

qualitative reactions of the important organic compounds are tabulated with full experimental details in a form which will be found very convenient for reference. The book will be found invaluable to all students and lecturers of practical organic chemistry by reason of its completeness of experimental detail and excellent manner of treatment. The type and illustrations are excellent.

(2) Prof. Staudinger's book gives no experimental details. It presumes that the student has already a good acquaintance with both theoretical and practical organic chemistry and is only concerned with the methods of separating the constituents of organic mixtures and identifying the class to which they belong. It gives no specific tests for individual substances or experimental details in performing the operations. The book is more a theoretical discussion of the methods employed than a practical aid in the laboratory. While it will prove useful in showing a student the way to deal with difficult problems, the methods given are too elaborate for ordinary use when the student has obtained practical experience; for example, many pages are used in discussing how to separate liquid mixtures which can be identified by their odour in a few minutes. The book has been translated into idiomatic English very ably, the only outstanding peculiarity being the expression "mixed melt test."

*An Introduction to Physical Geology: with Special Reference to North America.* By Prof. William J. Miller. Pp. xvi + 435. (London: Chapman and Hall, Ltd., 1925.) 13s. 6d. net.

SEVERAL books on physical geology, with special reference to North America, are already available, but Prof. Miller's contribution to the existing literature is sufficiently attractive to justify its choice as a college text-book. Although no new ground is broken, the order of treatment differs somewhat from that usually adopted. River work, for example, is not touched upon until rocks, weathering, earth-movements, and structural features have been dealt with. Underground waters, again, are considered only after volcanic action has been discussed. The effort after logical treatment in geology can, however, never be wholly successful, whatever the arrangement. Since the study of processes includes that of the alteration and origin of rocks, and that of the concomitant development of land-forms, the aspects of physical geology fall into at least three dimensions, and a written account, which is of necessity unidimensional, must therefore involve both anticipation and repetition.

Like all recent books of its kind, Prof. Miller's is weak on the theoretical side, perhaps deliberately in view of the variety of hypotheses now under discussion. But some mention might have been made of the controlling importance of radioactivity in contributing to the heat of the earth and to crustal disturbances. The grouping of weathering with metamorphism is an example of placing the logical significance of words before that of the processes they connote. Familiarity with Crook's important paper on classification, a paper that has been strangely overlooked in the United States, would have prevented such an error of judgment. The ideal text on physical geology, even relative to

existing knowledge, has yet to be written, but of its class, Prof. Miller's work is thoroughly good, and its exceptionally full illustration by photograph and diagram is an added virtue which should ensure success.

*Roman Folkestone: a Record of Excavation of Roman Villas at East Wear Bay, with Speculations and Historical Sketches on related Subjects.* By S. E. Winbolt. Pp. xiv + 199 + 21 plates. (London: Methuen and Co., Ltd., 1925.) 8s. 6d. net.

IN this volume Mr. Winbolt describes his excavation of the Roman site discovered at Folkestone in August 1923. He suggests, with good ground, that we have here the remains of the official residence of the Roman Commander of the British Fleet, which came into being somewhere about A.D. 43, with headquarters at Gesoriacum (Boulogne) and stations at Dover, Lympne, and at times Newcastle, and was probably disbanded about A.D. 290. The size of the villa testifies to its importance, and strategic considerations make it improbable that it was a purely private residence, especially as there is no other private building known along this coast. Mr. Winbolt has made a very careful record of the finds and describes them in detail. Having the interest of the general public in archaeological matters in mind, he takes his readers into his confidence, and not only gives for their benefit extracts from his diary so that they may follow the progress of the excavation day by day and share his enthusiasm, but he also explains with great lucidity how each type of find bears upon the solution of the problems of the excavator. His book, therefore, may be commended to those who have no technical knowledge of Romano-British antiquities as well as to the expert.

*Non-Metallic Minerals: Occurrence, Preparation, Utilization.* By Raymond B. Ladoo. Pp. viii + 686. (New York: McGraw-Hill Book Co. Inc.; London: McGraw-Hill Publishing Co., Ltd., 1925.) 30s. net.

THE technology of the non-metallic minerals has not before been treated so systematically and comprehensively as in this book. Merrill's well-known book is essentially geological and mineralogical, but Mr. Ladoo gives us not only the physical properties and mode of occurrence, but also methods of mining, uses, and market values, together with much miscellaneous commercial information. The materials discussed are listed under nearly ninety headings, arranged in alphabetical order, and to each section a bibliography is appended. The volume closes with a more general bibliography and an excellent index, so that as a work of reference it is both a valuable compilation and an admirable guide to a literature that is comparatively little known.

The author has covered a wide field, and to keep the book within reasonable limits of size and scope he has properly omitted all fuels such as coal and petroleum, and all other "minerals" of organic origin. These, like the metallic ores, have an extensive literature of their own, and the remaining minerals, hitherto somewhat neglected, have now for the first time received really adequate attention.