

On page 5872, the figure in the last line of column 1 should be XV instead of XIV. On page 5875 in the last paragraph heading in column 1 "Benzyl Chloride" should read "Benzoyl Chloride."

Magnetic Resonance Studies of Copper(II)-Triglycylglycine Complexes [*J. Am. Chem. Soc.*, **89**, 6071 (1967)]. By K.-E. FALK, H. C. FREEMAN, T. JANSSON, B. G. MALMSTROM, and T. VÄNNGÅRD, Departments of Physical Chemistry and Biochemistry, University of Göteborg, Göteborg, Sweden.

Dr. F. J. C. Rossotti, Oxford, has pointed out to us that the volume ratios on page 6076 are a factor of 4 too high. Consequently the reported Cu-O distances should be reduced by 25%. This leads to axial Cu-O distances considerably shorter than one has found for similar complexes, probably reflecting the approximate nature of the analysis. On the other hand, our conclusion that one or two water molecules are coordinated in solution seems even better supported.

A Mass Spectrometric Investigation of the Low-Pressure Pyrolysis of Diphosphine-4 [*J. Am. Chem. Soc.*, **89**, 6477 (1967)]. By T. P. FEHLNER, Department of

Chemistry, University of Notre Dame, Notre Dame, Indiana 46556.

The ordinate of Figure 7 should read $(P_2H_4)_0 - (P_2H_4) \times 2 \times 10^4$ torr and $(PH_3) \times 2 \times 10^4$ torr.

The Crystal and Molecular Structure of 14c-Hydro-5a-phenylbenz[a]indeno[2,1-c]fluorene-5,10-dione ($C_{30}H_{18}O_2$) [*J. Am. Chem. Soc.*, **90**, 291 (1968)]. By A. L. BEDNOWITZ, W. C. HAMILTON, R. BROWN, L. G. DONARUMA, P. L. SOUTHWICK, R. KROPF, and R. A. STANFIELD, Departments of Chemistry, Brookhaven National Laboratory, Upton, New York 11973, Clarkson College of Technology, Potsdam, New York 13676, and Carnegie-Mellon University, Pittsburgh, Pennsylvania 15213.

On page 291, column 2, line 6 should read "of the hexacyclic product."

Unambiguous Specification of Stereoisomerism about a Double Bond [*J. Am. Chem. Soc.*, **90**, 509 (1968)]. By J. E. BLACKWOOD, C. L. GLADYS, K. L. LOENING, A. E. PETRARCA, and J. E. RUSH, Chemical Abstracts Service, The Ohio State University, Columbus, Ohio 43210.

In references 3 and 14, the journal citations should read *J. Chem. Doc.* rather than *J. Chem. Soc.*

Book Reviews

Organic Semiconductors. By FELIX GUTMANN, University of New South Wales, Sydney, Australia, and LAWRENCE E. LYONS, University of Queensland, Brisbane, Australia. John Wiley and Sons, Inc., 605 Third Ave., New York, N. Y. 1967. xvii + 858 pp. 16.5×23.5 cm. \$27.95.

This book is the first comprehensive literature survey to be made in the field concerned with the study of the electrical and associated optical properties of organic semiconductors. It includes data up to early 1966. The materials classified as organic semiconductors include molecular crystals, complex metal compounds, charge-transfer complexes, free radicals and their salts, polymers, dyes, and compounds of biological interest.

It is instructive to compare the size of this book with that of a review of this field that appeared in 1959 consisting of 39 pages of text and 112 references. The present review has 41 pages devoted merely to an index and contains more than 1500 references. Thus, in a span of about 7 years, activity has increased more than tenfold.

Aside from the normal curiosity of researchers in university laboratories, considerable impetus has been given to these studies with the expectation that breakthroughs might be found, connecting this field with biology or with the phenomena characteristic of the more glamorous inorganic solid-state semiconductors. This expectation has not yet been realized; the authors devote a chapter to the present and speculative future applications of these materials.

This book satisfies an urgent need for all research workers in this field. The authors have done a monumental and laudable job of collecting and describing the wide variety of experiments, experimental techniques, and theories characteristic of this rapidly developing field. Since it was not the aim of this book to provide critical evaluation, there are many experimental results and theories that with present knowledge can be discounted. Thus, unless the reader is familiar with this field, he is likely to become confused.

The first chapter, dealing with basic solid-state physics, should definitely be skipped by the beginner. It is unclear or misleading in spots and it contains numerous typographical errors in the equations

used. The second chapter deals with the types of measurements that have been made. It is somewhat marred by its failure to remind the reader at the very outset that Ohm's law is frequently not obeyed, in which case the conductivity measurements do not give a constant of the material (this precaution is voiced later on). There is also a confusion of units in an equation defining the carrier mobility in the space-charge limited current mode.

The third chapter dealing with purification starts with a discussion of the role of impurities that I found somewhat confusing. If the reader has his own opinions on the requirements for purification, the rest of the chapter will be valuable as source material.

The rest of the book contains in the main, a discussion of band theory, excited states of molecular crystals, ionized states (dark and photogenerated), and space charge effects. These discussions start at the level of the original articles and are not designed to provide anything but a minimum of background material.

This book will be most useful to those familiar with the field. It is, however, an absolute requirement for anyone entering the field because it will save him vast amounts of time. The reference tables and indexes are excellent and easy to use. I expect that this book will be the definitive reference book for many years to come.

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BOOKS RECEIVED, February 1968

MARGARET H. BACK and KEITH J. LAIDLER. "Selected Readings in Chemical Kinetics." Pergamon Press, Inc., 44-01 21st St., Long Island City, N. Y. 1967. 175 pp. \$5.50.

RAYMOND F. BADDOUR and ROBERT S. TIMMINS, Editors. "The Application of Plasmas to Chemical Processing." The MIT Press, 50 Ames St., Cambridge, Mass. 1967. 206 pp. \$12.50.