

New Books . . .

TEXTILE CHEMICALS AND AUXILIARIES, 2nd ed., edited by Henry C. Speel and E. W. K. Schwarz (Reinhold Publishing Corporation, New York, 517 pp., 1957, \$13.50). This book covers comprehensively the processes and the raw materials used in the treatment and finishing of textile fabrics. Since a substantial amount of the chemicals used in textile finishing are fat-derived, this book is of more than passing interest to members of this society. Authors of the 24 separate chapters embrace a large segment of those widely recognized as having authoritative knowledge of the fields included in this subject. All sections of the first edition (1952) have been retained and brought up to date and in some instances, such as the chapter on soap, have been completely rewritten. A new chapter on felts and nonwoven fabrics has been added.

For the information of those readers familiar with the first edition, deletions have been made from the first edition of material no longer of timely interest. New information of recent developments and trends has been added so that, of the original 23 chapters in the first edition, 11 are now some two to nine pages longer.

This volume is an essential reference for persons interested in the chemical agents used in the treatment and finishing of textiles.

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THE SYSTEMATIC IDENTIFICATION OF ORGANIC COMPOUNDS. A Laboratory Manual, 4th ed., by Ralph L. Shriner, Reynold C. Fuson, and David Y. Curtin (John Wiley and Sons Inc., New York, ix + 426 pp., 1956, \$6). The book is of average size, 14.5 x 22 cm., with a durable outside cover of pleasing appearance, and it is very well bound so that it will stand the constant usage which a book of this nature receives. The type is clear and readable; typographical errors appear to be nonexistent.

The book consists of 13 chapters: Introduction, General Aspects of the Identification of an Unknown, Preliminary Examination, Physical Properties, Qualitative Analysis for Elements, Solubility Classes, Application of Classification Tests, Spectroscopic Methods, Preparation of Derivatives, Tables of Derivatives, Separation of Mixtures, Interpretation of Experimental Data or Solution of Problems, and Problems.

This book is truly a revision of the very popular and useful work on the systematic laboratory study of organic compounds. The main improvements are the addition of the chapter on infrared and ultraviolet spectroscopy and in the chapters on the solubility classes and the application of the classification tests. The authors have included much material on the electronic and steric effects on acidity and basicity of compounds as well as other theoretical aspects on solubility, which makes it more understandable. The application of classification tests (chapter 7) contains new material, using modern interpretations of such reactions as the action of anhydrous aluminum chloride, the bromonium ion interpretation in bromine addition, nitrous acid reaction with amines, and the differences between bromine in water and bromine in carbon tetrachloride. Also the authors have included, under the discussion of the use of alcoholic silver nitrate, some theory on replacement reactions and neighborhood effects.

Chapter 8 on the use of infrared and ultraviolet for functional group determination is written for the individual with a general knowledge of these and for its use solely as a laboratory tool. Following a general discussion of the effect of conjugation, hydrogen bonding, steric strain, etc., the more characteristic infrared bands of the common functional groups are discussed on an individual basis. A table of infrared group frequencies is included. Ultraviolet spectroscopy is also discussed as an aid to the determination of functional groups. One may have confidence, in using the book, that the information given is the latest available. There are at least 60 new references on the preparation of derivatives. In the chapter on the ap-

plication of classification tests, 70% of the references are publications during the period of 1948-1955. Also 70% of the literature cited in the chapter on spectroscopic methods are from papers published in the period of 1950-1955.

It is the present writer's opinion that this work is the most useful textbook dealing with the identification of organic substances, both for regular class use and for the individual who may have a need for this in his laboratory and research work. It is an excellent source for experimental directions on the preparation of derivatives and for the determination of certain physical properties. In the latter instance chapter 4 contains an excellent description of methods for the determination of such properties as index of refraction, optical rotation, specific gravity, etc. Organic chemists engaged in research on analytical identifications will find this revised edition a valuable addition to their private collection of books.

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CUMULATIVE 35-YEAR INDEX

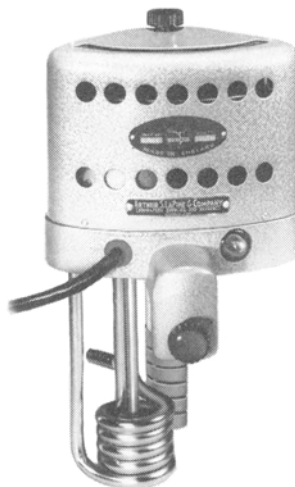
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