

## Recent Books, Summer 2003

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### **Terrestrial Field Dissipation Studies**

Edited by E. L. Arthur, A. C. Barefoot, and V. E. Clay  
*ACS Symposium Series 842; American Chemical Society: Washington, DC, 2003; 364 pp.*

Regulatory guidelines for terrestrial field dissipation studies from several countries are discussed, as well as study design, roles in risk assessment, and sources and magnitudes of variability.

### **Freshness and Shelf Life of Foods**

Edited by K. Cadwallader and H. Weenen  
*ACS Symposium Series 836; American Chemical Society: Washington, DC, 2002; 344 pp.*

Focuses on shelf life of foods, flavor aspects of freshness, rheological methods to determine freshness, processing of citrus in relation to retaining its fresh character, lipid oxidation in muscle foods, and the food polymer science approach to studies on freshness and shelf life.

### **Biogeochemistry of Environmentally Important Trace Elements**

By Y. Cai and O. C. Braids  
*ACS Symposium Series 835; American Chemical Society: Washington, DC, 2002; 448 pp.*

Discusses the fate, transport, and transformation of environmentally important trace elements, with a focus on arsenic, mercury, and selenium. Speciation studies are emphasized.

### **Food: The Chemistry of its Components**

By T. P. Coultate  
*Royal Society of Chemistry: Cambridge, U.K., 2002; 432 pp.*

Contains sections on sugars, polysaccharides, lipids, proteins, colors, flavors, vitamins, preservatives, undesirables, minerals, water, nutritional requirements and dietary sources. The structural formulas of around 600 food components are given.

### **Food Allergy and Intolerance: Current Issues and Concerns**

Edited by V. Emerton  
*Royal Society of Chemistry: Cambridge, U.K., 2002; 182 pp.*

Discusses major allergens in nuts, milk, soya, seafood, sesame, and food additives, as well as lactose intolerance. Contains chapters on the effect of cooking on the allergenicity of proteins, the assessment of novel foods for allergenicity, and development of a dipstick assay for allergens.

### **Soil Classification: A Global Desk Reference**

By H. Eswaran, R. J. Ahrens, T. J. Rice, and B. A. Stewart  
*CRC Press: Boca Raton, FL, 2002; 312 pp.*

Evaluates the understanding of soils and the evolution of their classification. Sections include concepts and innovations in soil classification and developments in classification systems.

### **Agronomic Handbook: Management of Crops, Soils, and their Fertility**

By J. B. Jones, Jr.  
*CRC Press: Boca Raton, FL, 2002; 352 pp.*

Contains descriptions of the genetic history, yield characteristics, and cultural and nutritional requirements of major agronomic crops, as well as information on soil classification, soil properties, soil pH, and liming.

### **Laboratory Guide for Conducting Soil Tests and Plant Analysis**

By J. B. Jones, Jr.  
*CRC Press: Boca Raton, FL, 2002; 384 pp.*

Includes laboratory procedures for determining the physical and chemical characteristics of soils and plant tissue. Provides details on sample preparation, standard preparation for calibrating analytical instruments, and selection of methods and analytical procedures best suited for each assay procedure. Offers definitions of commonly used terms and interpretative data for evaluating soil and plant test results.

### **Advancing Sustainability Through Green Chemistry and Engineering**

Edited by R. L. Lankey and P. T. Anastas  
*ACS Symposium Series 823; American Chemical Society: Washington, DC, 2002; 280 pp.*

Topics covered include environmentally benign synthesis, agrochemicals, greener solvents, and biobased synthesis and processing.

### **Handbook of Residue Analytical Methods for Agrochemicals**

Edited by P. W. Lee, H. Aizawa, A. D. Barefoot, and J. J. Murphy  
*Wiley: Chichester, U.K., 2003; 2 vol., 1401 pp.*

Brings together information on the key methodologies and current best practices used in agrochemical residue analysis. Presents chapters dealing with individual compounds as well as compound classes.

### **Nitrogen Fixation at the Millennium**

Edited by G. J. Leigh  
*Elsevier: Amsterdam, The Netherlands, 2002; 464 pp.*

Review of biological nitrogen fixation and the chemistry of nitrogenase, aimed at students and researchers entering this field.

### **Amorphous Food and Pharmaceutical Systems**

Edited by H. Levine  
*Royal Society of Chemistry: Cambridge, U.K., 2002; 351 pp.*

Includes sections on the physical and chemical behavior of water-compatible amorphous solids, low content water systems, and their applications in the food and pharmaceutical science industries.

### **Crop Biotechnology**

Edited by K. Rajasekaran, T. J. Jacks, and J. W. Finley  
*ACS Symposium Series 829; American Chemical Society: Washington, DC, 2002; 272 pp.*

Examines the use of biotechnology in crop plants, covering both input and output traits.

**Organic Soils and Peat Materials for Sustainable Agriculture**

Edited by L. E. Parent and P. Ilnicki

*CRC Press: Boca Raton, FL, 2002; 312 pp.*

Presents chapters on quality indicators of reclaimed organic soils and the loss of organic soil functions after reclamation, acidity determination for organic soils and peat, and nitrogen and phosphorus balance indicators and reviews pesticide and copper reactions in organic soils.

**Chinese and Related North American Herbs: Phytopharmacology and Therapeutic Values**

By T. S. C. Li

*CRC Press: Boca Raton, FL, 2002; 700 pp.*

Presents the major constituents and therapeutic values of Chinese medicinal herbs, including data on toxicity, major chemical components, and their therapeutic values. Highlights the relationship between Chinese and North American medicinal herbs and possible replacements for Chinese with North American herbs.

**Heteroatomic Aroma Compounds**

Edited by G. A. Reineccius and T. A. Reineccius

*ACS Symposium Series 826; American Chemical Society: Washington, DC, 2002; 392 pp.*

Presents chapters on the analytical methodologies, flavor, and aroma aspects of sulfur-containing, nitrogen-containing, oxygen-containing, and halogenated compounds.

**Food Safety Handbook**

By R. H. Schmidt and G. E. Rodrick

*Wiley: Hoboken, NJ, 2003; 850 pp.*

Topics addressed include risk assessment, biological, chemical, and physical food hazards, food hazard control systems and intervention strategies, safety issues with emphasis on food fortification, dietary supplements and functional foods, and worldwide food safety issues.

**Plant Cytogenetics, 2nd ed.**

By R. J. Singh

*CRC Press: Boca Raton, FL, 2002; 512 pp.*

Covers various classical and modern techniques in the handling of chromosomes, karyotype analysis, genetics of meiosis, genomic relationships, and chromosome manipulation. Includes new chapters on extra chromosomal inheritance and the mode of reproduction in plants, particularly apomixis, as well as new sections on the

molecular basis of heredity, genomic in situ hybridization, and the classical and molecular methods of genome analysis.

**An Introduction to Arthropod Pest Control**

By J. R. M. Thacker

*Cambridge University Press: Cambridge, U.K., 2002; 343 pp.*

Provides a brief history and a detailed overview of current approaches to pest control, including chemical pest control, the use of biological and biorational control agents, and biotechnological developments in insect control.

**Annual Bibliography of Significant Advances in Dietary Supplements Research 2001**

By U.S. National Institutes of Health and Consumer Health Care Products Association

*National Institutes of Health: Bethesda, MD, 2002; 20 pp.*

Third annual annotated bibliography highlights 25 selected scientific papers published in 2001 in the areas of water-soluble and fat-soluble vitamins, minerals, fiber, soy, amino acids and fatty acids, botanicals, and other dietary supplements. Available online at <http://dietary-Supplements.info.nih.gov>

**Physical Chemistry of Foods**

By P. Walstra

*Dekker: New York, NY, 2002; 832 pp.*

Comprehensive textbook for upper-level undergraduate and graduate courses in food, surface, colloid, and molecular chemistry and biochemistry, food science and technology, and food engineering.

**Soils, Land and Food: Managing the Land during the 21st Century**

By A. Wild

*Cambridge University Press: Cambridge, U.K., 2003; 246 pp.*

Describes how the use of technology in soil management can increase and sustain agricultural production.

**Food Microbiology: a Laboratory Manual**

By A. E. Yousef and C. Carlstrom

*Wiley Interscience, Hoboken, NJ, 2003; 285 pp.*

Reviews basic microbiological techniques; includes exercises to evaluate the microbiota of various foods and enumerate indicator microorganisms; presents beneficial microorganisms and their role in food fermentation.

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