

Additions and Corrections

Preparation and Properties of Dinitrogen Trimethylphosphine Complexes of Molybdenum and Tungsten. 4. Synthesis, Chemical Properties, and X-ray Structure of *cis*-[Mo(N₂)₂(PMe₃)₄]. The Crystal and Molecular Structures of *trans*-[Mo(C₂H₄)₂(PMe₃)₄] and *trans,mer*-[Mo(C₂H₄)₂(CO)(PMe₃)₃] [*J. Am. Chem. Soc.* **1983**, *105*, 3014–3022]. ERNESTO CARMONA,* JOSE M. MARIN, MANUEL L. POVEDA, JERRY L. ATWOOD,* and ROBIN D. ROGERS*

Page 3014, Abstract, line 1: The formula [MoCl₂(PMe₃)₄] should be replaced by [MoCl₃(PMe₃)₃].

Chemistry of Singlet Oxygen. 44. Mechanism of Photooxidation of 2,5-Dimethylhexa-2,4-diene and 2-Methyl-2-pentene [*J. Am. Chem. Soc.* **1983**, *105*, 4710]. LEWIS E. MANRING and CHRISTOPHER S. FOOTE*

Page 4713: This statement "variation of ene product ratios with solvents or temperature has not to our knowledge been previously observed" is an error. Such variation has been observed by Dr. V. Rautenstrauch (personal communication, 1980).

Book Reviews *

IP Standards for Petroleum and Its Products. Part I. Methods for Analysis and Testing. Volume 1. Methods IPI-230. Heyden & Son LTD, London, 1982. \$145.00.

This book contains a collection of 230 methods approved by the Institute of Petroleum (IP) for testing and characterizing petroleum and its products. Seventy-two of these methods have received joint approval of IP and the American Society for Testing and Materials (ASTM). The introduction section includes the following useful listings of methods: alphabetical, numerical, ASTM-IP Joint methods, proposed methods, obsolete methods, and correlations of IP or IP-ASTM methods with British Standards. Changes in the 1982 edition are also summarized. Moreover, criteria for a test method, method designations, formats, and general rules for presentation of numerical results are discussed.

The descriptions of the 230 methods presented range from 1 to 29 pages in length. Each method has appropriate labels as to its IP or ASTM designation number; many contain excellent drawings and pictures of equipment. The figures are clear and well labeled and contain exact information for reproducing a specific apparatus.

Included are methods for quantifying chemical elements and compounds found in petroleum and petroleum products. Moreover, methods for characterizing the purity of certain chemicals derived from petroleum are presented. Many physical properties, from heats of combustion of fuel oils to the load-carrying capacity of lubricating oils, are discussed. A number of methods are concerned with corrosion; both the prevention of corrosion by petroleum products and the causes of corrosion by chemicals in petroleum are considered.

This book would be extremely valuable to any laboratory devoted to general petroleum analyses or to anyone involved in the development of methodology for testing petroleum. It may also prove useful to a general chemical analysis laboratory, where petroleum products are tested occasionally.

Chris W. Brown, *University of Rhode Island*

Chromatography. Fundamentals and Applications of Chromatographic and Electrophoretic Methods. Part A: Fundamentals and Techniques. Part B: Applications. Edited by E. Heftman (Western Regional Research Center, U.S. Department of Agriculture). Elsevier Scientific Publishing Co., Amsterdam and New York, 1983. Part A: XXII + 388 pp. \$83.00. Part B: XVIII + 564 pp. \$138.25.

This most recent edition of "Chromatography" is published as Volumes 22A and 22B of the "Journal of Chromatography Library" series. As in the previous edition, the objective of this volume is to "feature the most recent and most significant techniques and applications" in this

rapidly expanding field. As in the earlier editions each chapter has been written by experts in that particular area.

Volume 22A consists of nine chapters covering the theoretical and practical aspects of separation on the basis of differential migration methods. The introductory chapter is followed by a short but interesting chapter on the history of chromatography and electrophoresis, and a comprehensive chapter on chromatographic theory. These are followed by chapters on column chromatography, planar chromatography, gas chromatography, ion-exchange chromatography, gel chromatography, and electrophoresis.

Considering the number of individuals involved in this volume, the editor has done an admirable job in maintaining the general format through the chapters. Each chapter considers, to a greater or lesser extent, aspects of sample preparation, theory, instrumentation, and methodology. A list of suppliers included in the chapter on planar chromatography should prove useful to anyone wishing to get started in this area.

Volume 22A is a successful attempt to overview a wide range of chromatographic areas. However, a number of shortcomings should be noted. Although the stated purpose of the text is to discuss new techniques, some of the most important new methods are completely omitted. The chapter on gas chromatography describes neither GC-MS nor supercritical fluid techniques. Other topics, such as LC-MS and ion chromatography, are described only briefly.

Volume 22B consists of 16 chapters on applications. As in previous editions, each chapter discusses a specific class of compounds. Topics include amino acids, proteins, lipids, terpenoids, steroids, carbohydrates, pharmaceuticals, antibiotics, nucleic acids, porphyrins, phenolics, pesticides, inorganics, nonhydrocarbon gases, and hydrocarbons. Each chapter is subdivided into specific categories and extensively referenced (4492 total references).

While this edition is not intended for the novice, it should be a useful reference to the practicing scientist. In my opinion this work should be particularly useful to the researcher wishing to employ a method with which he has limited experience.

James E. DiNunzio, *Wright State University*

Structure and Bonding. Volume 52. Springer-Verlag, New York, 1982. 202 pp. \$48.00.

This volume of the series, which is a hybrid between a periodical and a series of books, contains four reviews on rather disparate subjects: Natural Optical Activity and the Molecular Hypothesis, by R. G. Woolley; Spectral-Structural Correlations in High-Spin Cobalt(II) Complexes, by L. Banci, A. Bencini, C. Benelli, D. Gatteschi, and C. Zanchini; Relationships Between Structure and Low-Dimensional Mag-

*Unsigned book reviews are by the Book Review Editor.