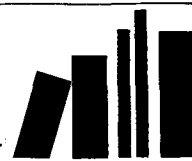


New Books

J.F. Gerecht, Book Review Editor



Creation and Detection of the Excited State, Edited by William R. Ware (Marcel Dekker, N.Y., 1976, 336 p., \$39.75).

This volume is the fourth in a series of monographs dealing with experimental techniques used to detect and study molecules in excited states. This particular volume is divided into five chapters: the first two deal with the measurement of laser intensities by chemical and physical methods respectively; the final three chapters deal with various aspects of chemical photolysis.

Chapter One, written by J.N. Demas, is concerned with chemical actinometry as applied to laser intensity measurements. The presentation is quite complete, dealing with basic principles, sources of error, and the chemistry of systems suitable for use in the actinometry application. The second chapter (by D. West) complements the first in that it also deals with the experimental aspects of laser power measurements, but in this instance the emphasis is on physical methods—calorimeters, photodiodes, etc. Taken together these two chapters provide a useful compendium of the state-of-the-art in an area of fundamental experimental importance in all photochemical work.

By way of contrast, the third chapter (by E.G. Janzen) is less concerned with details of experimental technique than with a lengthy recitation of experimental results, complete with illustrative spectra. The title, "The Application of ESR Spin Trapping Techniques in the Detection of Gas Phase Free Radicals Produced from the Photolysis of Gas Phase Organic Molecules," is of sufficient length to describe the contents. The emphasis throughout is on descriptive chemistry and as such this reviewer questions whether this article follows the announced purpose of this series of monographs.

The fourth chapter (by P. deMayo and H. Shizuka) provides a complete and well-written discussion of the experimental aspects of the measurement of quantum yields. Included is a critique dealing with the choice of light sources, monochromators, actinometers, etc., as well as the use of common laboratory spectroscopic methods (IR, NMR, etc.). The experimenter working in this field for the first time will welcome the detailed description given of the preparation of sample, solvents, and reagents.

The last chapter, written by M.A. West, is entitled "Experimental Methods in Flash Photolysis." It is thorough and well-illustrated. Apparatus design and construction covering the experiment time-scale from microseconds to picoseconds are carefully described. Procedures and applications are included.

In the preface, the editor states that "... the series is intended as a source of information on experimental techniques... [providing]... experimental details well beyond what is normally included in a [scientific] paper..." With the minor exception noted above, the editor has admirably achieved his goal. This volume constitutes a worthy, if somewhat expensive, addition to the literature of the field of the molecular excited state.

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Detergent Manufacture, Marshall Sittig, (Noyes Data Corp., Park Ridge, NJ, 1976, 388 p., \$38).

This book is largely a compilation of about 500 patents on the titled subject issued between 1952 and 1975 which presumably were selected by the author. It contains a forward, an introduction which includes a short history of the industry, and 20 sections—eight on raw materials; four on sulfation, sulfonation, and related products; and two on builders and other ingredients. Topics such as Production of Finished Products, End Uses of Detergent Products, Test Methods, and Future Trends comprise the other sections. The book concludes with company, inventor, and patent number indexes; the subject index is included in the table of contents.

In the forward the author states that "the technical information obtained from a patent is extremely reliable and comprehensive; sufficient information must be included to avoid rejection for 'insufficient disclosure.'" This is theoretically true, but as so often happens in life a wide gulf exists between theory and practice.

He further states that "These [selected] patents include practically all those issued on the subject in the United States during the period covered; there has been no bias in the selection of patents for inclusion." This reviewer accepts the latter statement on face value. However, a few spot checks make one wonder about the first. The following significant patents, some of which have been commercialized, were not included.

U.S. Patent No.	Description
2,859,182	Heavy Duty Liquid Detergents
2,889,283	Process for the Manufacture of Detergents Containing Colored Granules
2,954,347	Controlled Suds Heavy Duty Detergents
3,024,273	Process for the Preparation of Alkyl Glyceryl Ether Sulfonates
3,177,148	Process for Preparing Detergents Containing Activated Peroxide Bleaches
3,177,147	Non-Tower Detergent Processing
3,202,714	Oxy-containing Amine Oxides
3,533,139	Process for the Preparation of Detergents Containing Both Enzymes and Perborate Bleaches

In addition out of thirty-odd U.S. patents on the manufacture and use of alpha olefin sulfonates checked, only four were cited by the author.

This book probably will be part of the library of organizations interested in detergents but it seems one should not take the forward too literally.

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Lipid Chromatographic Analysis, Vol. 3 (2nd Edition, Revised and Expanded), Edited by Guido V. Marinetti (Marcel Dekker, Inc., New York, NY 1976, 304 p., illustrated, \$35).

The Second Edition, Volume 3 of *Lipid Chromatographic Analysis*, edited by Guido V. Marinetti is nothing

more than a reorganized version of the first edition and word for word transformation of contents removed from Volumes 1 and 2. There is not a single revision or expansion as stated on the cover and title page of this book. The cost for this edition is \$35.

The first two volumes of this book were published in 1967 and 69. This reviewer found no new references beyond 1967 in Volume 3.

The contents of this book include column chromatography procedures for separation of polar lipids; thin layer chromatography (TLC) of neutral lipids, bile alcohols, and acids; and gas chromatography of sterols, fatty acids and derivatives, and long chain fatty aldehydes. The book consists of 304 pages of text and illustrations, and an author and subject index.

The contents in the eight chapters of this book are of interest to chemists and biochemists working on methods of lipid analysis. The first edition of these books, Volumes 1 and 2, were very well received in the field and are no longer available from the publisher. What previously was published in two volumes now appears in toto in three. This is probably what the publisher meant in its promotional letter on the new second edition as being revised and expanded. More likely it appears to be a way to meet the inflationary trends of the publishing business.

An erroneous description of a gas liquid chromatography (GLC) column used in the chapter on gas chromatography of cholesterol has never been corrected from the way it was reported in the original manuscript. For example, 1% SE-30 on 100-120 Gas Chrom P is not the correct description of the column that was really used for the analysis of sterols. Gas Chrom P is just an acid and base washed support which requires further acid washing and silane treatment before it can be used for making the packing to do the analysis described in this chapter. The product is no longer Gas Chrom P, but a modified version of it. It would be fruitless if anyone tried to repeat this work.

The authors provided a most valuable outline for their areas of expertise in chromatographic methods, and the wealth of general information presented in each chapter makes this book very useful as a guide for anyone separating lipids and their derivatives by GLC, TLC, and column chromatography. The book is both expensive and worthwhile. It is just unfortunate that the revision wasn't updated to include more recent reference materials in developments in chromatography.

NICHOLAS PELICK
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