

beginner will doubtless be willing to admit his own obtuseness, but he will be disconcerted.

The book is very free from typographical errors and is, of course, excellently produced. There are 31 efficient diagrams and figures in the text. Though the pedagogy is a weak feature, the style has a refreshing air of activity and modernness, while the matter selected is generally accurate and always interesting. We feel certain, however, that this is not yet the ideal "Introduction to Physical Chemistry." Let the Quest continue.

ALAN W. C. MENZIES.

*Analyse der Silikat- und Karbonat Gesteine.* Von W. F. HILLEBRAND. Deutsche Ausgabe von ERNST WILKE-DÖRFURT. Leipzig: von Wilhelm Engelmann, 1910.

This volume in its German dress contains numerous additions made by its author to previous editions. The fact that German students have recognized its merits and want it in their own language reflects great honor upon its author. Years ago, within the knowledge of some of us, the Fatherland was the seat of most thorough training in mineral analysis. To-day, however, as evidenced by the rich fund of reliable information in this special publication and in other similar publications, America may justly lay claim to this position.

The careful perusal of its pages proved most refreshing to the reviewer, and if he may be allowed a word of advice to students of chemistry, it would be: Study the contents of this book; put to test the methods and experiences therein described. A vast fund of new knowledge will be the reward, a deeper respect for analytical methods and their significance and value will be engendered, while the feeling of contempt so frequently manifested for the work of the mineral analyst will absolutely disappear, and a wider and wholesomer view of the whole field of chemical science will result. Teachers of more advanced students in analysis will realize the greatest pleasure and profit in the consideration of the many topics of this volume in their seminars.

EDGAR F. SMITH.

*Das Radium und die Farben.* PROFESSOR DR. C. DÖLTER, Vorstand des Mineralogischen Institutes der Universität Wien. Verlag von Theodor Steinkopf, Dresden. 1910. pp. 133. Preis, geb. M. 5.

The discovery of radium and a recognition of the complex influences of its several forms of energy have aroused unusual interest for several reasons, but mainly, because, first, radium salts, in their decomposition produce canal and cathode (magneto- or electro-magneto-deflectable) and gamma (Röntgen) rays, exert specific, analytic and synthetic influences, physical, chemical and physiological, which might in a large sense be grouped under the head of chemical; second, when all that is positively known of these influences is applied to the world's history, petrographical and geological, a revision of previous ideas of changes that have taken place and calculations as to the age of the earth have become necessary.