

## Recent Books, Summer 2001

***Novel Macromolecules in Food Systems.*** Edited by G. Doxastakis and V. Kiosseoglou; Developments in Food Science Vol. 41; Elsevier: Amsterdam, The Netherlands, 2000; 468 pp.

Discusses novel proteins and polysaccharides that can perform multifunctional roles and affect shelf life, texture, and nutritional value of natural and processed foods. Includes macromolecules from algae, yolk, amaranth, mesquite, fish, microbes, cereals, and others.

***Funktionelle Eigenschaften von Ackerbohnenprodukten (Vicia faba); Ernährung, Biochemie und Verarbeitung (Functional Properties of Faba Bean Products).*** By G. Muschiolik and H. Schmandke; Shaker Verlag: Aachen, Germany, 2000; 311 pp.

Covers the history and utilization of faba beans, as well as the chemical composition, biologically active substances, production and properties of proteins and starch products, and modification of protein functionality. This book is written in German.

***Analysis of Environmental Endocrine Disruptors.*** Edited by L. H. Keith, T. L. Jones, and L. L. Needham; ACS Symposium Series 747; American Chemical Society: Washington, DC, 2000; 184 pp.

Examines recent developments in screening/monitoring methods and analytical techniques for identification and quantification of environmental endocrine disruptors.

***Flavor Chemistry; Industrial and Academic Research.*** Edited by S. J. Risch and C.-T. Ho; ACS Symposium Series 756; American Chemical Society: Washington, DC, 2000; 192 pp.

Developed from a collaborative symposium between ACS's Division of Agriculture and Food Chemistry and the Institute of Food Technologists; sections include overviews of flavor chemistry from academic and industrial perspectives, flavor formation, flavor challenges, and flavor analysis.

***Agrochemical Fate and Movement; Perspectives and Scale of Study.*** Edited by T. R. Steinheimer, L. J. Ross, and T. D. Spittler; ACS Symposium Series 751; American Chemical Society: Washington, DC, 2000; 408 pp.

Discusses environmental fate and transport of agrochemicals, with an emphasis on scale-of-study; sections focus on the Chesapeake Bay Watershed, the Midwestern Plains, and California's San Joaquin Valley.

***Chemistry and Physiology of Selected Food Colorants.*** Edited by J. M. Ames and T. Hofmann; ACS Symposium Series 775; American Chemical Society: Washington, DC, 2000; 240 pp.

Reviews the chemistry and physiology of food colorants, carotenoids, anthocyanins, and the oxidative transformation of tea catechins; examines aspects of nonenzymatic browning.

***Pesticide Biotransformation in Plants and Microorganisms; Similarities and Divergences.*** Edited by J. C. Hall, R. E. Hoagland, and R. M. Zablotowicz; ACS Symposium Series 777; American Chemical Society: Washington, DC, 2000; 448 pp.

Presents an overview of pesticide metabolism in plants and animals and in vitro methods for its study; pesticide detoxification involving hydrolytic and conjugative enzymes; pesticide transformation involving oxidative and reductive enzymes; glutathione *S*-transferases and bacterial dehalogenating systems; regulation of pesticide metabolism; factors affecting pesticide use.

***Agrochemical Discovery; Insect, Weed and Fungal Control.*** Edited by D. R. Baker and N. K. Umetsu; ACS Symposium Series 774; American Chemical Society: Washington, DC, 2000; 328 pp.

A current look at the process of discovery in crop protection, including synthesis and chemistry of new pesticide classes, natural products, agricultural biotechnology, combinatorial chemistry approaches, and modes of action.

***Flavor Release.*** Edited by D. D. Roberts and A. J. Taylor; ACS Symposium Series 763; American Chemical Society: Washington, DC, 2000; 496 pp.

Examines how flavor compounds are released in the mouth and how they correlate with sensory perception. Includes sections on in vivo and dynamic flavor release methodology, modeling of flavor release, interactions of flavor compounds with food components, and relating analytical results to human perception.

***Citrus Limonoids; Functional Chemicals in Agriculture and Food.*** Edited by M. A. Berhow, S. Hasegawa, and G. D. Manners; ACS Symposium Series 758; American Chemical Society: Washington, DC, 2000; 272 pp.

Reviews the history, biochemistry, analysis, and biological benefits of citrus limonoids, including cancer prevention and pest management aspects.

***Caffeinated Beverages; Health Benefits, Physiological Effects, and Chemistry.*** Edited by T. H. Parliament, C.-T. Ho, and P. Schieberle; ACS Symposium Series 754; American Chemical Society: Washington, DC, 2000; 448 pp.

Discusses the chemistry and physiological effects of coffee, teas, cocoa, and guarana; includes health benefits, behavioral effects, flavor development, and analysis.

***Dietary Anticarcinogens and Antimutagens; Chemical and Biological Aspects.*** Edited by I. T. Johnson and G. R. Fenwick; RSC Special Publication 255; Royal Society of Chemistry: Cambridge, U.K., 2000; 452 pp.

Proceedings of the Food and Cancer Prevention III meeting held at the University of East Anglia, Norwich, Sept 5–8, 1999. Sections include epidemiology of diet

and cancer, mechanisms of DNA damage and repair, the body's various protective mechanisms, and experimental approaches to the study of diet and cancer emphasizing human subjects.

***The Science of Chocolate.*** By S. Beckett; Royal Society of Chemistry: Cambridge, U.K., 2000; 190 pp.

Describes the history, ingredients, and processing techniques, as well as the scientific principles that play a vital role in chocolate processing, including latent and specific heat, Maillard reactions, and enzyme processes. A series of experiments for students is included to demonstrate the physical, chemical, or mathematical principles involved.

***Functional Foods II: Claims and Evidence.*** Edited by J. Buttriss and M. Saltmarsh; RSC Special Publication 248; Royal Society of Chemistry: Cambridge, U.K., 2000; 264 pp.

Proceedings of a joint conference held by the British Nutrition Foundation and the Food Chemistry Group of the Royal Society of Chemistry, April 14–15, 1999, at the University of London, Kent, U.K. Sections include setting up clinical trials of functional foods, pre- and probiotics, phytochemicals, and micronutrients.

***Gas Chromatography—Olfactometry; The State of the Art.*** Edited by J. V. Leland, P. Schieberle, A. Buettner, and T. Acree; ACS Symposium Series 782; American Chemical Society: Washington, DC, 2001; 240 pp.

Topics include application of GC-O to flavor creation, improving the reproducibility and qualitative accuracy of GC-O, coupling GC-O with SPME, application of AEDA to solve off-flavor problems, a new approach called aroma extract concentration analysis, and techniques for improving odor intensity estimates by cross-modality matching.

***Elsevier's Electronic Bibliography: Analytical Separations 2.0 CD-ROM.*** Compiled by Z. Deyl, J. Janák, V. Schwarz, and Z. Mikšik; Elsevier Science: Amsterdam, The Netherlands, 2000; CD-ROM.

This electronic bibliography contains citations to over 100,000 articles published 1989–1999 and can be searched by author, title, journal, year, technique, and subject. Yearly updates are anticipated.

***Capillary Electrophoresis for Food Analysis: Method Development.*** By R. A. Frazier, J. M. Ames, and H. E. Nursten; Royal Society of Chemistry: Cambridge, U.K., 2000; 142 pp.

The process of developing and troubleshooting capillary electrophoresis methods is presented, with a focus on applications in food analysis.

***A Primer on Quality in the Analytical Laboratory.*** By J. V. Kenkel; CRC Press: Boca Raton, FL, 2000; 96 pp.

Explains Good Laboratory Practice, Quality Assurance, and Total Quality Management, covering important practical points; discusses the application of statistical analysis to experimental data.

***Cereal Biotechnology.*** By P. C. Morris and J. H. Bryce; CRC Press: Boca Raton, FL, 2000; 264 pp.

Includes sections on the genetic transformation of wheat, barley, rice, and maize; biotechnology in product development, adding value to cereal, and cereal breeding; risk assessment and legislative issues; current practice in cereal production, milling, baking, malting, brewing, and distilling.

***Allelopathy in Ecological Agriculture and Forestry.*** Edited by S. S. Narwal, R. E. Hoagland, R. H. Dilday, and M. J. Reigosa Roger; Kluwer Academic Publishers: Dordrecht, The Netherlands, 2000; 280 pp.

Proceedings of the 3rd International Congress on Allelopathy in Ecological Agriculture and Forestry, Dharwad, India, August 18–21, 1998. Includes sections on ecological agriculture, allelochemicals as herbicides, multiple cropping systems, and agroforestry systems.

***Seafood Enzymes; Utilization and Influence on Postharvest Seafood Quality.*** Edited by N. F. Haard and B. K. Simpson; Dekker: New York, 2000; 696 pp.

Outlines the role of native enzymes on texture, flavor, and color; discusses control of enzymatic activity and the utilization of seafood enzymes as food processing aids.

***Biochemical Sites of Insecticide Action and Resistance.*** Edited by I. Ishaaya; Springer Verlag: New York, 2001; 310 pp.

Reports methods for isolation, identification, and use of various enzymes and receptor systems that serve as targets for insecticide action or as sites for resistance development.

***Humic Substances: Versatile Components of Plants, Soil and Water.*** Edited by E. A. Ghabbour and G. Davies; Royal Society of Chemistry, Cambridge, U.K., 2000; 354 pp.

Derived from Humic Substances Seminar IV, held at Northeastern University, Boston, MA, March 22–24, 2000.

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