

## Recent Books, Summer 2006

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JAFc 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.

### **Chemistry and Safety of Acrylamide in Food**

Edited by Mendel Friedman and Don Mottram

*Advances in Experimental Medicine and Biology 561*; Springer: New York, 2005; 488 pp

Proceedings of a symposium held at the American Chemical Society National Meeting in Anaheim, CA, March 28–April 1, 2004. Topics include mechanisms of formation, distribution, and reduction in foods, analysis, toxicology, pharmacology, metabolism, epidemiology, and risk assessment.

### **Probiotic Dairy Products**

Edited by Adnan Tamime

*Blackwell: Oxford, U.K., 2005*; 232 pp

Presents chapters on the microbiota of the human gut, characterization of starter cultures, probiotic microorganisms in dairy products, prebiotic ingredients, current legislation, health claims, and future development of probiotic dairy products.

### **Food Processing Handbook**

Edited by James G. Brennan

*Wiley-VCH: Weinheim, Germany, 2006*; 607 pp

Discusses the principles and technology of food preservation used in today's food industry, including the equipment used and changes that occur during processing. Postharvest handling, thermal processing, evaporation and dehydration, freezing, irradiation, high-pressure processing, pulsed electric field processing, power ultrasound, baking, extruding, frying, packaging, food safety, process control, separations, mixing, emulsification, and size reduction are covered.

### **Food Carbohydrates; Chemistry, Physical Properties, and Applications**

Edited by Steve W. Cui

*CRC Press: Boca Raton, FL, 2005*; 430 pp

Discusses the chemistry of food carbohydrates, carbohydrate analysis, structural analysis, conformation and physical properties of polysaccharides, the structure, functional properties, and applications of polysaccharide gums, and the role of starches and modified starches in foods.

### **Nutritional Genomics: Impact on Health and Disease**

Edited by Regina Brigelius-Flohé and Hans-Georg Joost

*Wiley-VCH: Weinheim, Germany, 2006*; 28 pp

Discusses the impact of nutrients on gene expression and how genetic variation is associated with dietary response and diseases such as atherosclerosis, diabetes, cancer, and inflammation.

### **Methods of Analysis of Food Components and Additives**

Edited by Semih Ötleş

*CRC Press: Boca Raton, FL, 2005*; 449 pp

Covers selection of techniques used in food analysis, statistical assessment of results, and analysis of drinking water, proteins, peptides, amino acids, lipids, trace elements, vitamins, carotenoids,

chlorophylls, polyphenols, pesticide residues, pollutants, preservatives, radioactive contaminants, allergens, genetically modified components, and the sensory analysis of foods.

### **Handbook of Analytical Food Chemistry: Water, Proteins, Enzymes, Lipids, and Carbohydrates**

Edited by Ronald E. Wrolstad et al.

*Wiley-Interscience: Hoboken, NJ, 2000–2005*; 783 pp

Handbook derived from protocols published in *Current Protocols in Food Analytical Chemistry* from 2001 to 2003 providing detailed information on food analytical methodology for water, proteins, enzymes, lipids, and carbohydrates.

### **Handbook of Analytical Food Chemistry: Pigments, Colorants, Flavors, Texture, and Bioactive Food Components**

Edited by Ronald E. Wrolstad et al.

*Wiley-Interscience: Hoboken, NJ, 2000–2005*; 621 pp

Handbook derived from protocols published in *Current Protocols in Food Analytical Chemistry* from 2001 to 2003 providing detailed information on food analytical methodology for pigments and colorants, flavors, texture/rheology, and bioactive food components.

### **Technology of Bottled Water, 2nd ed.**

Edited by Dorothy Senior and Nicholas Dege

*Blackwell: Oxford, U.K., 2005*; 427 pp

Presents practical and technical information on the production of bottled water, including market development, categories of bottled waters, hydrogeology, microbiology, water treatment, equipment, and quality management.

### **Manufacturing Yogurt and Fermented Milks**

Edited by Ramesh C. Chandan, Charles H. White, Arun Kilara, and Y. H. Hui

*Blackwell: Ames, IA, 2006*; 376 pp

Presents background information for the manufacturing of yogurt and fermented milk products, the manufacturing technology for yogurt, buttermilk, sour cream, and other fermented and culture-containing milk products, and the health benefits of these products.

### **Nonparametrics for Sensory Science; A More Informative Approach**

By J. C. W. Rayner, D. J. Best, P. B. Brockhoff, and G. D. Rayner

*Blackwell: Ames, IA, 2005*; 186 pp

Presents statistical techniques for sensory evaluation and other applications, with chapters on completely randomized design, randomized block design, balanced incomplete block designs, correlation effects, categorical data for randomized block designs, and goodness of fit.

### **Handbook of Functional Lipids**

Edited by Casimir C. Akoh

CRC Press: Boca Raton, FL, 2006; 541 pp

Presents chapters on the isolation, production, and concentration of functional lipids, their role in food functionality, their health and nutritional aspects, and their modification and market potential.

### **Flavor Chemistry and Technology, 2nd ed.**

By Gary Reineccius

CRC Press: Boca Raton, FL, 2006; 513 pp

An overview of flavor chemistry and technology, with chapters on flavor analysis, formation, changes due to processing, flavor release from foods, off-flavors and taints, flavoring materials and potentiators, flavor production and applications, and quality control.

### **Food Microbiology and Laboratory Practice**

By Chris Bell, Paul Neaves, and Anthony P. Williams

Blackwell: Oxford, U.K., 2005; 336 pp

A practical training aid for laboratory personnel describing the structure and habit of microorganisms, factors affecting their growth or death, food spoilage, foodborne illness, food preservation, HACCP, laboratory design and operation, and microbiological methods and tests.

### **Chemistry and Technology of Soft Drinks and Fruit Juices, 2nd ed.**

Edited by Philip R. Ashurst

Blackwell: Oxford, U.K., 2005; 392 pp

An overview of the chemistry and technology of soft drinks and fruit juices; covers fruit and juice processing, sweeteners and other added ingredients, packaging, carbonated and noncarbonated beverages, functional drinks containing herbal extracts, analysis, microbiology, and market trends.

### **Soy Applications in Food**

By Mian N. Riaz

CRC Press: Boca Raton, FL, 2006; 300 pp

Summarizes some fundamentals for applying soy ingredients to food systems; provides chapters on soy food products, including use in baking, pasta, snacks, cereals, meat products, and beverages, as well as health effects, processing, flavoring, and selection for food applications.

### **Plowshares & Pork Barrels; The Political Economy of Agriculture**

By E. C. Pasour, Jr., and Randal R. Rucker

The Independent Institute: Oakland, CA, 2005; 408 pp

Presents a brief history and discussion of impacts of U.S. farm policy, including the regulation of production and marketing of agricultural products, international trade, taxation in agriculture, soil conservation and land use, productivity research, crop insurance and risk management, and subsidized food programs.

### **Dietary Supplements and Functional Foods**

By Geoffrey P. Webb

Blackwell: Oxford, U.K., 2006; 253 pp

Contains an overview of dietary supplements and functional foods, with a discussion of micronutrient adequacy, vitamins, minerals, free radicals and antioxidants, natural fats and oils, nonessential nutrients used as dietary supplements, natural products and extracts, and functional foods.

### **Identification of Microorganisms by Mass Spectrometry**

Edited by Charles L. Wilkins and Jackson O. Lay, Jr.

Wiley-Interscience: Hoboken, NJ, 2006; 369 pp

Provides an overview of mass spectrometry (MS) techniques for identifying microorganisms, including metastable atom bombard-

ment pyrolysis MS, matrix-assisted laser desorption/ionization (MALDI) MS, MALDI time-of-flight (TOF) MS, high-resolution Fourier transform MS, and electrospray ionization MS.

### **Regulation of Functional Foods and Nutraceuticals: A Global Perspective**

Edited by Clare M. Hasler

Blackwell: Ames, IA, 2005; 425 pp

Reviews the impact of regulation on nutraceuticals, functional foods, and dietary supplements from an international perspective, including quality, safety, development, and marketing issues, and health claims.

### **Polysaccharides and Polyamides in the Food Industry: Properties, Production, and Patents**

Edited by Alexander Steinbüchel and Sang Ki Rhee

Wiley-VCH: Weinheim, Germany, 2005; 2 vol., 771 pp

Contains selected chapters from the 10-volume *Biopolymers* series. Vol. 1 has chapters on polysaccharides, including alginates, bacterial cellulose, carrageenan, chitin and chitosan, curdlan, dextran, exopolysaccharides of lactic acid bacteria, inulin, levan, pectins, pullulan, starch, and xanthan. Vol. 2 focuses on polyamides: collagens and gelatins, enzymes for technical applications, poly- $\gamma$ -glutamic acid,  $\epsilon$ -poly-L-lysine, sweet-tasting proteins, and vicilin and legumin seed storage proteins.

### **Encapsulated and Powdered Foods**

Edited by Charles Onwulata

CRC Press: Boca Raton, FL, 2005; 522 pp

Discusses the importance of food powders to the food industry, the characteristics of particulate foods, powder manufacturing, blending and segregation, characterization of food powders, functional properties of milk, cocoa, salts, and sugars, and encapsulated food powders.

### **Handbook of Milk of Non-Bovine Mammals**

Edited by Young W. Park and George F. W. Haenlein

Blackwell: Ames, IA, 2006; 459 pp

Presents chapters on the production, composition, and utilization of milk from goats, sheep, buffaloes, mares, camels, yaks, reindeer, sows, llamas, and humans.

### **Food Biochemistry & Food Processing**

Edited by Y. H. Hui, Wai-Kit Nip, Leo M. L. Nollet, Gopinadhan Paliyath, and Benjamin K. Simpson

Blackwell: Ames, IA, 2006; 783 pp

A reference book and classroom text covering the principles of food biochemistry, with sections on water, enzymology, biotechnology, and protein cross-linking; muscle foods; milk; fruits, vegetables, and cereals; fermented foods; and food safety.

### **Food, Fermentation and Micro-organisms**

By Charles W. Bamforth

Blackwell: Oxford, U.K., 2005; 232 pp

Discusses the science underpinning food fermentations, along with chapters on beer, wine, cider, distilled alcoholic beverages, flavored spirits, sake, vinegar, cheese, yogurt, bread, meat, indigenous fermented foods, vegetable fermentations, cocoa, and others.

### **Handbook of Frozen Food Processing and Packaging**

Edited by Da-Wen Sun

CRC Press: Boca Raton, FL, 2006; 755 pp

Contains 34 chapters divided into 5 sections covering the fundamentals of freezing, facilities for the cold chain, quality and

safety of frozen foods, monitoring and measuring techniques for quality and safety, and packaging of frozen foods.

### **Handbook of Fruits and Fruit Processing**

Edited by Y. H. Hui, József Barta, M. Pilar Cano, Todd W. Gusek, Jiwan S. Sidhu, and Nirmal Sinha  
Blackwell: Ames, IA, 2006; 709 pp

Covers fundamental aspects of processing technology and products manufacturing for fruits and fruit products, along with commodity-processing perspectives on many important fruit groups, including apples and pears, stone fruits, citrus, grapes, dates, olives, red peppers, berries, and tropical fruits.

### **Seafood Processing: Adding Value Through Quick Freezing, Retortable Packaging, and Cook-Chilling**

By V. Venugopal

CRC Press: Boca Raton, FL, 2006; 503 pp

Focuses on new technologies for value addition, including bulk handling, chilling, freezing, and packaging, mince based and coated products, radiation and high-pressure processing, gel formation and enzyme applications, and nutritional value and processing effects.

### **Aflatoxin and Food Safety**

Edited by Hamed K. Abbas

CRC Press: Boca Raton, FL, 2005; 613 pp

Discusses management and reduction of aflatoxins in crops, including resistant plant breeding, biological control of contamination, and detoxification; food safety and regulatory perspectives from different countries; advances in sampling and analysis; and health effects.

### **Sensory Discrimination Tests and Measurements: Statistical Principles, Procedures and Tables**

By Jian Bi

Blackwell: Ames, IA, 2006; 310 pp

Covers standard discrimination tests as well as modified, multiple-sample, and replicated discrimination tests, measurements of sensory difference, and similarity testing; statistical analysis chapters are included.

### **Genetic Resources, Chromosome Engineering, and Crop Improvement. Vol. 2: Cereals**

Edited by Ram J. Singh and Prem P. Jauhar

CRC Press: Boca Raton, FL, 2006; 456 pp

Discusses the origin, wild relatives, gene pool exploitation, and genetic enrichment of wheat, rice, maize, oats, barley, pearl millet, sorghum, rye, and triticale.

### **Nutraceutical Proteins and Peptides in Health and Disease**

Edited by Yoshinori Mine and Fereidoon Shahidi

*Nutraceutical Science and Technology Series 4*; CRC Press: Boca Raton, FL, 2006; 686 pp

Explores bioactive proteins and peptides of scientific and commercial interest in relation to the nutrient absorption system, the body's defense regulatory, and nervous systems, hypoallergenic foods, and new methodologies for classification, identification, design, and synthesis.

### **Carcinogenic and Anticarcinogenic Food Components**

Edited by Wanda Baer-Dubowska, Agnieszka Bartoszek, and Danuta Malejka-Giganti

CRC Press: Boca Raton, FL, 2006; 405 pp

Discusses cancer-causing and cancer-preventing food components, including genotoxic components, environmental contamina-

tion, the impact of food preservation, processing, and cooking; anti- and prooxidants; polyunsaturated fatty acids and eicosanoids; and the chemopreventive potential of phenolics, carotenoids, flavonoids, phytoestrogens, tea, and cruciferous vegetables.

### **Postharvest Pathogens and Disease Management**

By P. Narayanasamy

Wiley-Interscience: Hoboken, NJ, 2006; 592 pp

Discusses the importance, detection, identification, ecology, and symptom expression of postharvest microbial pathogens, as well as conditions that influence their development during cultivation, harvest, postharvest handling, and storage. Covers the principles and practices of postharvest disease management, including physical methods, host plant resistance, biocontrol and chemical control agents, and integrated systems.

### **Soy in Health and Disease Prevention**

Edited by Michihiro Sugano

CRC Press: Boca Raton, FL, 2006; 325 pp

Presents chapters on the nutritional implications and health benefits of soy proteins, isoflavones, saponins, lecithin, sterols, peptides, and fermented components.

### **Concept Research in Food Product Design and Development**

By Howard R. Moskowitz, Sebastian Porretta, and Matthias Silcher

Blackwell: Ames, IA, 2005; 609 pp

Covers principles of concept development, particularly for development and marketing of food products, and discusses methods for testing concepts and establishing validity, variables such as children compared with adults or pricing issues, and creating databases.

### **Sittig's Handbook of Pesticides and Agricultural Chemicals**

Edited by Stanley A. Greene and Richard P. Pohanish

William Andrew Publishing: Norwich, NY, 2005; 1201 pp

Provides information for over 800 pesticides and other agricultural chemicals, including uses, CAS Registry Number and other identification codes, synonyms, trade names, producers, chemical class, regulatory information, harmful effects, symptoms and first aid information, human and fish toxicity, crop residue tolerances, and references to methods for determination in air and water.

### **Semiochemicals in Pest and Weed Control**

Edited by Richard J. Petroski, Maria R. Tellez, and Robert W. Behle

*ACS Symposium Series 906*; American Chemical Society: Washington, DC, 2005; 184 pp

Contains papers from a symposium presented at the American Chemical Society National Meeting held in New Orleans, LA, in 2003. Discusses the discovery and use of semiochemicals, control of the Formosan termite, development of microbial formulations resistant to sunlight degradation, and statistical analysis of chemical mixture experiments.

### **Environmental Fate and Safety Management of Agrochemicals**

Edited by J. Marshall Clark and Hideo Ohkawa

*ACS Symposium Series 899*; American Chemical Society: Washington, DC, 2005; 368 pp

Papers presented at the 3rd Pan Pacific Conference on Pesticide Science, held in Honolulu, HI, in June 2003, including contributions to the safety of agrochemicals, pesticide transport and fate, metabolism, risk assessment, resistance, formulation and application.

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