of a stable Fe(III) chelate involving the displacement of amide protons from the ligand.

Displacement Stereochemistry and Product-Formation Selectivities in the Solvolysis of Cyclooctyl *p*-Bromobenzenesulfonate [*J. Am. Chem. Soc.* **1982**, *104*, 201]. J. ERIC NORDLANDER,* PHILIP O. OWUOR, DONNA J. CABRAL, and JEROME E. HAKY.

Several of the values for k_{EtOH}/k_{ROH} reported in Table III are imprecise.

The correct values are given below.

Table III (corrected values)

solvent	unrearranged products	rearranged products
80% EtOH, 20% H_2O	0.65	0.65
60% EtOH, 40% TFE	1.34	1.13
50% EtOH, 50% TFE	0.75	0.86
40% EtOH, 60% TFE	0.67	0.64

Propagation of Redox Reaction through a Quinoid Polymer Film on an Electrode [*J. Am. Chem. Soc.* **1982**, *104*, 28]. M. FUKUI, A. KITANI, C. DEGRAND, and L. L. MILLER.*

Captions to Figures 8, 9, 10 were omitted during printing and should be as follows.

Figure 8. Anodic peak currents for electrodes **2** in the presence of 0.2 mM IV. (a) i_p^a for cycle 5 corrected by subtracting i_p^a for cycle 4 and i_p^a for IV on cleaned carbon. (b) i_p^a for cycle 24 corrected by subtracting i_p^a for cycle 25 and i_p^a for IV on cleaned carbon.

Figure 9. Cyclic voltammogram for **2** (Γ_i = 4.8 nmol cm^{-2}) in the presence of 0.2 mM V.

Figure 10. Cyclic voltammogram for **1** in 40% ethanol–60% water. Electrode prepared by dip-coating from a 0.2% solution.

The MNDOC Method, a Correlated Version of the MNDO Model [*J. Am. Chem. Soc.* **1981**, *103*, 1413]. W. THIEL.

Page 1415, Table IV: E_{el}^A for carbon should read −120.133645 eV. The published results are correct since they are based on the parameter value given above.

Oxidation of Ketals to Orthocarbonates: A Double Baeyer–Villiger Reaction [*J. Am. Chem. Soc.* **1982**, *104*, 1769–1771]. WILLIAM F. BAILEY* and MEI-JUE SHIH.

Page 1770, Table II, third column: $C_7H_{15}OH$ (**14**) is the alcohol produced from **13**.

Oxidation of Mandelic Acid by Fenton's Reagent [*J. Am. Chem. Soc.* **1982**, *104*, 1185]. CHEVES WALLING,* KALYANI AMARNATH, and CURT B. CAMPBELL.

Dr. Curt B. Campbell's name was inadvertently omitted from the list of authors, which should read Cheves Walling,* Kalyani Amarnath, and Curt B. Campbell.

*Book Reviews**

Environmental Management Handbook for the Hydrocarbon Processing Industries. By James D. Wall (Hydrocarbon Processing). Gulf Publishing, Houston, Texas. vi + 227 pp. $16.95.

This is intended to be "a manual of practices and technologies for managers, designers and environmental specialists...". Unfortunately, it falls far short of this goal. The main problem appears to be poor editing. The "manual" is actually a compilation of presentations and articles, most of which date before 1974. The unevenness in the selections is apparent even in the first technical section, on wastewater treatment. An article on activated carbon use is followed by one on powdered carbon. But no comparison is made between the two. This is followed by State-of-the-Art Wastewater Treatment, dated 1970.

There are some good papers. In the section on wastewater, the contributions from Fluor, Exxon, and Dorr-Oliver on activated-sludge-unit design, mutant bacteria, and incineration, respectively, are well-done and useful. In the air pollution control section, the article by National Air Oil Burner on flares and that by ARCO on flue gas desulfurization are professionally prepared and valuable. Exxon's paper on Thermal de-NO_x describes selective reduction of NO_x, giving performance data as well as problems and prospects for its use. The two preceding papers, also dealing with NO_x emission control, are badly dated; catalytic reduction processes have made significant advances since these were written.

The remainder of the book has articles on odor, noise, and spills. They are interesting but not detailed enough for design nor recent enough to show state-of-the-art. An exception is that on use of lead sheathing for noise control.

Overall, this compilation cannot be recommended as either a practical manual or a status report.

Jack Winnick, *Georgia Institute of Technology*

Biogeochemistry of Amino Acids. Edited by P. E. Hare (Geophysical Laboratory, Carnegie Institute of Washington), T. C. Hoering (Geophysical Laboratory, Carnegie Institute of Washington), and K. King, Jr. (Lamont-Doherty Geological Observatory). John Wiley & Sons, New York. 1980. xviii + 558 pp. $56.00.

This book is a collection of 39 papers presented at a conference on the Biogeochemistry of Amino Acids held at Arlie House, Warrenton, Virginia (October 21–November 1, 1978) sponsored by the Carnegie Institute of Washington and the National Science Foundation. It is divided into four sections: I. Distribution and Characterization of Proteins, Peptides and Amino Acids (17 papers); II. Techniques and Methods (4 papers); III. Kinetics and Mechanisms (7 papers); and IV. Applications: Geological, Archeological and Biological (11 papers). Each section is introduced by a short summary written by the editors who, by their high standing in the area of organic geochemistry, are eminently suited to this task.

Of importance to the understanding of amino acid biogeochemistry is the understanding of the preservation of amino acids and their polymers the proteins over geological time. The papers in section I deal with diagenetic changes in protein structure, particularly of collagen, the principal component of vertebrate hard tissue. They also make clear that while the microstructure of fossils may be preserved, chemical changes may be great and contamination is an ever present problem. Such problems are discussed and criteria are suggested that may be of value in overcoming the inherent difficulties associated with diagenetic changes in the amino acid composition of fossils.

The second section is perhaps not very well defined as a distinct section in that many papers in the book describe in some detail the techniques and methods used. Nevertheless, the papers presented are of interest and place in perspective some of the analytical methods of current use in biogeochemistry. The paper by Kvenvolden detailing the findings of a small (13 laboratories) quality control assessment study is of particular interest. The disappointingly high interlaboratory variability observed is of great concern.

A basic understanding of chemical kinetics and reaction mechanisms is essential for an informed approach to resolving the many problems a study of amino acid biogeochemistry raises. The papers of section III are very important to the overall biogeochemical picture in this respect. They particularly illustrate the complex nature of racemization even in the relatively simple and well defined laboratory environment where matrix effects, pH, temperature, metal ion concentrations, leaching, peptide structure, and specie differences are controlled and can be studied individually.

Each of the papers in sections I, II, and III contribute knowledge that is important in pursuing the complexities of applying amino acid racemization rates and diagenetic changes in fossil amino acid composition to geochronology, paleotemperature estimations, and stratigraphic correlations of marine sediments. This is the important subject matter of section IV. It highlights the many problems of making the step from simulated to real geological environments.

The book is a valuable contribution to research in amino acid biogeochemistry. It places in proper perspective the inherent problems

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*Unsigned book reviews are by the Book Review Editor.