

Supplementary Material Available: Analytical details, including ^1H and ^{13}C NMR, high-resolution MS, and elemental analyses

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Book Reviews*

Carbohydrate Chemistry. Volume 17. Part I. A Specialist Periodical Report. Senior Reporter: N. R. Williams (University of London). Reporters: B. E. Davison, R. J. Ferrier, and R. H. Furneaux. The Royal Society of Chemistry: London. 1985. XI + 275 pp. \$87.00. ISBN 0-85186-182-2.

"The Specialist Periodical Report—Carbohydrate Chemistry" series has been indispensable for more than 15 years to almost anyone interested in the carbohydrates. Part I of the 17th volume of this series retains the camera-ready format that was introduced in Volume 15 and describes the chemistry of mono-, di-, and trisaccharides and their derivatives.

There are 24 chapters: Introduction; Free Sugars, Glycosides and Disaccharides; Oligosaccharides; Ethers and Anhydro-sugars; Acetals; Esters; Halogeno-sugars; Amino-sugars; Miscellaneous nitrogen Derivatives; Thio-sugars; Deoxy-sugars; Unsaturated Derivatives; Branched-chain Sugars; Alduloses, Dialdoses, and Diuloses; Sugar Acids and Lactones; Inorganic Derivatives; Alditols and Cyclitols; Antibiotics, Nucleosides; NMR Spectroscopy and Conformational Features; Other Physical Methods; Separatory and Analytical Methods; Synthesis of Enantiomerically Pure Non-carbohydrate Compounds. Each chapter contains a summary of important developments in this field, including a citation of recent review articles at the beginning. The references appear to cover the literature published through 1983 (available by February 1984) and are conveniently placed at the end of each chapter. Over 1400 references are listed (compared to 1200 in Volume 16), and the variety of journals represented indicates the growing international scope of this fascinating chemistry. To accommodate the increasing trend in oligosaccharides, the authors have introduced a separate chapter on oligosaccharides, to include trisaccharides, tetrasaccharides, and higher saccharides.

The chapter contains 60 references which clearly demonstrates actual interest.

In view of increasing importance of carbohydrate synthons in organic synthesis, the last chapter Synthesis of Enantiomerically Pure Non-Carbohydrate Compounds, that was introduced in Volume 9 and modified in Volume 14, is highly valuable and contains 57 references (compared to 38 in Volume 16). Also the chapters on deoxy, branched, free, and amino sugars cover recent advances in syntheses from non-carbohydrate precursors, a field of increasing interest in recent years. An improved author index is also provided with references to each chapter, and it adds greatly to the usefulness of the volume. This series has, over the years, been characterized by a standard of editorial excellence. The present volume is no exception, and any errors of editing or typing are insignificant.

This volume, together with its predecessors, should be in every chemical library, and it is an indispensable item in the personal library of anyone working in the carbohydrate field.

Zbigniew J. Witczak, *Purdue University*

Volumes of Proceedings

Large-Scale Mammalian Cell Culture. Edited by Joseph Feder and William R. Tolbert (Monsanto Co.). Academic Press: Orlando, FL. 1985. x + 159 pp. \$25.00. ISBN 0-12-250430-5.

A collection of nine papers and two panel discussions from an ACS symposium held in Philadelphia in 1984. Biochemical aspects are prominent.

Evaluation of Pesticides in Ground Water. Edited by Willa Y. Garner, Richard C. Honeycutt, and Herbert N. Nigg. American Chemical Society: Washington, DC. 1986. x + 573 pp. \$94.95. ISBN 0-8412-0979-0.

There are 32 typescript papers in this volume, grouped under the headings Physical and Chemical Parameters, Ground Water Monitoring Techniques, Modeling and Model Valuation, Risk Assessment and its Toxicological Significance, and Regulatory Aspects. The 16-page index is exemplary.

Strong Metal-Support Interactions. Edited by R. T. K. Baker, S. J. Tauster, and J. A. Dumesic. American Chemical Society: Washington, DC. 1986. x + 238 pp. \$44.95. ISBN 0-8412-0955-3.

The nature and action of metal catalysts on solid supports, especially from the standpoint of industrial processes, were the subjects of a symposium held in Miami Beach in 1985. The typescripts of 21 papers, together with an 8-page index, make up this volume.

Xenobiotic Conjugation Chemistry. Edited by Gaylord D. Paulson, John Caldwell, David H. Hutson, and Julius J. Menn. American Chemical Society: Washington, DC. 1986. x + 358 pp. \$49.95. ISBN 0-8412-0957-X.

The fate of foreign chemical substances to which the living body is exposed is an increasingly important subject. The compounds into which they are converted may lead to a detoxification process, but in some cases they may themselves have even greater activity than the original substance. The 1985 symposium on which this book is based produced 16 papers dealing with isolation, identification, and biological significance of these xenobiotic conjugates. Thoroughly indexed.

Biological Methylation and Drug Design: Experimental and Clinical Role of S-Adenosylmethionine. Edited by Ronald T. Borchardt, Cyrus R. Creveling, and Per Magne Ueland. Humana Press: Clifton, NJ. 1986. xxii + 457 pp. \$69.50. ISBN 0-89603-102-0.

The proceedings of a symposium on the Biochemistry of S-Adenosylmethionine as a Basis for Drug Design, held in Norway in 1985, have been elaborated into a series of chapters by the plenary speakers. They are arranged in the areas Protein and Phospholipid Methylations, Nucleic Acid Methylations, Regulation of S-Adenosylmethionine, S-Adenosylhomocysteine and Methylthioadenosine Metabolism, Clinical Aspects, and Design, Synthesis and Biological Evaluation of Transmethylation Inhibitors. Indexed.

Dynamical Processes and Ordering on Solid Surfaces. Edited by A. Yoshimori and M. Tsukada. Springer-Verlag: Berlin and New York. 1985. xii + 195 pp. \$24.00. ISBN 0-387-15108-7.

The Seventh Taniguchi Symposium, held in Japan in 1984, was concerned with the physical chemistry of collisions, optical processes at surfaces, and ordering of adsorbed materials. The typescripts of the papers appear in this volume, which has no subject index.

Polycrystalline Semiconductors: Physical Properties and Applications. Edited by G. Harbeke. Springer-Verlag: Berlin and New York. 1985. viii + 245 pp. \$29.50. ISBN 0-387-15143-5.

A symposium on materials science and technology, held in Italy in 1984, was the source of the typescript papers in this volume. There is much concern with the nature of grain boundaries and with polycrystalline silicon. Not indexed.

Ion Formation from Organic Solids. Edited by A. Benninghagen. Springer-Verlag: Heidelberg and New York. 1986. 219 pp. \$34.00. ISBN 3-540-16258-5.

Proceedings of the 3rd International Conference on the title subject, held at the University of Münster in 1985, consisting of 40 papers in such areas as ^{252}Cf -plasma desorption, SIMS, other methods of formulation of organic ions, instrumentation, FT ion cyclotron resonance. Set in type, but not indexed.

Modern Chlor-Alkali Technology. Volume 3. Edited by K. Waid. Ellis Horwood: Chichester; John Wiley & Sons: New York. 1986. 450 pp. \$140.00. ISBN 0470-20317-X.

Thirty papers, from the areas of business outlook, safety, development and operation of membrane cells, electrodes, plant design, and hypochlorite and chlorate production, make up this typeset volume, which deserves an index longer than the two pages allotted to it.

Flavonoids and Bioflavonoids, 1985. Edited by L. Farkas, M. Gábor, and F. Kállay. Elsevier Science Publishers: Amsterdam and New York.

*Unsigned book reviews are by the Book Review Editor.

1986. xxii + 466 pp. \$109.25. ISBN 0-444-99520-X.

The 7th Hungarian Bioflavonoid Symposium, held in Szeged in 1985, gave rise to the large number of reports of original research presented in typescript form in this volume, which has a good index.

Mycotoxins and Phycotoxins. Edited by P. S. Steyn and R. Vlegaar. Elsevier Science Publishers: Amsterdam and New York. 1986. xviii + 546 pp. \$120.25. ISBN 0-444-42632-9.

The invited papers, mostly reports of original research, given at the Sixth International IUPAC Symposium, held in Pretoria in 1985, are collected in this volume; the plenary lectures are to be found in *Pure and Applied Chemistry*. There is unfortunately no subject index.

Computer Applications in the Polymer Laboratory. Edited by Theodore Provder. American Chemical Society: Washington, DC. 1986. x + 323 pp. \$69.95. ISBN 0-8412-0977-4.

An ACS Symposium held in 1985 generated the 24 typescript papers in this volume. They are grouped in these categories: Laboratory Information Generation, Management, and Analysis Tools; Instrument Automation for Polymer Characterization; and Polymerization and Cure Process Modeling and Control. There is a 9-page subject index.

Separation, Recovery, and Purification in Biotechnology. Edited by Juan A. Asenjo and Juan Hong. American Chemical Society: Washington, DC. 1986. x + 228 pp. \$54.95. ISBN 0-8412-0978-2.

A symposium held in Chicago in 1985 was the basis for the 15 papers in this volume. They fall in the areas Product Release and Recovery, Separation and Concentration Processes, and Purification Operations, and they are accompanied by a 10-page subject index.

Membranes and Membrane Processes. Edited by E. Drioli and M. Nakagaki. Plenum Press: New York. 1986. xii + 663 pp. \$95.00. ISBN 0-306-42270-0.

The papers from the First Europe-Japan Congress on the subject, held in 1984, are presented in typescript form, with a substantial index.

Organic Coatings: Science and Technology. Volume 8. Edited by Geoffrey D. Parfitt and Angelos V. Patsis. Marcel Dekker: New York. 1986. xii + 537 pp. \$89.75. ISBN 0-8247-7486-8.

Contains the proceedings of the Tenth International Conference on the subject, held in Athens in 1984. The emphasis is on pigments, solvents, and resins, with much concern with corrosion and its prevention.

Non-Equilibrium Dynamics in Chemical Systems. Edited by C. Vidal and A. Pacault. Springer-Verlag: New York and Berlin. 1984. x + 255 pp. \$26.00. ISBN 0-387-15065-X.

An international symposium held in Bordeaux in 1984 gave rise to the large number of papers in this volume, which includes poster presentations, but it is not indexed.

Multiphoton Processes. Edited by P. Lambropoulos and S. J. Smith. Springer-Verlag: Berlin and New York. 1984. viii + 201 pp. \$26.00. ISBN 0-387-15068-4.

Proceedings of the Third International Conference, held in Crete in 1984, consisting of typescript papers in the areas of multiphoton processes in atoms and in molecules and field fluctuations and collisions. Not indexed.

Advances in X-Ray Analysis. Volume 29. Edited by Charles S. Barrett, Jerome B. Cohen, John Faber, Jr., Ron Jenkins, Donald E. Leyden, John C. Russ, and Paul K. Predecki. Plenum Press: New York. 1986. xviii + 600 pp. \$79.50. ISBN 0-306-42287-5.

Proceedings of the 1985 Denver Conference, containing the typescripts of a large number of short papers and an index.

Mineral Matter and Ash in Coal. Edited by Karl S. Vorres. American Chemical Society: Washington, DC. 1986. xiv + 537 pp. \$97.95. ISBN 0-8412-0959-6.

The ACS Division of Fuel Chemistry was responsible for the symposium, held in Philadelphia in 1984, that gave rise to the 38 typescript papers in this volume. They are concerned with the chemistry of coal mineral matter, coal ash properties and their prediction, coal ash deposition in boilers, and catalysis by ash and mineral matter in coal utilization. Indexed (11 pages).

Coulombic Interactions in Macromolecular Systems. Edited by Adi Eisenberg and Fred E. Bailey. American Chemical Society: Washington, DC. 1986. viii + 272 pp. \$59.95. ISBN 0-8412-0960-X.

The ACS Macromolecular Secretariat sponsored a symposium held

in Philadelphia in 1984, from which the 21 typescript papers in this volume derive. Besides general discussions, the topics include polymeric membranes, rubbers, and solutions, polyelectrolytes and biopolymers, and colloids. Indexed (11 pages).

Petroleum-Derived Carbons. Edited by John D. Bacha, John W. Newman, and J. L. White. American Chemical Society: Washington, DC. 1986. x + 406 pp. \$74.95. ISBN 0-8412-0964-2.

The 25 typescript papers in this volume derive from an ACS symposium held at an undisclosed site and date. They are concerned with such subjects as coke, carbon composites, the carbonization process, surface area, etc., and are accompanied by a 12-page index.

Fungicide Chemistry: Advances and Practical Applications. Edited by Maurice B. Green and Douglas A. Spilker. American Chemical Society: Washington, DC. 1986. viii + 173 pp. \$39.95. ISBN 0-8412-0963-4.

The 11 typescript papers in this volume were developed from a symposium sponsored by the ACS Division of Pesticide Chemistry, held in Philadelphia in 1984. The opening paper, History of Azole Chemistry, is startlingly illustrated with a picture of diseased feet, among other subjects, but the disturbing effect is ameliorated by the many illustrations in color, made from microphotographs, that appear later in the book. Thoroughly indexed.

Methods of Laser Spectroscopy. Edited by Yehiam Prior, Abraham Ben-Reuven, and Michael Rosenbluh. Plenum Press: New York. 1986. xiv + 496 pp. \$79.50. ISBN 0-306-42285-9.

It was raining on the shores of the Dead Sea, the preface informs us, when the symposium was held in December 1985, and the entertainment, an archaeologist and a belly dancer, failed to make it. The participants nevertheless overcame these disasters and delivered themselves of a large number of papers, in the areas Nonlinear Optics and Coherent Phenomena, Stable Lasers and High-Resolution Spectroscopy, Time-Resolved Spectroscopy, and Few-Atom Laser Interactions. These have been expanded and are presented in typescript form; a thorough index accompanies them.

Water-Soluble Polymers: Beauty with Performance. Edited by J. E. Glass. American Chemical Society: Washington, DC. 1986. xii + 449 pp. \$89.95. ISBN 0-8412-0931-6.

The ACS Division of Polymeric Materials Science and Engineering sponsored a symposium held in Philadelphia in 1984. The 23 papers given there are grouped under the headings Modification, Criteria and Performance in Action, Petroleum Applications, and Coatings Applications. The nice typesetting is complemented by a 12-page index.

Nonmetallic Materials and Composites at Low Temperatures. 3. Edited by Gunther Hartwig and David Evans. Plenum Press: New York. 1986. xii + 220 pp. \$49.50. ISBN 0-306-42117-8.

A symposium on the title subject was held in Heidelberg in 1984 and gave rise to the typescript papers in this volume. Most thoughtfully, the editors have provided both a materials index and a subject index.

Carbon Fibres and Their Composites. Edited by Erich Fitzer. Springer-Verlag: Berlin and New York. 1985. xiv + 296 pp. \$58.00. ISBN 0-387-15804-9.

An international conference on carbon fiber applications, held in Sao José dos Campos, Brazil, in 1983, was the occasion for the 21 papers in this volume, set in type, and illustrated with space-craft, race cars, and structural formulas pertinent to thermosetting resins. No index.

Phenomena in Mixed Surfactant Systems. Edited by John F. Scamehorn. American Chemical Society: Washington, DC. 1986. x + 349 pp. \$66.95. ISBN 0-8412-0975-8.

An ACS symposium held in Potsdam, New York, in 1985 was the origin of the 24 typescript papers in this volume. They fall in the categories Mixed Micelle Formation, Mixed Monolayer Formation, Studies of Mixed Micelles and Mixed Monolayers, Mixed Surfactant Adsorption, Formation and Behavior of Other Surfactant-Aggregate Structures, and Future Perspectives. Indexed (12 pages).

Plant Proteins: Applications, Biological Effects, and Chemistry. Edited by Robert L. Ory. American Chemical Society: Washington, DC. 1986. x + 285 pp. \$59.95. ISBN 0-8412-0976-6.

The ACS Division of Agricultural and Food Chemistry sponsored the 1985 symposium that provided the basis for this typescript book. The 21 papers fall into the categories Applications, Biological Effects, and Chemistry Composition. A 10-page subject index follows upon the concluding illustration of dehydrated yam flakes, which does not look nearly so appetizing as the sugar cookies illustrated at the beginning. Thoroughly indexed.