

by a chapter on the preparation of gas, liquid and solid samples which satisfactorily includes most of the techniques which have been employed up to the present. The last one hundred and thirty pages are spent on practical infrared spectroscopy (*i.e.*, the elucidation of the structure of molecules from group frequencies, qualitative and quantitative analysis) and the results and applications of low resolution infrared spectroscopy. This is probably the most valuable part of the book.

The 595 references extend to 1953 and it is probable that any important class of results or development in technique through this date has at least been mentioned. The author has made no attempt at complete coverage of the literature, which is quite appropriate in an introductory work, but at times the references cited seem haphazard and spotty. Certainly they have not all been viewed critically. For example, on p. 92 it is stated that rotational fine structure has been observed in the ammonium halides, although several subsequent investigations have shown the observations cited to be erroneous. Similarly, two of the three fundamental frequencies given for H₂S on p. 292 are now known to be in error, one of them by more than 100 cm.⁻¹. Nevertheless, for anyone entering the field or beginning to use infrared spectroscopy as a tool this book should be a helpful guide to the voluminous literature.

In sum, although the book gives the impression of being a compendium of material collected from a variety of sources rather than an integrated work it will be a useful introduction to its field.

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From Classical to Modern Chemistry. Some Historical Sketches. By A. J. BERRY, M.A., Fellow Emeritus of Downing College, Cambridge. Cambridge University Press, 32 East 57th Street, New York 22, N. Y. 1954. xi + 251 pp. 14 × 22 cm. Price, \$4.75.

In this book, Dr. Berry discusses the historical development of a number of fields in chemistry, continuing a work begun in a previous volume, *Modern Chemistry*. After an introductory chapter which is called "Some Remarks on Theory in Chemistry" and which gives a general view of this subject, the author turns his attention to certain specific fields of interest. The following chapter-headings will give a good idea of the matters treated by the author: "Vicissitudes of the Theory of Heat," "Some Aspects of Classical Electricity and Electrolysis," "Physical Optics and Chemistry," "Molecular Magnitudes," "Analytical Chemistry," "Chemical Formulae," "Some Problems Relating to Valency, Radicals and Constitution" and finally "Some Considerations on Kinetic Chemistry." Each topic is treated from an appropriate beginning in time up to the present, although greater emphasis is in general placed on the older history of the development.

We have in these historical sketches a very competent portrayal of topics that are of high interest to chemists. The book might well be recommended reading for graduate students, some of whom seem inclined to think that anything done or published ten years ago is already out of date and valueless. Teachers of chemistry will find this volume very useful in keeping their knowledge of the history of their science fresh and active.

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April 10, 1955—May 10, 1955

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