

## Recent Books, Early Spring 2005

JAFAC publishes titles and brief summaries of recent books brought to the attention of the Editor. For consideration, books must be currently available and not more than 2 years old.

### **Agricultural Biotechnology: Challenges and Prospects**

Edited by Mahesh K. Bhalgat, William P. Ridley, Allan S. Felsot, and James N. Seiber

*ACS Symposium Series 866; American Chemical Society: Washington, DC, 2003; 218 pp.*

Discusses present and future benefits of agricultural biotechnology and methodologies to detect biotechnology products. Reviews food, feed, and environmental safety assessments, with focus on impact of *Bacillus thuringiensis*. Also examines allergy assessment and biotechnology crops as feeds for livestock.

### **Food Supply Chain Management**

Edited by Michael A. Bourlakis and Paul W. H. Weightman

*Blackwell Publishing: Oxford, U.K., 2004; 236 pp.*

Discusses "farm to fork" process of food chain management. Contains sections on consumer choice, food safety, crop and livestock production, food manufacturing and wholesale, the supply and demand for organic food, and new product development. Each chapter includes stated objectives and study questions.

### **Environmental Fate and Effects of Pesticides**

Edited by Joel R. Coats and Hiroki Yamamoto

*ACS Symposium Series 853; American Chemical Society: Washington, DC, 2003; 300 pp.*

Based largely on research presented at the 2nd Pan-Specific Conference on Pesticide Science. Focuses on newly developed experimental methods and novel analytical techniques, environmental fate of recently developed active ingredients, and refinements of risk assessment processes.

### **Food Chemicals Codex: 5th Edition**

Committee on Food Chemicals Codex, Institute of Medicine

*National Academies Press: Washington, DC, 2003; 1032 pp.*

Describes the U.S. Food and Drug Administration and World Health Organization's accepted standards for quality and purity in food chemicals. Substance monographs provide physical description, uses in food, purity requirements, test methods, and packaging and storing methods.

### **Handbook of Food Toxicology**

By S. S. Deshpande

*Marcel Dekker: New York, 2002; 903 pp.*

Covers principles of toxicology relevant to food science and nutrition, in addition to information on various toxic and microbial hazards associated with modern-day foods.

### **Oligosaccharides in Food and Agriculture**

Edited by Gillian Eggleston and Gregory L. Coté

*ACS Symposium Series 849; American Chemical Society: Washington, DC, 2003; 264 pp.*

Describes biosynthesis, structure, and properties of oligosaccharides present in food, byproducts, and agricultural products such

as starch and sugarcane. Contains methods of oligosaccharide analysis and biosynthesis of prebiotics.

### **Liquid Chromatography/Mass Spectrometry, MS/MS, and Time of Flight MS: Analysis of Emerging Contaminants**

Edited by Imma Ferrer and E. M. Thurman

*ACS Symposium Series 850; American Chemical Society: Washington, DC, 2003; 431 pp.*

Focuses on LC/MS/MS and TOF-MS, HPLC TOF-MS, LC-MS, and LC-NMR methods of analysis to identify contaminants such as pharmaceuticals, pesticides, surfactants, and natural products.

### **Beverage Quality and Safety**

Edited by Tammy Foster and Purnendu C. Vasavada

*CRC Press: Boca Raton, FL, 2003; 229 pp.*

Based on materials presented at an IFT workshop on emerging beverage technology. Covers basic plant sanitation, Good Agricultural Practices to ensure safe juice, HACCP, the role of genetically modified organisms, nutraceuticals in beverages, and alternative processing technologies.

### **Pesticide Decontamination and Detoxification**

Edited by Jay J. Gan, Peter C. Zhu, Steven D. Aust, and Ann T. Lemley

*ACS Symposium Series 863; American Chemical Society: Washington, DC, 2004; 266 pp.*

Based on materials presented at a program on Deactivation and Safe Disposal of Germicides and Pesticides, held at the 224th National Meeting of the American Chemical Society, with additional invited contributions. Presents biologically and chemically based deactivation methods, along with field processes and applications.

### **Environmental Impact of Fertilizer on Soil and Water**

Edited by William L. Hall and Wayne P. Robarge

*ACS Symposium Series 872; American Chemical Society: Washington, DC, 2004; 296 pp.*

Describes nutrient measurement, management, and impact on water and the environment, detection and role of perchlorate ions in fertilizers, and detection, health risks, and management of metals in fertilizers.

### **Genetically Engineered Food: Methods and Detection**

Edited by Knut J. Heller

*Wiley-VCH: Weinheim, Germany, 2003; 276 pp.*

Discusses breeding techniques, legislation in Europe relating to genetically modified foods, and detection methods for foods developed with the aid of genetic engineering, including fish, farm animals, crops, fungi, and bacteria.

### **Oriental Foods and Herbs**

Edited by Chi-Tang Ho, Jen-Kun Lin, and Quin Yi Zheng

*ACS Symposium Series 859; American Chemical Society: Washington, DC, 2003; 360 pp.*

Discusses standardization and use of traditional Oriental herbal products as dietary supplements and functional foods, along with the chemistry, biological activities, and antioxidant capacity of some foods and herbs.

#### **Challenges in Taste Chemistry and Biology**

Edited by Thomas Hofmann, Chi-Tang Ho, and Wilhelm Pickenhagen  
*ACS Symposium Series 867; American Chemical Society: Washington, DC, 2003; 304 pp.*

Presents sections on molecular physiology and taste coding, analytical characterization and structure–activity relationships, taste-active peptides and amino acid derivatives, and flavor interactions.

#### **Statistical Methods for Six Sigma in R&D and Manufacturing**

By Anand M. Joglekar

*John Wiley & Sons: Hoboken, NJ, 2003; 321 pp.*

Presents a structured (six sigma) approach to performance improvement for products, processes, or performance measures. Contains sections on basic statistical methods, regression analysis, control charts, measurement systems analysis, and variance components.

#### **Fermented Beverage Production, 2nd Edition**

Edited by Andrew G. H. Lea and John R. Piggott

*Kluwer Academic/Plenum Publishers: New York, 2003; 423 pp.*

Discusses production of beer, white, red, sparkling, and fortified wines, cider, whiskies, rum, and other alcoholic beverages. Discusses flavor chemistry, distillation, malting, fermentation, and effects of age on flavor.

#### **Allelopathy: Chemistry and Mode of Action of Allelochemicals**

Edited by Francisco A. Macías, Juan C. G. Galindo, José M. G. Molinillo, and Horace G. Cutler

*CRC Press: Boca Raton, FL, 2004; 372 pp.*

Discusses allelochemicals from lichens, aquatic plants, fungi, soil microbes, cereal crops, sunflowers, and parasitic plants. Includes chapters on alkaloids, terpenoids, phenolics, and hydroxamic acids. Techniques for the study of allelopathic stress are presented.

#### **Uncorked: The Science of Champagne**

By Gérard Liger-Belair

*Princeton University Press: Princeton, NJ, 2004; 152 pp.*

This book for general readers explains the physics and chemistry of champagne bubbles, with chapters on the history and making of champagne. Emphasis is on the physics of bubble formation, growth, ascent, and bursting. Includes many drawings and photographs.

#### **Prions and Mad Cow Disease**

Edited by Brian K. Nunnally and Ira S. Krull

*Marcel Dekker: New York, 2003; 413 pp.*

Contains methods of analysis of prion protein assays and discusses diagnosis of transmissible spongiform encephalopathies (TSEs). Gives an overview of TSE in cervids in the United States. Discusses methods to assess and prevent potential spread of bovine spongiform encephalopathy.

#### **Water-Soluble Polymer Applications in Foods**

By A. Nussinovitch

*Blackwell Science: Oxford, U.K., 2003; 226 pp.*

Focuses on applications of hydrocolloids in foods, specifically relating to adhesives, coatings, capsules, textures, and cellular solids.

#### **Off-Flavors in Aquaculture**

Edited by Agnes M. Rimando and Kevin K. Schrader

*ACS Symposium Series 848; American Chemical Society: Washington, DC, 2003; 280 pp.*

Discusses types of off-flavors, especially of pond-cultured marine shrimp, catfish, salmon, and trout. Contains information on hydrocarbons in blue mussels, the effects of cyanobacteria that cause off-flavors, and algicides that combat cyanobacterial off-flavors in aquaculture.

#### **Managing Soil Quality: Challenges in Modern Agriculture**

Edited by P. Schjønning, S. Elmholt, and B. T. Christensen

*CABI Publishing: Wallingford, Oxon, U.K., 2003; 368 pp.*

Discusses main concepts and issues in soil quality such as soil acidity, degradation of soil organic matter, and plant nutrients including nitrogen, potassium, and phosphorus. Contains information on pesticides in soil, land use management, soil quality improvement and management, and soil quality in industrial and developing countries.

#### **Food Factors in Health Promotion and Disease Prevention**

Edited by Fereidoon Shahidi, Chi-Tang Ho, Shaw Watanabe, and Toshihiko Osawa

*ACS Symposium Series 851; American Chemical Society: Washington, DC, 2003; 464 pp.*

Gives an overview of food factors in health promotion and disease prevention, with sections on signal transduction and gene modulation, biomarker and animal models, antioxidants, fruits and vegetables, and other food factors.

#### **Nutraceutical Beverages: Chemistry, Nutrition, and Health Effects**

Edited by Fereidoon Shahidi and Deepthi K. Weerasinghe

*ACS Symposium Series 871; American Chemical Society: Washington, DC, 2004; 489 pp.*

Contains sections on beer, wine, coffee, tea, cocoa, fruits, soy, and milk, relating to their chemistry, flavor, and effects on health. Describes activity, isolation, and stability of nutraceuticals in beverages and food.

#### **Phenolics in Food and Nutraceuticals**

By Fereidoon Shahidi and Marian Naczk

*CRC Press: Boca Raton, FL, 2004; 558 pp.*

Presents the classification and nomenclature of phenolics in food and nutraceuticals, with a discussion of their occurrence in cereals, oilseeds, plant oils, fruits and vegetables, nuts and legumes, beverages, and herbal and nutraceutical products. Contains information of the pharmacological and nutritional effects of food phenolics, processing effects, contributions to flavor and color of foods, antioxidant properties, and analysis of phenolic compounds.

#### **Diversity in Barley (*Hordeum vulgare*)**

Edited by R. von Bothmer, T. van Hintum, and H. Knüpffer

*Elsevier: Amsterdam, The Netherlands, 2003; 297 pp.*

Explores genetic, ecogeographical, cytogenetic, and molecular diversity of barley. Discusses barley's domestication and cultivation, resistance to biotic and abiotic stresses, and the diversity conservation and future utilization of barley.

#### **Dictionary of Food Compounds with CD-ROM: Additives, Flavors, and Ingredients**

Edited by Shmuel Yannai

*Chapman & Hall/CRC: Boca Raton, FL, 2004; 1763 pp. and 1 CD.*

An updated alphabetical reference of food compounds. Typical entries include common name, CAS Registry number, structural formula and stereochemical description, molecular formula and weight, food use, hazard information, physical data, information on derivatives, and bibliographic references. A searchable CD-ROM version accompanies and complements the printed book.