

BOOK REVIEWS

HETEROCYCLIC CHEMISTRY. By Adrien Albert. Pp. viii + 424 (including Index). Athlone Press, of the University of London, 1959. 45s.

Those who are familiar with the work of Professor Albert will not be disappointed with his original approach to heterocyclic chemistry. The subject matter is divided for convenience into hetero-paraffinic, hetero-ethylenic and hetero-aromatic chemistry, and covers both preparative methods and properties, but with the emphasis very heavily on the latter. The approach to hetero-aromatic chemistry, which occupies a considerable part of the book, is refreshing, and provides a classification, based on the distribution of π -electrons in the ring, which simplifies the study of hetero-aromatics. The main subdivision is into (a) π -deficient *N*-hetero-aromatics—compounds such as pyridine, having nitrogen as the sole hetero-element, and a deficit of π -electrons elsewhere, (b) π -excessive *N*-hetero-aromatics, (e.g. pyrrole), and (c) π -excessive *O*- and *S*-hetero-aromatics. The correlation of structure and properties is much assisted by liberal use of formulae showing the most probable electron distributions, a feature which helps to emphasise the generality of this method of approach. Special chapters on spectra, ionisation constants, oxidation-reduction potentials, dipole moments and on the interpretation of complex formulae in terms of physical and chemical properties add considerably to the value of the book, which also includes a large bibliography and many excellent suggestions for further reading. The text also contains appropriate references to important biological, medical and technical applications. It should provide a most useful source of reference for honours students in chemistry and pharmacy and research workers alike, at a very economic price.

J. B. STENLAKE.

APPLIED PHARMACOLOGY (Clark). Ninth Edition. By Andrew Wilson and H. O. Schild. Pp. xii + 750 (including Index and 165 illustrations). J. and A. Churchill, Ltd., London, 1959. 50s.

Clark's Applied Pharmacology needs no description and it is very welcome that Professor Wilson and Dr. Schild have again brought it up to date. The appearance and layout have been little changed, and the many inescapable new drugs have been deftly included with an increase of less than ten per cent in the number of pages. There have been many small alterations; particularly the chapter on general principles of drug action has been refreshed and is a joy to read. There is also a very useful new section, written by Dr. Hannah Steinberg, on methods of studying drugs which affect mental activity. In parts of the text there has been a slight and regrettable tendency to make it less easy to trace statements to their origin; for instance, dates no longer appear beside the names of some authors whose statements are quoted, and so it has become more difficult to find these references for further information. It is also a pity that references in the text to tables which appear up to 14 pages away no longer indicate where in fact these tables are. But these are most minor blemishes on an excellent production. Much of A. J. Clark's original text has been preserved, and it is a measure of its quality that so much can remain unaltered. The revisions and additions are better than in the eighth edition, and the present volume admirably fills a gap which was developing as its predecessor became out of date.

MILES WEATHERALL.

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METHODEN DER ORGANISCHEN CHEMIE (Houben-Weyl). Fourth Edition. Edited by Eugen Müller. Volume XI, Part 2. Spezielle chemische Methoden. Stickstoffverbindung II (Unwandlung von Aminen) and Stickstoffverbindungen III. Pp. xlviii + 840 (including Index). Georg Thieme Verlag, Stuttgart, 1958. Moleskin, DM.155.00.

The extensive literature on nitrogenous derivatives has necessitated the division of Volume XI into two parts, issued as sub-volumes. Volume XI/1, which has already been reviewed, dealt solely with the preparation of amines, and such of their reactions as led to the formation of other amines. In the first part of Volume XI/2, the survey of amines is completed with a review of their actions which lead to their conversion to other derivatives, such as acid amides, amidines, nitramines, and amine oxides. Deamination with nitrous acid and its derivatives has been given special attention, and the chapter forms a useful survey of these reactions, which is not to be found elsewhere. The chapter on elimination of the amino group in the preparation of olefines and in substitution reactions also reflects current interests. The second part of Volume XI/2 summarises the literature on 1,2- and 1,3-alkylenimines, amino acids and their derivatives, lactams, quaternary ammonium compounds and certain nitrogen-sulphur compounds, including sulphamido acids, thioamido acids and their derivatives. The latter, and certain of the other contributions again are particularly valuable in providing surveys which are not readily available elsewhere. The volume as a whole is well up to the standard of the series, being liberally illustrated with formulae and adequately referenced, many of the references being of recent date.

J. B. STENLAKE.