

Recent Books, Spring 2001

Handbook of Property Estimation Methods for Chemicals: Environmental Health Sciences. Edited by Robert S. Boethling and Donald Mackay; Lewis Publishers: Boca Raton, FL, 2000; 503 pp.

A complete restructuring and updating of the landmark 1982 *Handbook of Chemical Property Estimation Methods* (commonly known as *Lyman's Handbook*). Covers property estimation for pure substances, partitioning, reactivity or persistence, and unusual substances.

Multimedia Environmental Models: The Fugacity Approach, 2nd ed. By Donald Mackay; Lewis Publishers: Boca Raton, FL, 2001; 272 pp.

Discusses environmental chemicals and their properties and provides techniques for prediction of their behavior in the environment.

Trace Elements in Soil and Plants, 3rd ed. By Alina Kabata-Pendias; CRC Press: Boca Raton, FL, 2000; 432 pp.

Presents an overview of the principal pathways from soils to plants. Highlights the significance of anthropogenic factors in changing the trace element status in soils and plants.

Trace Elements in Soil: Bioavailability, Flux, and Transfer. Edited by I. K. Iskandar and M. B. Kirkham; Lewis Publishers: Boca Raton, FL, 2001; 304 pp.

Explores bioavailability, accumulation, partitioning, transport, and fate of trace elements in soils.

Worker Exposure to Agrochemicals: Methods for Monitoring and Assessment. Edited by Richard C. Honeycutt and Edgar W. Day; Lewis Publishers: Boca Raton, FL, 2000; 216 pp.

Compilation of papers presented at the National Meeting of the American Chemical Society, Spring 1996, in New Orleans, LA. Discusses and compares biological monitoring and dermal dosimetry. Also discusses use of exposure data to assess risks, exposures during re-entry into treated areas, and exposure reduction with protective clothing.

Herbicides and Their Mechanisms of Action. Edited by Andrew H. Cobb and Ralph C. Kirkwood; CRC Press: Boca Raton, FL, 2000; 320 pp.

Covers herbicide mechanisms of action, especially herbicide selectivity. Provides insight into the causes of herbicide resistance.

Current Protocols in Food Analytical Chemistry. Edited by Ronald E. Wrolstad et al.; Wiley: New York, NY; looseleaf, CD-ROM, or Intranet versions, updated quarterly.

A current, continuously updated source of food chemistry methods and instrumentation. Includes sections on water, proteins, enzymes, lipids, carbohydrates, colors, flavors, and textural/rheology components.

Herbs, Botanicals and Teas. Edited by G. Mazza and B. D. Oomah; Technomic Publishing: Lancaster, PA, 2000; 434 pp.

Chemical, pharmacological, and clinical aspects of major herbal and tea products, including garlic, ginseng, Echinacea, ginger, fenugreek, St. John's wort, *Ginkgo biloba*, goldenseal, saw palmetto, valerian, evening primrose, licorice, bilberries, blueberries, and black and green teas.

Phytochemicals as Bioactive Agents. Edited by Wayne R. Bidlack, Stanley T. Omaye, Mark S. Meskin, and Debra Topham; Technomic Publishing: Lancaster, PA, 2000; 296 pp.

Focuses on the mechanisms of action of phytochemicals identified as bioactive in the prevention of cancer, heart disease, and other diseases and prospects for developing functional foods containing these compounds.

Polysaccharide Gums from Agricultural Products; Processing, Structures and Functionality. By Steve W. Cui; Technomic Publishing: Lancaster, PA, 2000; 250 pp.

Addresses the basic chemistry, extracting processes, molecular structure, functional properties, and potential applications of polysaccharide gums, including yellow mustard gum, flaxseed gum, β -D-glucans, pentosans, arabinoxylans, psyllium, fenugreek, maize, and soybean.

FlavorWORKS 2.0 Comprehensive Flavor and Fragrance Software. Created by Kris Raghavan; Technomic Publishing: Lancaster, PA, 2000; CD-ROM.

Database contains >2000 compounds, indexed by common and alternative names, registry numbers, class, physical properties, spectral data, sources, uses, and others. Custom updateable inventory allows you to enter and maintain your in-house data and graphics.

Carbohydrate Reserves in Plants—Synthesis and Regulation. Edited by A. K. Gupta and N. Kaur; Elsevier Science: New York, 2000; 374 pp.

Presents articles on synthesis and disposition of carbohydrates in grains, sugar cane and sugar beets, potatoes, Jerusalem artichoke, chicory, legumes, transgenic plants, and trees.

Food Chemistry: Principles and Applications. Edited by Genevieve L. Christen and J. Scott Smith; Science Technology System: West Sacramento, CA, 2000; 454 pp.

A textbook, containing both basic food chemistry and applications, with review questions after each chapter. Topics include food chemistry fundamentals, water, carbohydrates, lipids, proteins, vitamins, minerals, enzymes, flavors, colorants, toxicants, food additives, contaminants and indirect additives, milk, grains, legumes, fruits, vegetables, meats, poultry products, fish, and shellfish.

Food Biotechnology. Edited by Stanislaw Bielecki, Johannes Tramper, and Jacek Polak; Elsevier Science: Amsterdam, The Netherlands, 2000.

Proceedings of the International Symposium on Food Biotechnology held in Zaczopane, Poland, May 1999. Papers from sessions on GMO (genetically modified organisms) in Food Biotechnology; Food Processing and Food Products; Measurement and Quality Control; Legal and Social Aspects of Food Biotechnology.

Redesigning Rice Photosynthesis To Increase Yield. Edited by J. E. Sheehy, P. L. Mitchell, and B. Hardy; International Rice Research Institute, Los Baños, Philippines; Elsevier: Amsterdam, The Netherlands, 2000; 312 pp.

Proceedings of a workshop exploring increasing yield in rice by redesigning the rice plant's photosynthetic pathway, held in Los Baños, Philippines, Nov 30–Dec 3, 1999.

Approved Methods of the American Association of Cereal Chemists, 10th ed. Compiled by the Approved Methods Committee, AACCC: St. Paul, MN, 2000; print edition comprises two ring-bound volumes, ~1200 pp; CD-ROM version and on-line subscription also available.

New 10th edition includes the most up-to-date techniques, with obsolete methods removed. Every method contains a concisely written objective to help the user find the most appropriate method. Supplier index is greatly expanded over that of previous editions.

Plant Growth Regulators in Agriculture and Horticulture; Their Role and Commercial Uses. Edited by Amarjit S. Basra; Haworth Press: New York, 2001; 278 pp.

Evaluation of the commercial uses of plant growth regulators (PGRs) in agriculture and horticulture, along with their regulatory roles in plant growth and development. Covers roles of PGRs in managing crop yield in cereal production, ornamental horticulture, and fruit production.

The Pesticide Manual, a World Compendium, 12th ed. Edited by C. D. S. Tomlin; British Crop Protection Council: Farnham, Surrey, U.K., 2000; 1276 pp, CD-ROM version available.

Contains 812 detailed main entries, as well as abbreviated details covering 598 superseded products. Covers herbicides, fungicides, insecticides, acaricides, nematocides, plant growth regulators, herbicide safeners, repellents, synergists, pheromones, beneficial microbial and invertebrate agents, rodenticides, and animal ectoparasiticides. Includes structures, nomenclature, physical–chemical properties, mammalian toxicology, ecotoxicology, fate in animals, plants, and soils.

Handbook of Environmental Data on Organic Chemicals, 4th ed. Edited by Karel Verschuere; Wiley: New York, 2000; 2 volumes, ~2800 pp, CD-ROM version also available.

Environmental data for >3000 organic chemicals, including physical–chemical properties, air, water, and soil pollution factors, methods of sampling and analysis, and biological effects.

The Future Role of Pesticides in US Agriculture. By the Committee on the Future Role of Pesticides in U.S. Agriculture, Commission on Life Sciences, National Research Council; National Academy Press: Washington, DC, 2000; 321 pp.

Examines the history, benefits, costs, and contemporary use patterns of pesticides, as well as economic, regulatory, technological, and biological changes with regard to the future of pest management. Includes an evaluation of pest control strategies. The full text may be viewed free at <http://books.nap.edu/catalog/9598.html>.

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