

"Popular Oil Geology," has produced a remarkably neat and illuminating little volume which may be confidently recommended to all interested in the subject of petroleum technology.

Prof. Ziegler has condensed a very large subject into a comparatively small space, and it must be admitted that in but few instances have the principles of the science suffered from this treatment. The author has the obvious knack of extracting the real substance of the various branches of oil geology, and of presenting this without unnecessary "padding," so that the book really achieves its purpose of being an introduction to larger volumes dealing in more detail with the principles of the subject.

The chapters on the laws of the migration and accumulation of oil and gas, on oil structures and oil fields, and on prospecting are particularly good, while the final remarks on oil investments, culminating in a parody of John Hammond's rules for investors, are quite as amusing as they are apposite.

The book is profusely illustrated, a great many of the maps and diagrams being taken from the U.S. Geological Survey publications, as acknowledged in the preface. While this practice of reproduction is useful within limits, it is one that can be very easily overdone. To say that it shows lack of originality is possibly an exaggeration, but when such diagrams as that included on p. 77 occur again and again in various American publications we have examined, it seems disappointing that a new rendering of the same subject cannot be invented. But for that and the price (which for a book of this description is rather excessive), this little volume deserves a place on the bookshelf of the layman, student, and expert alike.

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Our Bookshelf.

Ozone. By Prof. E. K. Rideal. (A Treatise of Electro-chemistry.) Pp. ix + 198. (London: Constable and Co., Ltd., 1920.) Price 12s. net.

IN recent years ozone has attracted increasing interest on account both of its value as an aid to research in organic chemistry, and of its actual or possible applications on the industrial scale. The literature of the subject is, however, widely scattered, hence in compiling this monograph, which forms a section of the treatise on electro-chemistry in course of production under the editorship of Mr. Bertram Blount, the author has done good service to chemists.

An interesting introductory portion, which deals with the early history, the general properties, and the occurrence of ozone, is followed by five

chapters in which the methods of production—chemical, thermal, and electrolytic—and in particular production by means of ultra-violet radiations and of the silent electric discharge, are adequately described. These are succeeded by a summary of the principal investigations on the catalytic decomposition of ozone, and in the next chapter its more important industrial applications—*e.g.* in the sterilisation of water, the "purification" of air, the bleaching of oils and fats, and the manufacture of vanillin—are discussed in some detail. The last chapter contains an account of the methods of detecting and estimating ozone.

The author has been distinctly successful in his effort to collect and correlate the various references to ozone which occur in chemical literature, and his monograph will be welcomed if only for that reason. In addition, it contains a valuable summary of what is known—after all not very much—about ozone, and by indicating problems which remain to be solved should also serve to promote investigation. It is therefore all the more regrettable that several of the pages of an otherwise praiseworthy book are disfigured by grammatical errors, or by sentences so carelessly constructed as to be obscure in their meaning.

Microscopy: The Construction, Theory, and Use of the Microscope. By Edmund J. Spitta. Third edition. Pp. xxviii + 537 + xxviii plates. (London: John Murray, 1920.) Price 25s. net.

THE first edition of this work was reviewed in NATURE for February 6, 1908. The work has gained a well-deserved popularity, and two further editions have since been called for. In each of these the opportunity has been taken to bring the subject-matter so far as possible up to date, and to indicate important new developments. In the present edition may be noted especially the reference to low-power objectives designed to give great depth of focus and a flat field, valuable especially for the photography of relatively large specimens of appreciable thickness, where good definition has to be obtained of parts lying in different planes. To illustrate the use of these, a considerable number of new plates have been added, which include some admirable reproductions of photographs obtained with modern objectives of this type.

Mention must also be made of the photographs added to illustrate the use of the term "critical definition." Unfortunately, the term, though no doubt convenient, is not one to which a precise significance can be given, and it thus always presents difficulties to the learner, who comes to appreciate only by experience the sense in which it is employed.

The "Addenda," amounting to more than twenty pages, contain useful notes of some recent improvements, with a few convenient tables. Attention is directed especially to the use of the newer Kodak filters for obtaining blue light with a powerful illuminant, details being given. The index has been improved and additional references have been inserted, notably those to the pages of