STEPHENSON, GUY SOLLADIÉ, and HARRY S. MOSHER,* Department of Chemistry, Stanford University, Stanford, California 94305.

On page 4186, footnote 26, the final clause "but the details have not yet been published" should be deleted and replaced by the following. "The details of the reaction of *R*-neopentyl-1-*d* alcohol of 50% enantiomeric purity with triphenylphosphine–carbon tetrachloride and triphenylphosphine–carbon tetrabromide to give (+)-neopentyl-1-*d* chloride and (+)-neopentyl-1-*d* bromide have been published [R. G. Weiss and E. I. Snyder, *J. Org. Chem.*, **36,** 403 (1971)]. These prior results and ours, although differing in some details, are in substantial agreement."

Stereochemistry of the Photochemical Diels–Alder Reaction [*J. Amer. Chem. Soc.*, **94,** 4378 (1972)]. By DOUGLAS A. SEELEY, Department of Chemistry, The Pennsylvania State University, University Park, Pennsylvania 16802.

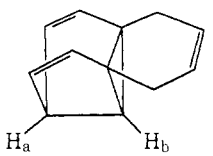
Structures **2** and **3** should be interchanged.

Pyrolytic Conversion of Bicyclo[4.2.0]octatrienes to Cyclooctatetraenes. The Tetracyclo[3.2.0.0^{2,8}.0^{5,7}]octene Pathway of Thermal Bond Reorganization [*J. Amer. Chem. Soc.*, **94,** 4398 (1972)]. By LEO A. PAQUETTE* and ROBERT E. WINGARD, JR., Department of Chemistry, The Ohio State University, Columbus, Ohio 43210.

The name tetracyclo[3.2.0.0^{2,8}.0^{5,7}]octene should be corrected to tetracyclo[4.2.0.0^{2,8}.0^{5,7}]octene in the title and at one point in the text.

Structural Consequences of 2,8 Bridging of the Semibullvalene Nucleus [*J. Amer. Chem. Soc.*, **94,** 4739 (1972)]. By LEO A. PAQUETTE,* ROBERT E. WINGARD, JR., and RONALD K. RUSSELL, Department of Chemistry, The Ohio State University, Columbus, Ohio 43210.

The dominant valence tautomeric form of **9** should be written as



and the equilibrium arrow in Figure 2 should be reversed.

Kinetic Preference between Equatorial and Axial Hydrogens in the Lithiation of Conformationally Fixed 1,3-Dithianes [*J. Amer. Chem. Soc.*, **94,** 4786 (1972). By ERNEST L. ELIEL,* ANTHONY ABATJOGLOU, and ARMANDO A. HARTMANN, Department of Chemistry, University of Notre Dame, Notre Dame, Indiana 46556.

On page 4786, footnote 7, 0.05 should read 6.05.

The Isolation and Characterization of Pure Cyclopropenone [*J. Amer. Chem. Soc.*, **94,** 4787 (1972)]. By RONALD BRESLOW* and MASAJI ODA, Department of Chemistry, Columbia University, New York, New York 10027.

Footnote 6, at the end of the paper, was inadvertently omitted. It should read as follows: (6) For a possible first isolation of crystalline cyclopropenone, see J. T. Groves, Ph.D. Thesis, Columbia University, 1969.

Possible Assignments for the Three Lowest Lying Singlets in Dialkyl Sulfides [*J. Amer. Chem. Soc.*, **94,** 4797 (1972)]. By JOAN SAMOUR ROSENFIELD and ALBERT MOSCOWITZ,* Department of Chemistry, University of Minnesota, Minneapolis, Minnesota 55455.

Equation 8 on page 4801 should read

$$B = -\langle b_2|V|b_1\rangle/(E_{b_1\rightarrow b_2^*} - E_{b_2\rightarrow b_2^*})$$

In Table IX, all entries under the heading *B* and under the heading Total contribution of states to rotational strength, subheading ($b_2^{-1}b_2^*$) only, should have a change of sign. These corrections do not alter the discussion or conclusions of the work in any way.

Preferred Conformations of the Isobutyl, Cyclopropylcarbinyl, and Oxirylcarbinyl Cations, Radicals, and Anions as Determined by Semiempirical Intermediate Neglect of Differential Overlap Calculations [*J. Amer. Chem. Soc.*, **94,** 4835 (1972)]. By WAYNE C. DANEN, Department of Chemistry, Kansas State University, Manhattan, Kansas 66502.

During the editing process the acronym INDO was expanded incorrectly in the title of this work. The title is correct as above with *overlap* having replaced *orbital.*

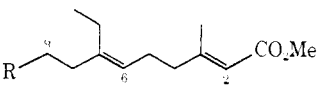
Optically Active Aromatic Chromophores. XI. Circular Dichroism Studies of Some 1-Substituted 2-Phenylcyclohexanes [*J. Amer. Chem. Soc.*, **94,** 5143 (1972)]. By LAWRENCE VERBIT* and HOWARD C. PRICE, Department of Chemistry, State University of New York at Binghamton, Binghamton, New York 1390i.

In Chart I, compounds **4** and **5** and their associated data should be moved up directly under compound **3**. Both **4** and **5** are trans compounds.

In Figure 1, compounds **1** and 6 should be interchanged.

Stereoselective Synthesis of the C-18 Cecropia Juvenile Hormone [*J. Amer. Chem. Soc.*, **94,** 5374 (1972)]. By C. A. HENRICK,* F. SCHAUB, and J. B. SIDDALL, Chemical Research Laboratory, Zoecon Corporation, Palo Alto, California 94304.

Structures **10–13** should be



10, R = $-CO_2Me$
11, R = $-CH_2OH$
12, R = $-CHO$
13, R = $EtC(OMe)=CH-$

Proof of Structure of Steroid Carboxylic Acids in a California Petroleum by Deuterium Labeling, Synthesis, and Mass Spectrometry [*J. Amer. Chem. Soc.*, **94,** 5880 (1972)]. By WOLFGANG K. SEIFERT,* EMILIO J. GAL-

LEGOS, and RICHARD M. TEETER, Chevron Oil Field Research Company and Chevron Research Company, Richmond, California 94802.

On page 5880, column 2, line 15 should read: Pliocene age (Midway Sunset Field...).

In Scheme I, the second time the word Fraction appears the footnote reference should be *b*, not *c*.

On page 5887, column 2, the formula at the end of the fourth line up from the end of the Experimental Section should be $C_{24}H_{41}D$.

*Book Reviews**

Electrochemistry of Cleaner Environments. Edited by J. O'M. BOCKRIS (University of Pennsylvania). Plenum Press, New York and London. 1972. xiii + 296 pp. $22.50.

One of the most important and urgent problems facing our present world society is the alleviation of the pollution of air and water. Bockris cites the burning of fossil fuels in power plants and the internal combustion engine, as well as metallurgical practices (*e.g.*, reduction of copper by formation of oxide from sulfide thus releasing S and SO_2 into the atmosphere), releasing of dirty industrial liquids into streams, rivers, and seas, and the present treatment of sewage and rubbish as some of the causes for our present situation. The problem has developed to such an extent that it threatens public health, promises to influence the meterology of the planet, and requires revolutionary changes in the way of life of the inhabitants of the globe in order to accomplish a solution.

The object of the book is to illustrate a few specific ways in which a cleaner world may be realized by employing present and improved electrochemical technology.

The influence of the combustion of fossil fuels on the climate is reviewed by G. N. Plass (Texas A&M University). Emphasis is given to the role of CO_2 in influencing the climate of the earth. E. H. Hietbrink, J. McBreen, S. M. Selis, S. B. Tricklebank, and R. R. Witherspoon (General Motors Corp.) discuss electrochemical power sources for vehicle propulsion. They examine incentives for electric vehicles, obstacles to their development, and requirements of power sources. The crux of their chapter is devoted to a discussion of batteries and fuel cells. They conclude with a projection of the steps by which electric vehicle technology might evolve.

A. T. Kuhn (University of Salford) describes the electrochemical treatment of aqueous effluent streams. Four methods are examined including electrodialysis to remove ions, electroflotation to separate suspensions into slurries and clear liquid, electrodeposition of metals, and electrooxidation of unwanted organic compounds.

T. A. Henrie and R. E. Lindstrom (U. S. Bureau of Mines) describe the "Hydrometallurgical Treatment of Sulfide Ores for Elimination of SO_2 Emissions by Smelters" in an effort to suggest methods of reducing sulfide ores and avoid base-metal pyrometallurgical operations which pollute the atmosphere with sulfur oxide gases.

E. C. Potter (Commonwealth Scientific and Industrial Research Organization, Australia) discusses the electrofiltration of particulates from gases. The theory and practice of electrostatic precipitation are reviewed.

B. D. Epstein (Gulf General Atomic Co.) outlines electrochemical methods of air and water monitoring in his chapter on electrochemical methods of pollution analysis. The review includes the analysis of ozone, oxides of nitrogen, SO_2, and oxidizable sulfur contaminants, carbon monoxide, and fluorides in air, and the measurements of conductivity, pH, and oxidation reduction potentials in water monitoring.

The prospect of abundant energy is introduced by R. P. Hammond (Oak Ridge National Laboratory). The chapter explores the basis for future energy supplies and the possibilities for substantial reduction in cost. Hammond visualizes both fusion and fission reactors in large energy centers and agroindustrial centers to provide power, desalt water, and utilize land which is now marginal.

A unique solution to the general problem of energy production and pollution abatement is offered in the Hydrogen Economy by D. P. Gregory, D. Y. C. Ng, and G. M. Lang (Institute of Gas Technology). They show how hydrogen can be produced electrolytically and used as fuel producing only H_2O as a combustion product to complete a simple cycle. They consider the technology and economy of the nuclear-electrical future.

Bockris concludes that adequate research funding by national governments and increased education in electrochemistry will help to achieve a future of pollution-free technology.

Sigmund Jaffe, *California State University, Los Angeles*

The Nuclear Overhauser Effect—Chemical Applications. By JOSEPH H. NOGGLE (University of Delaware) and ROGER E. SCHIRNER (Eli Lilly and Co.). Academic Press, New York, N. Y. 1971. x + 259 pp. $14.50.

This book is an excellent one for the chemist wishing to learn the principles and uses of the nuclear Overhauser effect. In four chapters the authors lay out the theory of the phenomenon in a very clear and understandable way, without making great demands on the reader's mathematical skills. Two further chapters discuss experimental methods, and a final lengthy review chapter presents chemical applications which have been reported through 1970, illustrating and emphasizing the points of the preceding chapters.

It is assumed that the reader is familiar with the principles and practices of high resolution nmr. Rigor has in a few places been curtailed for the sake of clarity; however, the balance achieved makes this a highly readable book which should be extremely useful for students and for nmr practitioners.

Aksel A. Bothner-By, *Carnegie-Mellon Universtity*

Guide to Modern Methods of Instrumental Analysis. Edited by T. H. GOUW (Chevron Research Co.). Wiley-Interscience, New York, N.Y. 1972. x + 495 pp. $19.50.

This book attempts the impossible, succeeding fairly well. Twelve chapters discuss Gas Chromatography, High-Resolution Liquid Chromatography, Thin-Layer and Paper Chromatography, Gel Permeation Chromatography, Visible and Ultraviolet Spectroscopy, Infrared and Raman Spectroscopy, NMR Spectroscopy, ESR Spectroscopy, Gas Chromatography-Mass Spectrometry, Mass Spectrometry, Electroanalytical Methods, and Differential and Thermogravimetric Analysis. The chapters emphasize theory and instrumentation, but most provide good selections of references on applications. Some, notably that on thin layer chromatography, have application sections of inadequate scope.

The attempt to cover (on an advanced level, according to the preface) uv and visible spectroscopy on 33 pages—theory, instrumentation, application, and all—is brave indeed. The chapter does provide a good selection of references. Perhaps the editor would have done better omitting chapters like this and that on ir and Raman spectroscopy—given the space limitations, the authors were confronted with an insoluble problem. Nevertheless, D. L. Rabenstein is remarkably successful in discussing nmr spectroscopy on 47 pages.

In the opinion of this reviewer, the following chapters will be of the greatest utility to most of the readers: T. H. Gouw and R. E. Jentoft: High Resolution Liquid Chromatography; M. J. R. Cantow and J. F. Johnson: Gel Permeation Chromatography; R. A. Flath: Gas Chromatography–Mass Spectrometry; D. H. Smith: Mass Spectrometry; E. M. Barrall, II: Differential Thermal and Thermogravimetric Analysis. These chapters might well justify buying the book.

Walter Lwowski, *New Mexico State University*