Book Reviews

J. Am. Chem. Soc., Vol. 112, No. 23, 1990 8637

Additions and Corrections

Heteroannulation of Chromium Carbene Complexes. A Novel and Efficient Pyrrole Synthesis [*J. Am. Chem. Soc.* **1990**, *112*, 1251]. VERA DRAGISICH, CHRISTOPHER K. MURRAY, BENJAMIN P. WARNER, WILLIAM D. WULFF,* and DOMINIC C. YANG

Reference 11c should read: Aumann, R.; Althaus, S.; Krüger, C.; Betz, P. *Chem. Ber.* **1989**, *122*, 357.

A Direct Total Synthesis of (+)-Longifolene via an Intramolecular Diels–Alder Strategy [*J. Am. Chem. Soc.* **1990**, *112*, 4609–4610]. BO LEI and ALEX G. FALLIS*

Page 4610, line 15, left column: (−)-Methyl chloroformate should be (−)-menthyl chloroformate and (−)-methanol should be (−)-menthol.

A New Method for the Stereocontrolled Synthesis of Silyl Dienol Ethers Using (Naphthalene)chromium Tricarbonyl Catalyzed Isomerization [*J. Am. Chem. Soc.* **1990**, *112*, 4906]. MIKIKO

SODEOKA, HIROYOSHI YAMADA, and MASAKATSU SHIBASAKI*

Page 4906: The introductory statement that stereocontrolled synthesis of silyl dienol ethers has never been reported is in error. The following papers report just such a process: Wan, C. S. K.; Weedon, A. C.; Wong, D. F. *J. Org. Chem.* **1986**, *51*, 3335. Krägeloh, K.; Simchen, G.; Schweiker, K. *Liebigs Ann. Chem.* **1985**, 2352. Tominaga, Y.; Kamio, C.; Hosomi, A. *Chem. Lett.* **1989**, 1761.

Proton-Coupled Electron-Transfer Reactions. Mechanisms of Two-Electron Reduction of *trans*-Dioxoruthenium(VI) to *trans*-Aquooxoruthenium(IV) and Disproportionation of *trans*-Dioxoruthenium(V) [*J. Am. Chem. Soc.* **1990**, *112*, 5176–5181]. CHI-MING CHE,* KEUNG LAU, TAI-CHU LAU, and CHUNG-KWONG POON

trans-Aquooxoruthenium(IV) incorrectly appeared as *trans*-aquooxoruthenium(VI) in the title.

Computer Software Reviews

SYSTAT/SYGRAPH 5.0. Systat, Inc.: 1800 Sherman Avenue, Evanston, Illinois. List price $795.00. Government Services Administration Contract allows discount for this product in the U.S.A.

Systat/Sygraph 5.0 is a statistical and scientific graphics package designed and developed for the Macintosh computer.

The package contains four disks for use on the Mac II or SE/30 and requires a 68020, 68030, 68881, or 68882 coprocessor, and similar four disks for use on Mac SE or Plus. Four manuals, Getting Started, Data, Systat, and Sygraph, are also included. It requires a Macintosh with 4 Mb of RAM, a hard disk, and System 6.0 or higher in order to use the package. The programs are fully menu-driven with all work done through menus and dialog boxes.

At first use the program is quite intimidating, but this is primarily due to the comprehensive nature of the package. The list of statistics, graphics, and data management is comprehensive and impressive but too

exhaustive to present in this review. Suffice to say that it includes the simple to the sophisticated and will satisfy the beginning, intermediate, and advanced scientist in terms of his needs for reduction and presentation of his data. Particularly useful is the graphics program which exhibits such useful features as pseudo-3-D highlighting and exagerrated and perspective effects.

The package has been used in this laboratory for only six weeks and we have only used a fraction of the program's capabilities. The program will be a useful addition to an industrial or academic laboratory that requires a number of various (simple to the complex) statistical, graphics, and data management calculations and presentations. It is relatively straightforward to use due to the comprehensive and complete nature of the manuals.

Joseph Sneddon, *University of Lowell*

*Book Reviews**

The Elements. Their Origin, Abundance, and Distribution. By P. A. Cox (University of Oxford). Oxford: Oxford and New York. 1989. viii + 207 pp. $19.95. ISBN 0-19-855298-X.

This little book traces the origin of elements in the universe from its conception, a subject of enormous scope. The author does it in a highly interesting and readable fashion. A year of college chemistry would prepare a reader for this fascinating account. In the introduction, we are introduced to the formation of the galaxies and stars and their spectroscopic probe to determine the abundance of elements in them. A brief review of electronic structure of atoms, the periodic table, and the nuclear structure follows. In the succeeding chapters the building up of elements based on nuclear reactions in the stars and their scattering supernova explosions are dealt with with clarity. The formation of the solar system from condensation of the interstellar gas and dust clouds is presented. The abundance of elements in the earth is discussed by considering the mechanism of formation of its crust through solidification of the magma and tectonic processes. The formation of the principal types of rocks and their further modification by hydrothermal and chemical processes are described leading to a discussion of the distribution of elements in various

rocks, as well as in the oceans, and in the living systems. Finally, the isotopic distribution of the elements is explained on the basis of radioactive decay of elements and their isotopic fractionation. Each chapter is followed by a brief summary and book reference. An appendix tabulates pertinent data.

The book has a minimum of error or obscurity. I only wish there were a complete periodic table in the book, and the isotopes in the text had both mass numbers and atomic numbers. The author is to be congratulated for covering such a vast subject in a short volume without losing accuracy and clarity.

S. K. Dhar, *DePaul University*

Sonochemistry: Theory, Applications and Uses of Ultrasound in Chemistry. By T. J. Mason and J. P. Lorimer (Coventry Polytechnic). John Wiley & Sons: Chichester and New York. 1988. 252 pp. $87.95. ISBN 0-7458-0240-0.

This book presents an introduction to various aspects of sonochemistry. Its publication follows by 2 years the First International Symposium on Sonochemistry held at Warwick University in 1986. The content of some of the chapters reflect the discussions at this Symposium.