

**Applications of Reference Materials in Analytical Chemistry.** By Vicki Barwick, Shaun Burke, Richard Lawn, Peter Roper, and Ron Walker (Laboratory of the Government Chemist, Teddington, U.K.). Royal Society of Chemistry: Cambridge. 2001. xii + 148 pp. £59.50. ISBN: 0-85404-448-5.

The intent of the authors of this book was to guide the reader on the use of certified reference materials (CRMs) “to achieve valid analytical measurements and thereby improve quality in the analytical laboratory” and “to explain how the results obtained from the use of CRMs can best be interpreted.” To that end, the main applications of CRMs in analytical chemistry are described, and worked examples are used to illustrate the key principles involved in the use of CRMs. The chapter headings are as follows: Introduction, CRM Production, Simple Statistics for Users of CRMs, The Use of CRMs for Instrument Calibration, Use of CRMs for Assessing the Accuracy of Analytical Data, and Use of CRMs in Method Validation and Assessing Measurement Uncertainty. A list of reference material producers, statistical tables, and a subject index complete the book.

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**Nomenclature of Inorganic Chemistry II. Recommendations 2000.** Edited by J. A. McCleverty and N. G. Connelly (University of Bristol). Royal Society of Chemistry (for the International Union of Pure and Applied Chemistry): Cambridge. 2001. x + 130 pp. £39.50. ISBN 0-85404-487-6.

This volume of *Nomenclature of Inorganic Chemistry* addresses the naming of more specialized systems on the basis of the fundamental principles laid out in vol I. Vol II is focused on such diverse topics as polyanions; isotope-containing inorganics; tetrapyrrolic metal complexes; nitrogen hydrides; and ring, chain, and graphite intercalation compounds. Each of the seven chapters was extensively reviewed by members of the IUPAC as well as by other chemists with expertise in the fields covered.

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**Organic Reactions. Vol. 57.** Editor-in-Chief: Larry E. Overman (University of California, Irvine). Wiley: New York. 2001. x + 694 pp. \$125.00. ISBN: 0-471-43511-2.

The purpose of this series, *Organic Reactions*, is to present a collection of chapters that are “each devoted to a single

reaction, or a definite phase of a reaction, of wide applicability”. Volume 57 introduces the following three chapters to this well-renowned series: “Intermolecular Metal-Catalyzed Carbenoid Cyclopropanations” by H. M. L. Davies and E. G. Antoulinakis, “Oxidation of Phenolic Compounds with Organohypervalent Iodine Reagents” by R. M. Moriarty and O. Prakash, and “Synthetic Uses of Tosylmethyl Isocyanide (TosMIC)” by D. van Leusen and A. M. van Leusen. An index of cumulative chapter titles by volume, an author index of volumes 1–57, and a chapter and topic index of volumes 1–57 complete the book.

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**Advances in Quantum Chemistry. New Perspectives in Quantum Systems in Chemistry and Physics, Part 1. Volume 39.** Edited by John R. Sabin (University of Florida) and Erkki Brändas (Uppsala University). Academic Press: San Diego. 2001. xxxii + 382 pp. \$155.00. ISBN: 0-12-034839-X.

This volume is based on the proceedings of the Fifth European Workshop on Quantum Systems in Chemistry and Physics held in Uppsala, Sweden, in April 2000. The purpose of the series is to report on new developments in the field of quantum chemistry. A sampling of the chapter headings in this volume includes: “Density Matrices and Phase–Space Functions” by Jens P. Dahl; “An Attempt to Realize the Constrained Search Approach in the Density Functional Theory” by Boris P. Zapol; and “Floquet States and Operator Algebra” by V. M. Leon, M. Martin, L. Sandoval, and A. Palma.

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**Bioactive Fibers and Polymers.** Edited by J. Vincent Edwards and Tyrone L. Bigo (U.S. Department of Agriculture). American Chemical Society: Washington DC (Distributed by Oxford Univ. Press). 2001. x + 332 pp. \$125.00. ISBN: 0-8412-3714-X.

This book of 16 chapters covers the design and activity of bioactive fibers and polymers, with a focus on wound-healing and antimicrobial materials “where the design and mechanism of the biologically active molecule plays a key role in the textile fiber function”. A sampling of the topics covered includes biologically active fibers in health care, biologically active biodegradable biomaterials, antimicrobials for synthetic fibers, arterial

grafts as biomedical textiles, and durable and regenerable antimicrobial textiles.

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**Infrared and Raman Characteristic Group Frequencies: Tables and Charts. 3rd ed.** By George Socrates (The University of West London, Middlesex, U.K.). J. Wiley and Sons: Chichester. 2001. xviii + 348 pp. \$185.00. ISBN: 0-471-85298-8.

This reference book is designed to introduce characteristic group frequencies to aid scientists in examining and interpreting

infrared and Raman spectra. Unlike the 2nd edition, *Infrared Group Frequencies: Tables and Charts*, the 3rd edition of this book has been expanded to address the interpretive needs of Raman spectroscopists. It also includes a new section on macromolecules, an expansion of the section on the near-infrared region to include recent developments, an extended chapter on inorganic compounds that includes minerals and glasses, and new charts as well as redrawn and updated charts that appeared in previous editions.

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