diagrams. Igneous intrusions are badly neglected; no mention is made of dykes, sills, ring-structures, or other minor bodies, and even batholiths are dismissed in one page containing a very simple diagram.

This book would be helpful to students who have already had some preliminary instruction in map interpretation, and seek to broaden their outlook. The general standard of the problems lies between that required for intermediate and that of a general degree. It is a useful reference book, because it contains illustrated descriptions of many French tectonic terms, index maps of the "Carte Géologique de France", and a summary of official geological maps of the countries surrounding France, together with names of agents from whom they may be obtained. GILBERT WILSON

Manual of the Polarizing Microscope

By Dr. A. F. Hallimond. Second edition. Pp. 204. (York: Cooke, Troughton and Simms, Ltd., 1953.) 15*s*.

THIS very useful practical handbook is written with particular reference to the series of polarizing microscopes and accessories made by its publishers; but it will be eminently useful to all who have occasion to work with any kind of polarizing microscope. The present, second edition, is greatly enlarged and virtually a new work. The approach is essentially a practical one, with little of the mathematical theory of the microscope, but with emphasis on the necessary adjustments of the apparatus, on the errors consequent on maladjustment, and on the various methods available for the measurement of those optical constants for which the polarizing microscope is particularly adapted.

After a short historical introduction and chapters on the construction of the polarizing microscope and its accessories, Dr. A. F. Hallimond discusses in detail the methods available for the measurement of optical path-differences, extinction angles, and pleochroism in transparent media. Apparatus for the examination of opaque materials by reflected polarized light is then described, and the theory of the reflexion of polarized light at normal incidence from anisotropic absorbing media is clearly outlined. This leads to the methods of measurement of the constants of absorbing media, including the reflecting power, extinction angles, rotation of the plane of polarization on reflexion, and path-difference on reflexion, and to the accurate measurement of the constants of an elliptically polarized beam of light. The universal stage is then discussed, including both orthoscopic and conoscopic techniques, and its use in determinations of refractive index. A final chapter deals with the grinding and polishing of opaque minerals, with emphasis on those aspects which differ from metallurgical practice. M. H. HEY

College Chemistry

A Systematic Approach. By Harry H. Sisler, Calvin A. Van der Werf and Arthur W. Davidson. Pp. x + 623. (New York: The Macmillan Company, 1953.) 5.25 dollars.

AFTER a decade of teaching, the three authors combined their ideas and wrote "General Chemistry: a Systematic Approach", a text for first-year (American) university students. In this work they expounded, as well as customary introductory matter, the electronic theory of valency, the structures of solids, and other theoretical principles helpful in explaining chemical behaviour. Then, instead of leaving these ideas isolated in their several chapters, they applied them faithfully and consistently to explain the chemistry of the elements and compounds they describe. The resulting book contains the finest simple account of the selected modern theory and of its use in interpreting chemical action that the reviewer has so far met.

In response to an appeal the text of 870 pages has been abridged to make the "College Chemistry", now under review. The plan of the smaller book and the logical presentation of subject-matter are as before. The authors explain new terms such as ionization potential, ionic size, ionic radius, atomic crystals and ionic crystals, and point out the bearing of these on chemical action; they describe the Brönsted and the Lewis conceptions of an acid, discourse on the relation of acidity and basicity to electronic structure, and generally throughout the book stress the dependence of property on structure. Electronic configurations of atoms and molecules are extensively used. The subject-matter covers approximately the requirements in general and inorganic chemistry of British intermediate examinations. In addition, there is a section (47 pp.) on organic chemistry and its importance in the world of to-day. There are numerous illustrations and ample sets of questions and numerical problems. This is the kind of inorganic text for which many teachers and students have been looking. G. FOWLES

Chemistry of Carbon Compounds

A Modern Comprehensive Treatise. Edited by Dr. E. H. Rodd. Vol. 2, Part B: Alicyclic Compounds. Pp. xiv + 489–1092. (Amsterdam: Elsevier Publishing Company; London: Cleaver-Hume Press, Ltd., 1953.) 105*s*. net.

IT is in no way derogatory to the sections of this work already published to state that the appearance of this volume has been awaited with particular interest, including, as it does, two highly topical but somewhat complex subjects, the steroids and the triterpenes. For a worthwhile review of these two classes, the middle path of mere competence is of no use whatsoever; the task must be done superbly well or not at all. Fortunately, the editor has ensured the necessary excellence by calling on Prof. D. H. R. Barton to expound the intricacies of the triterpenes, while the steroids are in the able hands of Prof. and Mrs. C. W. Shoppee (steroid studies seem conducive towards husband and wife partnerships). From these authoritative sources one expects a great deal, and expectation is fully justified. The complicated elucidations of structure are clearly described, and stereochemical implications are kept well to the fore. Especially welcome is the admirable and timely survey of the recent remarkable synthetic feats in the steroid field.

Prof. Barton (aided by Dr. S. H. Harper) has also shouldered the burden of describing the simpler mono-, sesqui- and di-terpenes. Much of this work is solidly classical; but recent studies are also fully discussed, one of the most interesting being the elucidation, at long last, of the structure of caryophyllene and its congeners.

In a book of this scope, clear presentation of the complex formulæ involved is essential, and here one can only regard the feats of the compositor with awestruck gratitude. The flow-sheets, especially, are models of clarity and, although errors inevitably occur (for example, omission of the 11-keto group in some formulæ on p. 976), they are few and relatively trivial. R. A. RAPHAEL