
Publications

Book reviews

Nutritional Improvement of Food and Feed Proteins, Advances in Experimental Medicine and Biology, Vol. 105, edited by Mendel Friedman (Plenum Publishing Corp., 233 Spring St., New York, NY 10013, 1980, 882 pp., \$69.50).

This title is a volume in the series **Advances in Experimental Medicine and Biology**. The book is intended to complement previously published volumes on sulfhydryl groups of amino acids, peptides and proteins, protein metal, assay methods for the determination of nutritional quality of foods and feeds, quality factors relating to breeding composition, processing and antinutrients in proteins, and protein crosslinking and its nutritional consequences. The editor wrote the volume on sulfhydryl groups and edited those about the other topics cited above. The present book contains papers of a symposium on "Improvement of Protein Nutritive Quality of Foods and Feeds", which was sponsored by the Division of Agricultural Chemistry and Food Chemistry of the American Chemical Society in 1977. For this symposium, papers discussing the following topics were invited: (1) improvement of protein quality by genetic methods; (2) fortification of food and feeds with essential amino acids, amino acid analogues or derivatives; (3) enrichment of foods and feeds with protein supplements; (4) use of special processes such as the plastein reaction to maximize protein quality and utilization; (5) use of protected amino acids and proteins in ruminants feed to increase meat, milk and wool production; (6) chemical and microbiological syntheses of essential amino acids; (7) interactions of supplemental amino acids or protein with other food ingredients during storage and processing and ways to minimize such undesirable reaction; (8) economic aspects, including calculation of least cost-optimum quality supplemented foods and feeds; (9) animal and human feeding tests of nutritional availability of amino acids or proteins and supplements; and (10) safety of supplemented or specially processed foods and feeds including amino acids antagonisms in vivo. Other scientists also made invited contributions on other topics for this volume. The book includes 40 papers from symposium proceedings and invited papers. The authors represent international authorities from 10 countries.

An interesting paper discusses the interdependent efforts among several scientific disciplines, government agencies and industries in a successful development of a food formula for children in Chile. Companion chapters relating to nutrition intervention programs in Guatemala and India by recognized international authorities accompany this well presented discussion. Other chapters relate to fortification

of breads and beverages for human populations. Amino acid fortification of foods and the undesirable consequences of this practice are pointed out by recognized authorities. Three of the well documented chapters are devoted to methods for predicting protein quality and show very clearly that we still need more precise means of evaluating the nutritive value of proteins. There is a chapter on fiber which deals with analytical methods, terminology and the shortcomings of methods available for assessing fiber intake in populations. The extensive paper on controlling photosynthesis to increase protein production by plants is a useful synopsis for this area and its potential for providing an additional source of indispensable food and protein. The volume, broad in coverage, also includes papers about the value of nonprotein nitrogen or non- α -amino nitrogen for both man and ruminants.

The volume is generally well written. Despite the large number of different authors, the style and depth of treatment of different subjects are quite uniform. The volume should be a useful reference in libraries serving investigators and teachers in the general area. Pertinent references are well selected. The volume should prove of considerable use for advanced undergraduate and graduate students.

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

The author endeavors to "help novices to appreciate the many factors that need to be considered to carry out a well controlled tetrahydrofuran polymerization that will give the kind of polymer they desire." It is now possible to control polymerization to produce the molecular weight and molecular weight distribution expected. Because the monomer is expensive, however, the homopolymer has never achieved a significant commercial market. Commercial quantities of polyurethanes and polyesters containing segments of poly(tetrahydrofuran) (PTHF), use about 35 million pounds per year of the low molecular weight polymers. PTHF is low melting and also quite extensible. As molecular weight increases the polymer is a sticky viscous oil that becomes a wax and then a rubbery tough material. The very high molecular weight polymer is only partially crystalline and quite intractable.

The author divided the chapters according to the monomer, polymerization, kinetics of polymerization and copolymerization, solution properties, bulk properties, industrial applications, and other block, star and graft copolymers.

As is usual, this monograph summarizes the pertinent known literature on the polymer and achieves the author's goals.

Polymerization chemists from novices to experts will welcome this book.

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New publications

- Regulation of Serum Lipids by Physical Exercise**, edited by Eino Hietanen, CRC Press Inc., 2000 Corporate Blvd., NW 24 St., Boca Raton, FL 33431, 1982, 192 pp., \$64 U.S., \$74 outside U.S.
- 1982 National Fire Code Supplements**, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269, Catalog No. NFC-S82, \$40 a set.
- 1982 Annual Book of ASTM Standards, Parts 27, 28 and 29**, containing over 630 standards covering paint, pigments, fatty oils and related coatings and components, ASTM, 1916 Race St., Philadelphia, PA 19103, 1982. Part 27-1,248 pp., \$50; Part 27-644 pp., \$34; Part 29-1,170 pp., \$49.
- Cholesterol Systems in Insects and Animals**, edited by Jacqueline Dupont, CRC Press Inc., 2000 Corporate Blvd., NW 24 St., Boca Raton, FL 33431, 1982, 160 pp., \$54 U.S., \$62 outside U.S.
- Hazardous Solid Waste Testing: First Conference**, publication STP 760, edited by Richard A. Conway and B. Charles Malloy, ASTM, 1916 Race St., Philadelphia, PA 19103, 1981, 352 pp., \$39, 20% discount for ASTM members.
- Infrared Grating Reference Spectra**, 26th volume in the collection **Surface Active Agents**, Sadtler Research Laboratories, 3316 Spring Garden St., Philadelphia, PA 19104 (telephone 215-382-7800).
- The Amylograph Handbook**, edited by William C. Shuey and Keith H. Tipples, American Association of Cereal Chemists, 3340 Pilot Knob Rd., St. Paul, MN 55121, 1982, paperback, 37 pp., \$10 AACC members, \$12 nonmembers.
- Psychobiology of Human Food Selection**, edited by Lewis M. Barker, AVI Publishing Company, 250 Post Road East, PO Box 831, Westport, CT 06881, 1982, 250 pp., \$27.50 in U.S., \$30.50 outside U.S.
- Reactive Cure Systems: UV-IR EB, 1982-83, Third Edition**, buyer's guide published by Captan Associates, 218 Stuyvesant Ave., Lyndhurst, NJ 07071, 1982, 230 pp., \$110. Quarterly supplements \$65; complete package available for \$140.
- Composition of Foods, Agriculture Handbook Series, Volumes 8-1 through 8-7**, Science and Education Administration, U.S. Department of Agriculture. Copies on sale through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Vol. 8-1, Dairy and Egg Products, 1976, 144 items, \$7; Vol. 8-2, Spices and Herbs, 1977, 43 items, \$6.50; Vol. 8-3, Baby Foods, 1978, 217 items, \$8; Vol. 8-4, Fats and Oils, 1979, 128 items, \$7; Vol. 8-5, Poultry Products, 1979, 304 items, \$9.50; Vol. 8-6, Soups, Sauces and Gravies, 1980, 214 items, \$8; Vol. 8-7, Sausages and Luncheon Meats, 1980, 80 items, \$6.
- Sourcebook on Food and Nutrition, Third Edition**, edited by Ioannis Scarpa, Helen Chilton Kiefer and Rita Tatum, Marquis Publications, Marquis Academic Media, 200 East Ohio St., Chicago, IL 60611, 1982, 549 pp., \$49.50 plus \$3 postage and handling.
- The Nutritional Evaluation of Long-Chain Fatty Acids in Fish Oil**, edited by S.M. Barlow and M.E. Stansby, Academic Press Inc. (London), Ltd., 24-28 Oval Rd., London NW1 7DX, England, or Academic Press Inc., 111 Fifth Ave., New York, NY 10003, 1982, 318 pp., \$29.50.
- Formulary of Paints and Other Coatings, Vols. 1 and 2**, compiled by Michael and Irene Ash, Chemical Publishing Co. Inc., 155 W. 19th St., New York, NY 10011. Vol. 1-1978, 399 pp., \$25; Vol. 2-1982, 427 pp., \$25.
- The Chemical Formulary, Vol. 24**, edited by H. Bennett, Chemical Publishing Co. Inc., 155 W. 19th St., New York, NY 10011, 1982, 308 pp., \$25.
- Encyclopedia of Surfactants, Vols. 1, 2 and 3**, compiled by Michael and Irene Ash, Chemical Publishing Co. Inc., 155 W. 19th St., New York, NY 10011, each \$75. Vol. 1-468 pp., 1980; Vol. 2-437 pp., 1981; Vol. 3-469 pp., 1981.
- Maillard Reactions in Food, Progress in Food and Nutrition Science Vol. 5**, edited by C. Ericksson, Pergamon Press Inc., Maxwell House, Fairview Park, Elmsford, NY 10523, 1981, 501 pp., \$100.
- Photopolymerization of Surface Coatings**, by C.G. Roffey, A Wiley-Interscience Publication, John Wiley & Sons Inc., 605 Third Ave., New York, NY 10155, 1982, 353 pp., \$54.95.
- Storage of Cereal Grains and Their Products**, edited by Clyde M. Christensen, American Association of Cereal Chemists, 3340 Pilot Knob Rd., St. Paul, MN 55121, 1982, 544 pp., \$40.50 AACC members, \$45 nonmembers.
- Environmental Problem Solving Using Gas and Liquid Chromatography**, by R.L. Grob and M.A. Kaiser, Elsevier Scientific Publishing Company, PO Box 211, Amsterdam, The Netherlands, or 52 Vanderbilt Ave., New York, NY 10017, 1982, 240 pp., U.S. \$59, Dfl. 127.
- Summary of Trade and Tariff Information—Vegetable Oils and Oilseeds, Except Soybeans and Soybean Oil** (USITC Publication 841, Control No. 1-14-29), United States International Trade Commission, September 1982, 88 pp. Call 202-523-5178 or write Office of the Secretary, United States International Trade Commission, 701 E. Street NW, Washington, D.C. 20436.