one a glossary of geotectonic terms of Japan and the other a list of subgenera, genera, and higher taxa proposed in Japanese publications, help make this book a valuable source of information. The glossary is actually a series of thumbnail sketches that cover the major structural elements of Japan.

In the United States the language problem involved in getting at source material on the geology of Japan has kept our interest to a generally low level; few of us (and I am one of the many who have not) have made the effort to learn Japanese. The contributors to this volume are to be admired for their effort to bring to us, in our own language, material on the geology of Japan.

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Chemical Geology

Organic Geochemistry. Irving A. Breger, Ed. Pergamon, London; Macmillan, New York, 1963. x + 658 pp. Illus. $22.50.

Studies in Analytical Geochemistry. Royal Society of Canada, Special Publications, No. 6. Denis M. Shaw, Ed. University of Toronto Press and the Royal Society of Canada, Toronto, Canada, 1963. xii + 139 pp. Illus. $6.95.

Maturity and balance are the important characteristics that these two collections of geochemical papers have in common. *Organic Geochemistry* is a fat and comprehensive book that roundly summarizes just about every important phase of the field. The 18 authors of its 15 chapters, all leaders in the field, tell what is known of the organic geochemistry of everything from the cosmos to cadavers, with a generally high degree of detachment and completeness. *Studies in Analytical Geochemistry* is a thin sampler of a book making no pretense to comprehensiveness, but comprising an excellent selection of material (six subjects by seven authors) which shows the sweep, applications, and limitations of modern analytical geochemistry. These articles present conclusions drawn from the views and experience of their authors rather than complete summaries of the fields treated, but all are thoughtful and well balanced. A refreshing reserve runs throughout the book and contributes much to its coherence and force. The editor set the tone when he commented that "if careful fieldwork alone cannot reveal all the intricacy of nature, it is not to be expected that our contemporary geochemical techniques will do so either."

The papers in *Analytical Geochemistry* were originally presented at a symposium of the Royal Society of Canada in 1952 and all are reasonably current. The intent and the content of the book are well summarized on the jacket flaps and in the editor's preface, and all chapters include abstracts, but there is no index. *Organic Geochemistry* has an excellent index, but the papers were collected between 1957 and 1962, or later (the most recent reference is to a 1962 paper), the editorial preface does not provide a summary, and only 4 of the 16 articles include individual summaries. Each book, nevertheless, achieves a high degree of success—one as sampler, the other as comprehensive source book. The criticisms of content, which I might make to show that I have read these books, are essentially trivial and in no way detract from their significance as landmarks in chemical geology.

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Organic Chemistry

Methoden der Organischen Chemie (Houben-Weyl). vol. 6, pt. 2, *Sauerstoff-Verbindungen*, I, pt. 2. E. Müller, Ed. Thieme, Stuttgart, Germany, ed. 4, 1963 (order from Intercontinental Medical Book Corp., New York). xlviii + 952 pp. Illus. $55.

This is the first review published in *Science* of one of the major German works in the field of organic chemistry, of which 17 volumes have been published. The third edition of Houben-Weyl, a standard reference book for the techniques and instruments concerned with the chemistry of reactions, was used in organic laboratories all over the world. It had been published in 1925 (two volumes), in 1930 and 1941 (one volume each), had become obsolete, and was superseded by several American publications. On the initiative of O. Bayer, a chemist himself and one of the leaders of the German chemical industry, chemists in industry and in academic positions rallied from the German collapse to write a fourth edition of Houben-Weyl. Eugen Müller, an organic chemist with a strong interest in physics and instrumentation, is the editor; he is assisted by a board which consists of Bayer, H. Meerwein, and K. Ziegler. The first tome of the fourth edition was published in 1952.

The general plan of the treatise is shown by the titles of the volumes which have been published, some in more than one part: *General Laboratory Practice* (2 parts); *Analytical Methods; Physical Methods* (2 parts); *General (Chemical) Methods; Halogen Compounds* (2 parts); *Oxygen Compounds* (2 parts); *Sulfur, Selenium, Tellurium Compounds; Nitrogen Compounds* (2 parts); *Phosphorous Compounds*; and *Macromolecular Compounds* (2 parts). The new Houben-Weyl is a monumental accomplishment.

The present volume, *Oxygen Compounds*, part 2, is dedicated to Bruno Hauff. Until his death in 1963, Hauff, the moving spirit of the house that publishes the treatise, had devoted much of his effort to the project. The volume covers methods for the preparation and transformation of the following compounds: alcoholates, phenolates, enolates and chelates of metals (F. Schmidt, E. Bayer); organic derivatives of silicic acid (W. Simmler), boric acid (R. Köster), arsenous, arsenic, antimonous, and antimonic acids (W. Herrmann), and sulfurous and sulfuric acids (F. Sinn and K. Schimmelschmidt); esters of nitrous and nitric acids (A. Berthmann, H. Ratz), hypohalogenous acids (A. Hausweiler), and perchloric acid (K. Schwarzer); β-lactones (H. Kröper); and lactones (H. Kröper).

The names of the authors and their affiliations are indicative of expert treatment, and examination of the chapters shows dedication to detail. It is difficult to imagine that anyone entering the fields discussed would proceed without consulting this volume. The typography and technical preparation of the book are excellent.

A comprehensive treatise covering a large field will of course be based on a systematic plan. If the field is in a state of rapid development, however, and the publication proceeds over