Metabolism and Function; Oxidation and Disease; The Inflammatory and

Immune Responses; Cancer and Slow Reacting Substances in Anaphylaxis. Poster sessions include: Nutritional Aspects of EFA and PG; Oxidative Metabolism of EFA; Neural Function; Platelet, Thrombosis and Cardiovascular Disease; Inflammation, Immunity and Leucocyte Function; Methodology Workshop; Miscellaneous. It would be tempting to summarize this volume by saying Ralph Holman had a ball and everyone was there. With more than 160 presentations by all the leading experts concise detailed comment is impractical. This volume has many components missing from most symposia — authentic historical perspectives, plenary talks to outline the various fields, minisymposia to provide depth and poster papers to provide currency. But best of all, it was put together with expertise tempered with traces of humor and even whimsy.

Whether this is a book *per se* or an overgrown single issue volume of a journal does not really matter. Just rush right out and buy it, but for heavens' sake don't drop it on your toes. This is clearly an indispensable item, be it book or journal, for every lipid chemist to be read for both knowledge and enjoyment.

High Performance Liquid Chromatography in Protein and Peptide Chemistry, edited by F. Lottspeich, A. Henschen and K.-P. Hope (Walter de Gruyter Inc., 200 Saw Mill

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Publications

River Rd., Hawthorne, NY 10532, or Walter de Gruyter and Co., Genthinerstrasse 13, 1000, Berlin 30, West Germany, 1981, 388 pp., \$72.50).

This volume is the proceedings of the symposium "High Performance Liquid Chromatography in Biochemistry: Proteins, Peptides and Amino Acids" held in Martinsried, Germany, January 13-14, 1981. The editors are to be complimented on the unusually rapid publication of this series of 23 papers. HPLC is admirably suitable for use with peptides and shows some promise with proteins. In general emphasis tends to be on size exclusion chromatography of proteins and separation of peptides for protein sequencing. Since this is a very young field in terms of HPLC many of the papers provide quite a bit of basic information which is extremely useful to anyone tempted to try the techniques. The corresponding symposium held in Washington, D.C., in November 1981 would seem to indicate very recent movements toward ion-exchange packings and the Toya-Soda materials that are not reflected in this volume. Similarly some of the analytical techniques such as the use of pyridine-acetic acid mobile phases with post column derivatization and fluorescence detection are not as popular in this country as in Europe.

Three criticisms may be noted in passing. Some portions of the camera ready copy are of very poor quality. The English in a few chapters could have profited from additional editing. Since many authors have presented complete procedures as used in their laboratories, amino acid separations, particularly of PTH-amino acids are repetitively reproduced chapter after chapter. This is, however, clearly the most comprehensive up to date book available on the subject. Under the circumstances, these problems can only be ignored. This book is an absolute must at the bench level of anyone considering HPLC of proteins and peptides.

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Nutrition and Behavior, edited by Sanford A. Miller (The Franklin Institute Press, Box 2266, Philadelphia, PA 19103, 1981, 320 pp., \$24.50).

This volume contains the proceedings of the Franklin Research Center's 1980 Working Conference on Nutrition and Behavior: New Research Directions. This conference arose from the National Science Foundation's effort to define its role in nutrition. The panel seeking to define this role singled out nutrition and behavior as the subject for one of three NSF-funded workshops. The workshop brought together participants from toxicology, physiology/neurology, neurochemistry, epidemiology, pharmacology, psychology, psychiatry and nutrition. The volume is divided into five sections as follows: Social Influence on Nutrition; Mechanisms of Regulation; Adverse Consequences of Dietary Elements; Diet as Therapy; and Experimental Design/Test Methodologies. The dietary therapy section contains some articles in such controversial fields as megavitamin therapy in schizophrenia and dietary treatment of hyperactivity. The latter article is by Feingold, designer of the much discussed dietary management of behavior and learning disabilities. The artificial color aspects of the Feingold diet are discussed earlier by Connors. Other areas of topical interest covered are



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monosodium-glutamate and neurotoxicity, caffeine, and nutritional management of insomnia.

While this volume suffers some of the problems associated with publications of conferences, such as relatively out of date reference lists, it suffers less than others. One gets the impression that, in most cases, considerable care went into the preparation of the articles and they are not merely brief overviews of the areas. For this reason I recommend the book as a useful reference for those interested in the developing area of nutrition and behavior.

Dietary Influences on Cancer: Traditional and Modern, edited by Regina Schoental and T.A. Connors (CRC Press, Inc., 2000 N.W. 24th Street, Boca Raton, FL 33431, 1981, 272 pp., \$74.95).

The first two chapters in this book deal with diet and cancer in Africa. Chapter 1 is an overview of diet and cancer in tropical Africa and Chapter 2 is a fascinating account of cancer among the Shona and Zimbabwe, in relation to their traditional diet and N'anga medicines. Chapters 3 and 4 deal with diet and cancer mortality in Japan and the carcinogenic properties of some plants used as human foods or herbal remedies in Japan. These are followed by a discussion of the cycad toxin; diet and cancer; carcinogenic mycotoxins; carcinogenic contaminants of food; an assessment of the hazard to public health of fusarial toxins; and mutacarcinogens in ordinarily cooked foods. The book concludes with a chapter by Connors on medicines suspected of causing cancer in humans.

Like most CRC books this appears to be a sound work which can be recommended to those interested in diet and cancer. Unlike many multi-authored books most of the reference lists appear reasonably up-to-date for a 1981 publication in that there are many 1979 and 1980 references throughout. The volume is mainly of interest to *JAOCs* for its coverage of fats and cancer and the carcinogenic properties of mycotoxins.

New Trends in Nutrition, Lipid Research and Cardiovascular Diseases, edited by Nicholas G. Bazan, Rodolfo Paoletti, and James Iacono (Alan R. Liss, Inc., 150 Fifth Avenue, New York, NY 10011, 1981, 332 pp., \$30).

This volume is the proceedings of the International Symposium on New Trends in Nutrition, Lipid Research, and Cardiovascular Diseases held in Argentina in November 1981. The chapters are organized around five sessions: Essential Fatty Acid Metabolism; New Trends in Selected Topics on Membrane Lipids; Platelets and Cardiovascular Diseases; Diet Composition in Health and Disease; and Current Nutrition Studies and Risk Factors in Cardiovascular Disease. Most of the authors are well known in their fields and the overall quality of the articles is good. Many are quite short and serve as mini-reviews of present knowledge of essential fatty acid metabolism, arachidonic acid metabolism in brain etc. Some like Hohman's article on polyunsaturated fatty acid profiles in human disease, are more detailed. The last two sections also contain some larger articles on dietary

surveys and dietary interventions. These last sections have a distinctly international flavor with contributions from Italy, USA, England, Finland, and Argentina.

The meeting on which this book is based was held in 1980 and the publication date is 1981. In spite of the use of offset copy the volume contains some views and concepts which have been modified during the time taken to publish. In this regard one must question the wisdom of publishing the proceedings of so many meetings. Although many of the articles are interesting and informative much of the material is available elsewhere. It appears that this publication falls into the ever increasing category of books serving to maximize the number of articles researchers can bleed out of the same data.

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Nutrition in Health and Disease and International Development, edited by A.E. Harper and G.K. Davis (Alan R. Liss, Inc., 150 5th Ave., New York, NY 10011, 1982, 1060 pp., \$85).

This book is a collection of 97 papers presented at symposia of the XII International Congress of Nutrition held in San Diego, August 1981. The symposia were: (1) Biochemical Nutrition; Nutrient Utilization and Requirements; (2) Malnutrition and Evaluation of Nutritional Status; (3) Nutritional Anthropology and Epidemiology; Nutrition Intervention; (4) Nutrition in Growth and Development, Aging and Disease; (5) Gastrointestinal Function and Animal Nutrition, and (6) Nutrition in National Policy. The papers are mostly cursory reviews of many topics apparently containing little data that have not been previously published. There is not much here of interest to readers of *JAOCs* unless they wanted to attend the meeting and were unable to do so and the price is forbidding. Several of the papers are five pages or less and are essentially superficial. Once again, is it necessary to publish the very short papers presented at symposia, many of which contain little new information even though the authors are well-known? I think not.

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Fatty Acids Manufacture, Recent Advances, Chemical Technology Review No. 157, edited by J.C. Johnson (Noyes Data Corporation, Park Ridge, NJ, 1980, 489 pp., \$54).

This book represents another in the long series of U.S. Patent reviews on specific subjects published by Noyes. At first glance one would pass these reviews off as a strange kind of book. However, on closer examination you will find that they are a very useful resource book for information that might otherwise require considerably more effort to obtain. I personally have found these reviews quite fascinating to scan through. Often a series of apparently unrelated patents scattered throughout the book will trigger some

new ideas and possibly solve a complex problem.

The title of this book is somewhat misleading. One would assume from the title — **Fatty Acids Manufacture, Recent Advances** — that the book is about manufacturing fatty acids on a commercial scale. This is not true. If the book is purchased for this reason, the buyer will be disappointed. The book is really a review of the patent literature for preparing all kinds of aliphatic acids by many routes for various purposes.

According to the editor, the review covers 210 processes as taught in 225 U.S. patents since 1975. Only aliphatic acids are covered. Synthetic preparations are reviewed. Also, many unusual derivatives as fatty acids sources are mentioned. Various uses, separations, and purifications are also covered in the review. The one criticism I have with the book is it does not have a subject index. This book is a valuable addition to the library of those doing research in aliphatic acids. Probably engineers, formulators and others will also find it useful.

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Reversed Phase High Performance Liquid Chromatography —Theory, Practice and Biomedical Applications, by A.M. Krstulovic and P.R. Brown (John Wiley and Sons, New York, NY, 1982, 296 pp., \$35).

This book is divided into 11 chapters: introduction; basic theory and terminology; instrumentation; columns and column performance; separation mechanisms; ion association (ion-pair) techniques; strategy of developing an RPLC analysis; spectroscopic and chemical characterization of peaks; chemical derivatization; quantitative analyses using RPLC; and selected biochemical/biomedical applications. The 72 page application section cites about 300 references and is divided into 10 parts covering: amino acids, peptides and proteins; biogenic amines and selected compounds; enzymes; lipids; nucleotides, nucleosides and bases; steroids, vitamins; miscellaneous; therapeutic drugs and drugs of abuse; and future trends. Approximately 93% of the references in this section cite work published in or prior to 1978. The text seems to have been assembled from parts separately written by the two authors. Chapter IV has one set of references for the first half of the chapter and a second set for the last half. References for chapters VII, VIII, and IX are found at the end of Chapter X. Chapter IX, Chemical Derivatization, which is 4 paragraphs long states that derivative formation is important and details may be found in the literature. Chapters II and III on basic theory and terminology and instrumentation, respectively, are unusually derivative with the majority of the figures (25 out of 33) and one-third of the tables attributed to prior texts including: Snyder and Kirkland, **Introduction to Modern Liquid Chromatography**, 2nd Edition, 1979; Simpson, **Practical HPLC**, 1976; Huber, **Instrumentation for HPLC**, 1978; and Parris, **Instrumental Liquid Chromatography**, 1976. In chapter IV the tabulation of properties of commercially available silicas derived from

Parris' 1976 book omits Nucleosil, Chromosorb, Hypersil, Spherosil, and Spheron. Similarly the table of some bonded phase materials from Simpson's 1976 book includes products based on Nucleosil silica but omits mention of bonded phase materials based on the other three silicas. Reproduction of previously published tables also does not ensure absence of typographical errors. Particle size on page 120, table 17 is stated in M rather than μm . Typos are rather frequent: i.e. page 100 ". . . pump capable of output pressures of 5000 to 1000 psi is employed . . ."; page 83 reference 23 cites the wrong year of publication; and reference 24 duplicates reference 7. It is not clear what is meant on page 232: "Recently, RPLC procedures have been developed, and some of them are outlined in Table 1 (54-62)." Table 1 is entitled "Properties of Solvents for use in Liquid Chromatography."

The applications section of this book may be recommended as a convenient entry to the literature for the period 1974-1978. Coverage in this area includes topics of interest to the lipid chemist such as fatty acid methyl esters, steroids, neutral lipids, aldosterone metabolites, vitamins A, D, an E, carotenes, and vitamins D and K metabolites.

J.B. Smith
 Anderson & Co.
 Philadelphia, PA

New publications

Consolidated Index, compiled by the editorial staff of the Nanogen Company and S. Barrie Walker, Nanogens International, Box 487, Freedom, CA 95019, 1982, 160 pp., \$29.50.

Bibliography on Liquid Exclusion Chromatography (Gel Permeation Chromatography), Second Supplement, 1976-78, ASTM, 1916 Race St., Philadelphia, PA 19103, 1981, 107 pp., \$14.

Advances in Neurochemistry, edited by B.W. Agranoff and M.H. Aprison, Plenum Publishing Co., 233 Spring St., New York, NY 10013, 1982, 231 pp., \$32.50.

Biological/Biomedical Applications of Liquid Chromatography, IV, edited by Gerald L. Hawk (Volume 20), Marcel Dekker Inc., 270 Madison Ave., New York, NY 10016, 1982, 395 pp., \$55.

General Handbook of On-Line Process Analysis, by D.J. Huskins, Halsted Press, John Wiley & Sons Inc., 605 Third Ave., New York, NY 10158, 1982, 239 pp., \$84.95.

Poly(Tetrahydrofuran), Polymer Monographs, Vol. 8, by P. Dreyfuss, Gordon and Breach Science Publishers, One Park Avenue, New York, NY 10016, 1982, 306 pp., \$59.50.

Lipoproteins and Coronary Atherosclerosis, edited by C. Nosedà, G. Fragiaco, R. Fumagalli and R. Paoletti (Proceedings of the International Symposium on Lipoproteins and Coronary Atherosclerosis, Lugano, Switzerland, Oct. 1-3, 1981), Elsevier Biomedical Press, P.O.

Publications

- Box 1527, 1000 B.M. Amsterdam, The Netherlands, 1982, 450 pp., \$84.
- The Literature Matrix of Chemistry**, by Herman Skolnik, John Wiley & Sons Inc., 605 Third Ave., New York, NY 10158, 1982, 297 pp., \$30.
- Fundamentals of Energy Production**, by Edwin L. Harder, John Wiley & Sons Inc., 605 Third Ave., New York, NY 10158, 1982, 368 pp., \$44.50.
- Advances in Cereal Science and Technology, Volume V**, edited by Y. Pomeranz, American Association of Cereal Chemists, Incorporated, 3340 Pilot Knob Rd., St. Paul, MN 55121, 1982, 294 pp., \$32.50 AACC members, \$36 nonmembers.
- Handbook of Heats of Mixing**, by James J. Christensen, Richard W. Hanks and Reed M. Izatt, Wiley-Interscience, John Wiley & Sons Inc., 605 Third Ave., New York, NY 10158, 1982, 1,586 pp., \$130.
- Carbon-13 NMR Spectra, Volumes 61-65**, Sadtler Research Laboratories, 3316 Spring Garden Street, Philadelphia, PA 19104, 1982. Each 8½ by 11-inch looseleaf volume contains 200 spectra of selected samples and costs \$215 if purchased by August 31, \$240 as of September 1.

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World Conference Proceedings

PROCEEDINGS JUST PUBLISHED:

World Conference on **Soya Processing and Utilization**, Acapulco, Mexico, November 9-14, 1980 (March 1981 Journal of the American Oil Chemists' Society). \$15 for members, \$20 for nonmembers.

PROCEEDINGS OF PAST CONFERENCES STILL AVAILABLE:

World Conference on **Vegetable Food Proteins**, Amsterdam, The Netherlands, October 29-November 3, 1978 (March 1979 Journal of the American Oil Chemists' Society). \$12.50 for single copies, \$9 for 10 or more copies to the same address.

World Conference on **Soaps and Detergents**, Montreux, Switzerland, October 9-15, 1977 (January 1978 Journal of the American Oil Chemists' Society). \$9 for members, \$12 for nonmembers.

World Conference on **Oilseed and Vegetable Oil Processing Technology**, Amsterdam, The Netherlands, March 1-5, 1976 (June 1976 Journal of the American Oil Chemists' Society). \$15 for single copies, \$10 for 5 or more copies to the same address.

World **Soy Protein** Conference, Munich, Germany, November 11-14, 1973 (January 1974 Journal of the American Oil Chemists' Society). \$6 for members, \$8 for nonmembers.

Order from American Oil Chemists' Society, 508 South Sixth Street, Champaign, IL 61820, USA.