π delocalization of positive spin density involving ψ_4 and negative spin density involving ψ_7 or ψ_8."

The Acid-Catalyzed and Mercuric Ion Catalyzed Hydrolysis of 2-(*para*-Substituted phenyl)-1,3-oxathiolanes [*J. Am. Chem. Soc.*, **90**, 7266 (1968)]. By Nimai C. De and Leo R. Fedor, Department of Medicinal Chemistry, School of Pharmacy, State University of New York at Buffalo, Buffalo, New York 14214.

The rate constant for the acid-catalyzed hydrolysis of 2-(*p*-nitrophenyl)-1,3-oxathiolane (**5**), Table III, is 0.0025 M^{-1} min^{-1}. Accordingly, for the acid-catalyzed reaction $\rho = -2.82 \pm 0.13$.

Synthetic Spectroscopic Models Related to Coenzymes and Base Pairs. II. Evidence for Intramolecular Base–Base Interactions in Dinucleotide Analogs [*J. Am. Chem. Soc.*, **90,** 7302 (1968)]. By Douglas T. Browne, J. Eisinger, and Nelson J. Leonard, Department of Chemistry and Chemical Engineering, University of Illinois, Urbana, Illinois 61801, and Bell Telephone Laboratories, Inc., Murray Hill, New Jersey 07974.

On page 7309, column 1, line 15, Ad–C_3–Ad should be Ad–C_n–Ad.

On page 7313, column 1, line 24, Ad–C_n should be Ad–C_n–Ad.

On page 7320, column 1, compound **35**, O_{16} in formula should be O_6.

Polarized Electronic Spectroscopy of Molecules Oriented by a Nematic Liquid Crystal [*J. Am. Chem. Soc.*, **91,** 191 (1969)]. By Gerald P. Ceasar and Harry B. Gray, Arthur Amos Noyes Laboratory of Chemical Physics, California Institute of Technology, Pasadena, California 91109.

The name *p*-(*p*′-ethoxybenzoxy)phenyl butyl carbonate as used in the paper is incorrect. The correct name is butyl *p*-(*p*-ethoxyphenoxycarbonyl)phenyl carbonate.

A Large Deuterium Solvent Isotope Effect on a Photochemical Reaction [*J. Am. Chem. Soc.*, **91,** 198 (1969)] By Margaret J. Jorgenson, Department of Chemistry, University of California, Berkeley, California.

On page 199, column 1, the last sentence should read as follows: The low d_2 content of **2** and **3** (Table I) argues for a negligible rate of γ deuteration of dienols **5** and **6** (**5a** and **6a** to **1a** and **5b** and **6b** to **1b**).

Polarized Infrared Spectroscopy of Molecules Oriented in a Nematic Liquid Crystal. Application to $Mn_2(CO)_{10}$ and $Re_2(CO)_{10}$ [*J. Am. Chem. Soc.*, **91,** 772 (1969)]. By Gerald P. Ceasar, Robert A. Levenson, and Harry B. Gray, Arthur Amos Noyes Laboratory of Chemical Physics, California Institute of Technology, Pasadena, California 91109.

The name *p*-(*p*′-ethoxybenzoxy)phenyl butyl carbonate as used in the paper is incorrect. The correct name is butyl *p*-(*p*-ethoxyphenoxycarbonyl)phenyl carbonate.

Book Reviews

Molecular Orbital Theories of Bonding in Organic Molecules. By Robert L. Flurry, Jr., Department of Chemistry, Louisiana State University, New Orleans, La. Marcel Dekker, Inc., 95 Madison Ave., New York, N. Y. 1968. x + 334 pp. 16 × 23 cm. $17.95.

The object of this book is to provide the reader with "a conceptual knowledge of the principles of chemical bonding, as explained by molecular orbital theory" and "a *working* knowledge of the methods in common usage for applying molecular orbital theory to moderately large molecules." After a brief introduction to MO theory, successive chapters deal with the free electron theory, LCAO theory, perturbation methods, the HMO method, group theory and symmetry orbitals, atomic structure, SCF MO methods, and bonds, with a very brief final chapter (19 pp) on application to specific problems.

The author's general approach is to state theoretical results with little or nothing by way of derivation, and to illustrate their use by detailed discussions of their application to specific simple problems. Thus in Chapter III, the HMO method is illustrated by a detailed discussion of H_2, and of the π electrons in butadiene, following empirical rules for constructing the MO equations, and in Chapter 5 the solution of such equations is discussed in great detail; however, neither the basic principles of the HMO method nor the approximations implicit in it are discussed at all. Similar comments apply to the rest of the book, and indeed it is clear that the author has set out with the object of training chemists to use MO theory as a kind of black box without their understanding in the least the basic principles involved.

Those who consider such an approach satisfactory will find this an admirable text for their courses; it is clearly written, well produced, and reasonable in price.

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Photoluminescence of Solutions. With Applications to Photochemistry and Analytical Chemistry. By C. A. Parker, Ph.D., D.Sc., F.R.M.S., F.R.I.C., Royal Navy Scientific Service, Admiralty Materials Laboratory, Holton Heath, Poole, Dorset, England. American Elsevier Publishing Co., Inc., 52 Vanderbilt Ave, New York, N. Y. 1968. xvi + 544 pp. 15.5 × 23 cm. $30.00.

Advances in the understanding of molecular electronic processes in conjunction with simultaneous advances in chemical instrumentation have increased the number of chemists engaged in synthetic and analytical studies involving excited states. For a long time no suitable texts were available for this field. Recently, the relationship between absorption spectra and the geometry of excited molecules has been adequately covered by several authors. This left a conspicuous need for a companion volume on solution photoluminescence. C. A. Parker is a recognized spectroscopist who has published papers dealing with almost every branch of this field. He is exceedingly well qualified to write on such a topic and his book fulfills this need.