

major parts. The quenching of luminescence by electric fields is described, revealing further gaps in our understanding of the whole subject, and the review concludes with a little on enhancement in both non-electroluminescent phosphors as well as those showing electroluminescence.

Newcomers should find the book easy to read, though the subject may still bewilder them; and workers in adjacent fields will find the descriptions comprehensive. Experts might prefer more critical comment, but they, particularly, will welcome the extensive bibliography.

J. R. TILLMAN

### Organic Electronic Spectral Data

Vol. 4. 1958-1959. Edited by J. P. Phillips and F. C. Nachod. Pp. 1179. (London and New York: Interscience Publishers, a division of John Wiley and Sons, 1963.) 150s.

THE scheme of Volume 4 of *Organic Electronic Spectral Data* is the same as that of Volumes 1 and 2 (*Nature*, 191, 107; 1961), which covered the years 1946-55. It is promised that Volume 3 (1956-57) will be issued as soon as possible. Some notion of the increasing labour involved may be formed from the fact that pages-per-year, in the three published volumes, constitute something like a geometrical progression with a common ratio of 2.

About a dozen journals have been added to the list of those regularly searched; and there are also some forty 'miscellaneous' references to journals, especially of the Far East, to which continuous access is often difficult. Restriction to a selected reading-list, however extensive, is bound to have its drawbacks, since a journal prolific in data in one biennium may prove barren in the next, in which an unsearched journal (say, *The Analyst* or the *Journal of the Association of Official and Agricultural Chemists*) might be producing a bumper crop. Several journals in the regular list are thus reduced to a return of "none" in their assessment for data in the two years now considered. A few more are noted as 'not included' or 'no longer published' (which, indeed, can scarcely be applied to the *Quarterly Journal of Pharmacy*, for although it has long been dead, references to it still crop up). *Mikrochimica Acta* seems to have disappeared rather unaccountably and without trace.

The problem of the most profitable casting of the net, however, must be one in which the editors' due is much less criticism than sympathy, and gratitude for so large a haul of serviceable information. E. G. KELLET

### Chromatographic Reviews

Vol. 4: Progress in Chromatography, Electrophoresis and Related Methods. Edited by Michael Lederer. Pp. viii + 184. (Amsterdam and New York: Elsevier Publishing Company, 1962.) 50s.

AS the editor comments in his preface, the original purpose of *Chromatographic Reviews*, to provide in permanent form reprints of review articles which have appeared in the *Journal of Chromatography*, is obviously changing when, in Volume 4, more than half the contributions are new and published for the first time. This trend is in the right direction, as now the volumes can have the positive task of providing a compact up-to-date source of information about the range of experimental techniques covered, rather than act as an echo of already published material. In this light, perhaps thinking of the contributions as authoritative articles with personal flavour rather than straight-forward reviews would do much to make the series more readable and stimulating. A critical appraisal of the present position and future potentiality of a method by a recognized worker is often more valuable than a magnificent bibliography of references that there is not time to look up.

Perhaps the two articles by C. S. Knight, on the part played by the filter paper and ion-exchange papers in the

separation of amino-acids, are an indication of the editor's intention to move towards this. Both present a refreshing new look at the limitations of papers and techniques at present available, the second article being particularly comprehensive. Two of the other contributions have not been published before. One reviews the work done over the past twelve years on the paper chromatographic separation of the fatty acids. In addition to a consideration of the merits and limitation of the methods developed during this period, it includes an interesting section on special procedures for the quantitative analysis of 'critical pairs' not separated by the usual techniques. The other, after describing paper chromatography, paper electrophoresis and column chromatography as is applied to the separation and identification of the oligosaccharides, comes to the conclusion that more 'automation' would be of particular benefit in column methods and more highly specific reactions for the various molecular groups and linkages involved should be actively sought.

The review by Demole on thin-layer chromatography, a continuation of an earlier article, and that by Adloff on a well-covered field, the gas chromatography of radioactive substances, appear for the first time in English. Other contributions are on radio paper chromatography and the chromatography of porphyrins and metalloporphyrins.

The book maintains the previous high standard of presentation and, in common with previous members of the series, should be read by all those with an active interest in physical methods of separation. D. H. DESTY

### Chymia

Vol. 8. Annual Studies in the History of Chemistry. Editor-in-Chief: Henry M. Leicester. Pp. 185. (Philadelphia: University of Pennsylvania Press; London: Oxford University Press, 1962.) 40s. net.

REVIEWS in *Nature* of earlier volumes of this important publication have been uniformly favourable, and the present volume continues its high standard. The articles include accounts of copper and its alloys in early Argentina, solution analysis before Boyle, William Lewis as a chemist, the history of acetone, the development of ideas on chemical affinity and mass action, the metal hydrides, and a diverting story of the malicious attacks on Humphry Davy in contemporary periodicals. The articles are well documented and interesting.

*Chymia*, although dealing primarily with the history of chemistry, contains much general information on the history of science; and now that this subject is attracting increasing attention, a set of the volumes should be acquired by libraries while they are still available. They cannot fail to be of interest and value to a wide circle of readers. J. R. PARTINGTON

### Progress in Inorganic Chemistry

Vol. 5. Edited by F. Albert Cotton. Pp. 464. (New York and London: Interscience Publishers, a Division of John Wiley and Sons, Inc., 1963.) 105s.

FOUR-FIFTHS of Volume 5 of *Progress in Inorganic Chemistry* is taken up by two of its four articles. The first long article, "Preparation and Properties of Primary, Secondary and Tertiary Phosphines", by L. Maier, is a mine of information covering the literature (in more than 500 references) from 1950 to March 1962. The information is set out systematically. Summaries in extensive tables make it possible to find the properties and methods of preparation of a particular phosphine in about 2 min. This article will no doubt be consulted rather than read through, and those interested will include a high proportion of organic chemists. The other long article, "Polarographic Behaviour of Co-ordination Compounds", by A. A. Vlček, is mainly concerned with the evaluation of various kinds of experimental results obtainable in polarographic investigations on solutions of metal com-