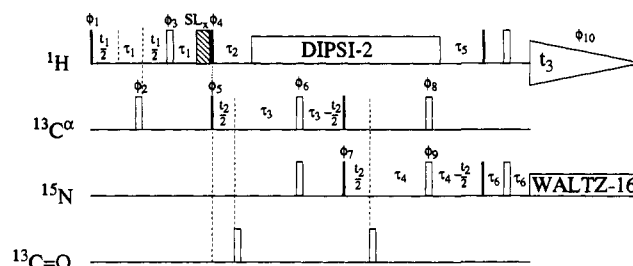


## Additions and Corrections

### Reduced Dimensionality in Triple-Resonance NMR Experiments

[*J. Am. Chem. Soc.* **1993**, *115*, 9307–9308]. T. SZYPERSKI, G. WIDER, J. H. BUSHWELLER, AND K. WÜTHRICH\*

Page 9308: In Figure 2, we inadvertently placed the reversed INEPT and the WALTZ-16 decoupling schemes in the  $^{13}\text{C}$  channel instead of the  $^{15}\text{N}$  channel. The corrected experimental scheme which was used to record the HA CA N HN experiment of Figure 1 is shown below. This correction does not affect the conclusions of the paper.



### Total Synthesis of (+)-Piperazinomycin [*J. Am. Chem. Soc.* **1993**,

*115*, 11426–11433]. DALE L. BOGER\* AND JIACHENG ZHOU

Page 11432: The  $[\alpha]_D^{25}$  value for compound **5** is +9.6 (*c* 0.5,  $\text{CHCl}_3$ ).

We are grateful to Professor A. J. Pearson for bringing this error to our attention.

## Book Reviews \*

**Materials Science and Technology, A Comprehensive Treatment. Volume 2A. Characterization of Materials Part I.** Edited by R. W. Cahan, P. Haasen, and E. J. Kramer. VCH Publishers: New York, 1992. xii + 724 pp. \$325.00. ISBN 0-89573-690-X. (Volume Editor, Eric Lifshin (General Electric Company)).

This comprehensive survey of methods for materials characterization includes chapters examining optical and electron microscopy, optical and X-ray emission, and X-ray and electron diffraction. Additional chapters describe thermal analysis, synchrotron radiation methods, and polymer procedures. Chapter authors provide ample detail to identify specific materials applications and limitations of each method examined. Recent advances, excellent tables and illustrations, and a comprehensive index are notable. This volume, recommended for chemists, physicists, materials scientists, and engineers, could be used for a graduate-level course in materials characterization. Extensive references and reading lists following each chapter identify sources for additional, specific, and detailed information.

Michael M. Reddy, *U.S. Geological Survey*

**Advances in Chemical Physics. Volumes LXXXI, LXXXIII, LXXXIV, LXXXVI.** Edited by I. Prigogine (University of Texas) and Stuart A. Rice (The University of Chicago). John Wiley and Sons: New York. Volume LXXXI: 1992. x + 822 pp. \$150.00. ISBN 0-471-54570-8. Volume LXXXIII: 1993. xii + 744 pp. \$215.00. ISBN 0-471-54018-8. Volume LXXXIV: 1993. x + 550 pp. \$150.00. ISBN 0-471-58726-5. Volume LXXXVI: 1993. xii + 434 pp. \$125.00. ISBN 0-471-59845-3.

Volume LXXXI contains the following chapters: Transition State Spectroscopy of Bimolecular Reactions Using Negative Ion Photodetachment by Richardo B. Metz, Stephen E. Bradforth, and Daniel M. Nueemark; Infrared Vibrational Predissociation Spectroscopy of Small Size-Selected Clusters by Friedrich Huisken; The Dynamics of Triplet Excitons in Mixed Molecular Crystals by Ross Brown and Philemon Kottis; Theoretic Physicochemical Problems of Clathrate Compounds by Vladimir E. Zubkus, Evaldas E. Tornau, and Vladimir R. Belosludov; Simulation and Symmetry in Molecular Diffusion and Spectroscopy by

M. W. Evans; Vibronic Interactions in Polynuclear Mixed-Valence Clusters by I. B. Bersuker and S. A. Borshch.

Volume LXXXIII contains the following chapters: Time-Resolved Optical Tests for Electronic Geometric Phase Development by Jeffrey A. Cina, Timothy J. Smith, Jr., and Victor Romero-Rochin; On Global Energy Conservation in Nonlinear Light-Matter Interaction: The Nonlinear Spectroscopies, Active and Passive by Duckhwan Lee and A. C. Albrecht; A Many-Body Stochastic Approach to Rotational Motions in Liquids by Antonino Polimeno and Jack H. Freed; Some Structural-Electronic Aspects of High Temperature Superconductors by Jeremy K. Burdett; On the Theory of Debye and Neel Relaxation of Single Domain Ferromagnetic Particles by W. T. Coffey, P. J. Cregg, and Yu P. Kalmykov; The Algebra of Effective Hamiltonians and Operators: Exact Operators by Vincent Hurtubise and Karl F. Freed; Melting and Liquid Structure in Two Dimensions by Matthew A. Glaser and Noel A. Clark.

Volume LXXXIV contains the following chapters: The Collisional Time-Correlation Function Approach to Molecular Energy Transfer by David A. Micha and Eduardo F. Vilallonga; Molecular Theory of Liquid-Phase Vibrational Energy Relaxation by S. A. Adelman, R. Ravi, R. Muralidhar, and R. H. Stote; Electron Degradation in Molecular Substances by Mineo Kimura, Mitio Inokuti, and Michael A. Dillon; Adiabatic and Quasidiabatic States in a Gauge Theoretical Framework by T. Pacher, L. S. Cederbaum, and H. Koppel; One-Dimensional Quantum Mechanical Problems with Complicated Potentials. The Propagator Method of Solution and Some Chemical Applications by M. V. Basilevsky and V. M. Ryaboy; Simulation of Nonlinear Electronic Spectroscopy in the Condensed Phase by Laurence E. Fried and Shaul Mukamel.

Volume LXXXVI contains the following chapters: Hard Convex Body Fluids by M. P. Allen, G. T. Evans, D. Frenkel, and B. M. Mulder; Triplet Excitons in Weak Organic Charge-Transfer Crystals by J. Krzystek and J. U. von Schutz; Flow Behavior of Liquid Crystalline Polymers by G. Marrucci and F. Greco.

These books are part of a series devoted to a wide variety of topics in chemical physics by experts in the field. Each volume contains an author and subject index.

\*Unsigned book reviews are by the Book Review Editor.

**Mathematical Research in Materials Science. Opportunities and Perspectives.** By the Board on Mathematical Sciences National Research Council, John R. Tucker, Senior Program Officer. National Academy Press: Washington, DC. 1993. xii + 130 pp. \$27.00. ISBN 0-309-04930-x.

This report is the second phase of a two-phase study by the Committee on Mathematical Sciences Applied to Materials Science documenting past collaboration between the mathematical sciences and materials science. Phase-one described general mathematical theory and techniques related to materials science research, and phase-two documents and presents technical details of collaborations between the mathematical sciences and materials science. There are nine chapters with the following headings: Summary and Overview; Atomic Scale; Macromolecular Structures; Evolution of Microstructures; Defects, Deformation, and Interfaces; Aggregates and Disordered Material; Processing, Fabrication, and Evaluation; Mathematical and Numerical Methods; and Recommendations. There are a bibliography and an appendix.

**Thermal Analysis: Techniques and Applications.** Edited by E. L. Charsley and S. B. Warrington (Leeds Metropolitan University). Royal Society of Chemistry: Cambridge, U.K. 1992. viii + 296 pp. £45.00. ISBN 0-85186-375-2.

This book is based on a course organized by the Thermal Analysis Consultancy Service in Leeds, 12–13 September 1991. After a preface by the editors, there are 15 chapters in typescript form covering the instrumental topics of differential thermal analysis (DTA), differential scanning calorimetry (DSC), thermogravimetry (TG), simultaneous TG-DTA/DSC, thermomicroscopy, high temperature X-ray diffraction, evolved gas analysis, thermomechanical analysis, and dynamic mechanical analysis. There is a subject index.

**Membrane Science and Technology.** Edited by Yoshihito Osada (Ibaraki University, Japan) and Tsutomu Nakagawa (Meiji University, Japan). Marcel Dekker: New York. 1992. x + 468 pp. \$165.00. ISBN 0-8247-8694-7.

This book is an introduction to membrane science and technology covering methods, structures, properties, and applications of membranes. After a preface by the editor, there are 12 chapters under the following headings: Physical Chemistry; New Methods of Membrane Preparation; Membranes in Chemical Engineering and Processing; and Biomedical Use. There is a subject index.

**Advances in Natural Product Chemistry.** Edited by Atta-ur-Rahman (University of Karachi). Harwood Academic Publishers: Chur, Switzerland. 1992. xii + 498 pp. \$140.00. ISBN 3-7186-5319-2.

This book was developed from the proceedings of the Fifth International Symposium and Pakistan–U.S. Binational Workshop on Natural Product Chemistry held in Karachi on 4–9 January 1992. After a preface by the editor and a forward by Heinz G. Floss, there are 29 articles in typescript form concerned with the isolation, structure elucidation, and synthesis of organic substances from terrestrial and marine organisms. There is a subject index.

**Catalysis. Volume 10. Specialist Periodical Reports.** Edited by James J. Spivy and Sanjay K. Agarwal (Research Triangle Institute). Royal Society of Chemistry: Cambridge, U.K. 1993. x + 180 pp. £95.00. ISBN 0-85186-614-x.

This book is Volume 10 in the Catalysis Series, in which topics of current interest in the field of catalysis are discussed. After a preface by the editors, there are five chapters with the following headings: Toward Supported Oxide Catalysts via Solid–Solid Wetting by Helmut Knozinger and Edmund Taglauer; Model Catalyst Studies of Supported Metal Sintering and Redispersion Kinetics by Calvin H. Bartholemew; Techniques for Measuring Zeolite Acidity by George Marcelin; Applications of Raman Spectroscopy to Heterogeneous Catalysis by Israel E. Wachs and Franklin D. Hardcastle; and Oxidative Coupling of Methane by Zbigniew Kalenik and Eduardo E. Wolf. There is not an index.

**Leaving No Stone Unturned. Profiles, Pathways, and Dreams.** By F. Gordon A. Stone. American Chemical Society: Washington, DC. 1993. xxiv + 240 pp. \$24.95. ISBN 0-8412-1826-9.

This book is one of 22 in the Profiles, Pathways, and Dreams autobiographies series of famous chemists, in which individual chemists

discuss their roles in the development chemistry. Stone, who is known as the chemist's chemist, describes, among other things, his work in organometallic chemistry at Bristol and at Baylor University.

**Photochemistry and Polymeric Systems.** Edited by J. M. Kelly (Trinity College, Dublin), C. B. McArdle (Loctite International, Dublin), and M. J. de F. Maunder (Speedibrews, Woking). Royal Society of Chemistry: Cambridge, U.K. 1993. x + 272 pp. £45.00. ISBN 0-85186-485-6.

This book was developed from the symposium entitled Light on Polymers—Photochemistry and Advanced Materials held by the Faraday and Industrial Divisions of the Royal Society of Chemistry at Trinity College held in Dublin on 16–18 September 1992. After an introductory chapter by A. Ledwith, there are 19 chapters in typescript form organized under the following headings: Radiation Curing; Photoablation; Photoluminescence of Polymers; Electro-optics and Nonlinear Optics; Photochromism and Photoimaging; and Photography. There is a short subject index.

**Physico-Chemical Properties of Selected Anionic, Cationic, and Nonionic Surfactants.** By N. M. van Os (Koninklijke/Shell Laboratory, Amsterdam), J. R. Haak (Enschede, The Netherlands), and L. A. N. Rubert (Thornton Research Centre, Chester, U.K.). Elsevier: Amsterdam, The Netherlands. 1993. viii + 608 pp. \$245.75. ISBN 0-444-89691-0.

This book is a compilation of the physico-chemical properties of a selected series of homologous surfactants. The properties covered include aggregation number, cloud point, CMC, <sup>13</sup>C-NMR, correlation length, counterion binding, density, enthalpy of micelle formation, entropy of micelle formation, Gibbs' free energy of micelle formation, head group area, <sup>1</sup>H-NMR, hydration number, Krafft temperature, micelle radius, microscopic viscosity, melting point miscibility curve, partial molar volume, phase inversion temperature, phase diagram, refractive index, self-diffusion coefficient, surface tension, and upper critical temperature. After a forward by R. Zana and an introduction by the editors, the book is divided under the following headings: Anionic Surfactants; Cationic Surfactants; and Nonionic Surfactants. There are compound, molecular formula, general formula, cross, and property indexes and a list of abbreviations.

**Organic Synthesis: Theory and Application. Volumes 1 and 2.** Edited by Tomas Hudlicky (Virginia Polytechnic Institute and State University). JAI Press: Greenwich, CT. Volume 1: 1989. x + 242 pp. \$90.25. ISBN 0-89232-865-7. Volume 2: 1993. xii + 188 pp. \$90.25. ISBN 1-55938-185-x.

These books are part of a series of essays on relevant themes written by active workers in the field. After an introduction to the series by Albert Padwa and a preface by the editor, Volume 1 contains the following three chapters: Asymmetric Diels–Alder Reactions by Michael J. Taschner; Nonconventional Reaction Conditions: Ultrasound, High Pressure, and Microwave Heating in Organic Synthesis by Raymond J. Giguere; and Allylsilanes in Organic Synthesis by George Majetich. Volume 2 contains the following five chapters: Modern Synthetic Design: Symmetry, Simplicity, Efficiency, and Art by Tomas Hudlicky and Michael G. Natchus; Toward the Ideal Synthesis: Connectivity Analysis and Multibond-Forming Processes by Paul A. Wender and Benjamin L. Miller; Applications of Graph Theory to Synthesis Planning: Complexity, Reflexivity, and Vulnerability by Steven H. Bertz and Toby J. Sommer; Asymmetric Reactions Promoted by Titanium Reagents by Koichi Narasaka and Nobuharu Iwasawa; and The Use of Arene *cis*-Diols in Synthesis by Stephen M. Brown and Tomas Hudlicky. Both volumes contain biographical sketches of the contributors, and Volume 2 has a subject index.

**Photosensitive Metal–Organic Systems. Mechanistic Principles and Applications.** Edited by Charles Kotal (University of Georgia) and Nick Serpone (Concordia University, Montreal). American Chemical Society: Washington, DC. 1993. xiv + 450 pp. \$109.95. ISBN 0-8412-2527-3.

This book was developed from a symposium sponsored by the Division of Inorganic Chemistry at the Fourth Chemical Congress of North America (202nd National Meeting of the American Chemical Society) held in New York on 25–30 August 1991. After a preface by the editors, there are 21 chapters devoted to fundamental mechanistic aspects and practical applications of photocatalytic systems. There are author, affiliation, and subject indexes.