

Book Reviews *

Advances in Multidimensional Luminescence. Volumes 1 and 2. Edited by Isiah M. Warner (Louisiana State University) and Linda B. McGown (Duke University). JAI Press: Greenwich, CT. Volume 1: 1991. xii + 210 pp. \$90.25. ISBN 1-55938-172-8. Volume 2: 1993. xii + 160 pp. \$90.25. ISBN 1-55938-327-5.

These books are part of a series in Multidimensional Luminescence with focus on the inherent selectivity of the luminescence measurement process. After a list of contributors, an editor's foreword by Warner, and a preface by both editors, Volume 1 contains eight chapters with the following headings: Introduction to Multidimensional Luminescence by Gabor Patonay and Isiah M. Warner; Luminescence Techniques for the Characterization of Multicomponent Systems by A. H. Bates, S. R. Meech, and I. Soutar; Biomedical Applications of Expert Systems in Analytical Spectroscopy by Brian J. Clark, Anthony F. Fell, and M. Howard Williams; Multidimensional Time-Correlated Single Photon Counting Fluorescence-Lifetime Measurements by Gregory Nelson, Gabor Patonay, and Isiah M. Warner; Multicomponent Determinations of Polycyclic Aromatic Hydrocarbons Using Synchronous Excitation Phase-Resolved Fluorometry by Linda B. McGown and Kasem Nithipatikorn; Fiber-Optic Chemical Fluorosensors by Ming-Ren S. Fuh, Lloyd W. Burgess, and Gary D. Christian; A New Fiber-Optic-Based Phase-Resolved Phosphorescence Spectrometer by Frank V. Bright, Curtis A. Monnig, and Gary M. Hieftje; Organized Assemblies in Analytical Chemiluminescence Spectroscopy: An Overview by Willie L. Hinze, N. Srinivasan, Thuy Kim Smith, Shukuro Igarashi, and Hitoshi Hoshino. Volume 2 contains eight chapters with the following headings: Spectroscopic Studies in Organized Media: An Overview by A. Muñoz de la Peña, T. T. Ndou, and I. M. Warner; Counterions and the Properties of Ionic Micelles by A. L. Underwood and E. W. Anacker; Study of Solute-Micelle Interactions by Laser Spectroscopic Techniques by M. J. Wirth and S.-H. Chou; Fluorescence Probe Studies of Trihydroxy Bile Salts by Steven M. Meyerhoffer and Linda B. McGown; Spectroscopic Studies in Cyclodextrin Solutions by Isiah M. Warner and Jodi M. Schuette; Dynamic Fluorescence Investigations in β -Cyclodextrin Organized Media by Frank V. Bright, Gino C. Catena, Jingfan Huang, JoAnn Zagrobelny, and Jing Zhang; Interactions in Solid Matrix β -Cyclodextrin Luminescence Analysis by Robert J. Hurtubise and Marsha D. Richmond; and Crown Ethers Mediated Sensitive and Selective Determination of Lanthanide Ions by Chieu D. Tran. Both volumes contain subject indexes.

Polymers of Biological and Biomedical Significance. ACS Symposium Series 540. Edited by Shalaby W. Shalaby (Clemson University), Yoshito Ikada (Kyoto University), Robert Langer (Massachusetts Institute of Technology), and Joel Williams (Becton Dickinson Research Center). American Chemical Society: Washington, DC. 1994. xii + 338 pp. \$89.95. ISBN 0-8412-2732-2.

This book was developed from a symposium sponsored by the Division of Polymer Chemistry at the 204th National Meeting of the American Chemical Society held on 24–28 August 1992 in Washington, DC. After a preface by the editors, there are 28 chapters listed under the following headings: Topical Reviews; Synthesis, Surface Activation, and Characterization of Biomaterials; Biological Effects Related to Specific Physicochemical Factors; and Synthetic Bioactive Chain Molecules and Polymers for Controlled Transport of Bioactive Agents. There are author, affiliation, and subject indexes.

Mass Spectrometry for the Characterization of Microorganisms. ACS Symposium Series 541. Edited by Catherine Fenselau (University of Maryland). American Chemical Society: Washington, DC. 1994. viii + 240 pp. \$64.95. ISBN 0-8412-2737-3.

This book was developed from the symposium sponsored by the Division of Analytical Chemistry at the 204th National Meeting of the American

Chemical Society held in Washington on 23–28 August 1992. After a preface by the editor, there are 14 chapters discussing biomarkers such as nucleosides, proteins, carbohydrates, phospholipids, glycopeptidolipids, and lipopolysaccharides, to which mass spectrometry has been applied. There are author, affiliation, and subject indexes.

New Aspects of Spillover Effect in Catalysis: For Development of Highly Active Catalysts. Studies in Surface Science and Catalysis. Volume 77. By T. Inui (Kyoto University), K. Fujimoto (University of Tokyo), T. Uchijima (University of Tsukuba), and M. Masai (Kobe University). Elsevier: Amsterdam, The Netherlands. 1993. xiv + 454. \$220.00. ISBN 0-444-89964-2.

This book is the proceedings of the Third International Conference on Spillover held in Kyoto on 17–20 August 1993. After a preface by the editors, three plenary lectures, and a special lecture by S. J. Teichner, there are 76 additional lectures, oral presentations, and poster presentations covering the topics of spillover effects in catalysis, on the elucidation of mechanisms, and on applications for catalytic reaction processes. The book is in typescript form, and there is an author index.

The Language of Colloid and Interface Science. A Dictionary of Terms. Edited by Laurier L. Schramm (University of Calgary). American Chemical Society: Washington, DC. 1993. xii + 196 pp. \$39.95 (\$69.96 cloth). ISBN 0-8412-2710-1.

This book is a collection of the terms encountered in the study of the principles, experimental investigations, and industrial applications of colloid and interface science. A basic knowledge of chemistry, geology, and chemical engineering is assumed.

Polyvinyl Alcohol: Developments. Edited by C. A. Finch (Pentafin Associates, U.K.). J. Wiley and Sons: New York. 1992. xx + 850 pp. \$325.00. ISBN 0-471-99850-8.

This book is a collection of articles that are a continuation of the first edition of this book. After an introduction by the editor, there are 20 chapters which describe the progress of topics since the first publication such as the general properties of the polymer, methods of preparation of polyvinyl acetate in solution, hydrolysis of this polymer solution to polyvinyl alcohol, and alternative modifications of polyvinyl alcohol by copolymerization by end group addition and by other modifications. The book also describes the more recently developed ethylene-vinyl alcohol copolymers, with a range of copolymer compositions and chemical reactions of the polymer with complexities of cross-linking and gelling reactions of the polymer, including reactions with metal ions and with borates. There are appendixes of analytical methods for polyvinyl alcohol, health and toxicity regulations relating to polyvinyl alcohol, and biodegradability and effluent disposal of polyvinyl alcohol. There are also name and subject indexes.

Kirk-Othmar Encyclopedia of Chemical Technology. Fourth Edition. Volume 9. Edited by Jacqueline I. Kroschwitz and Mary Howe-Grant. Wiley Interscience: New York. 1994. xxviii + 1112 pp. \$295.00. ISBN 0-471-52677-0.

This is the ninth volume of a 25-volume encyclopedia set, four volumes being published each year. The Fourth Edition is similar in format to the earlier editions with updates to the entries as necessary and the addition of several new subjects. This volume contains 34 entries ranging from Elastomers, Polyisoprene to Expert Systems. This volume does not contain an index; however, paperback indexes are published every four volumes and the supplement and index volumes are scheduled for publication in 1998.

*Unsigned book reviews are by the Book Review Editor.