be slipped into the pocket. It is evidence of the growing importance of this method of investigation that Dr. Kolthoff is able to give a list of 41 indicators, ranging from methyl violet to nitramine and Poirrier's blue covering a range of alkalinity from P_H 1 to 13, whilst a "stop-press" slip in Dr. Clark's book records the properties of 5 additional new indicators.

Kurzes Lehrbuch der Chemie in Natur und Wirtschaft. Von Prof. C. Oppenheimer. *Nebst einer Einführung in der Allgemeine Chemie.* Von Prof. J. Matula. Pp. xx+862. (Leipzig: Georg Thieme, 1923.) 25*s*.

THIS remarkable book contains in a single volume (i.) an introduction to general chemistry, covering 258 pages, contributed by Prof. Matula of Vienna, (ii.) a section on inorganic chemistry, covering 325 pages, (iii.) a section on organic chemistry covering 483 pages of the volume. Under these conditions a considerable measure of compression has been necessary. On the whole, this has been carried out judiciously, since most of the interesting topics in chemistry are referred to. It is, however, surprising that the largest number of entries in the name-index is under Neuberg, whose work in physiological chemistry, which is almost unknown to workers in pure chemistry, receives 46 entries, as compared with 36 under E. Fischer, 28 under von Baeyer and under Willstätter, and 18 under Werner. This is, however, less remarkable than the single entries only under the names of Bragg, of Pope (a reference to optically active compounds of tin), and of Walden (a reference to liquid sulphur dioxide as a solvent), and the complete omission of the familiar names of Lapworth, Lewis, and Langmuir.

As is usual under such high compression, illustrations are very scarce, but one of these is a crude picture showing the three principal zones of a candle-flame, which might surely have been left to the imagination. Since, however, there is no book of similar scope published in Great Britain, a chemical student who wishes to learn German might do much worse than practise the language, and, at the same time, acquire a knowledge of chemistry from a German point of view, by working steadily through this big volume.

Y a-t-il continuité dans le monde physique? Par Nicolas Yermoloff. Pp. x+48. (Paris: Gaston Doin, 1923.) 3.50 francs.

IN this memoir M. Yermoloff applies Cantor's theory of number to problems of evolution with the object of deciding whether the processes of evolution have been continuous, connex, or discontinuous. He regards the successive generations of a natural order, such as the Diatomaceæ, as an aggregate which can be treated by Cantor's methods. If there be continuity, this aggregate is infinite and non-enumerable, and its power is 2^{N_0}, where N_0 denotes Cantor's smallest transfinite cardinal number Alef-zero; if there be connexity, the aggregate is infinite, but enumerable, and its power is N_0; if finally there be discontinuity, the aggregate is finite, and its power is the total number of generations. With the last alternative the time required for the evolution of a given variety will be finite, but with the other two infinitely great, and much more difficult to account for. Thus the conclusion is reached that evolution has taken place by step-by-step "mutation" rather than by continuous, or even connex, "variation." If any criticism is to be offered of this interesting and suggestive memoir, it is that few of the biologists for whom, presumably, it is intended are likely to possess a sufficient knowledge of higher mathematics to appreciate the argument fully, in spite of the fact that quite one-half of the memoir is devoted to an exposition of Cantor's methods.

Practical Least Squares. By O. M. Leland. Pp. xiv+237. (New York and London: McGraw-Hill Book Co., Inc., 1921.) 15*s*.

THERE are already many excellent books on least squares, both theoretical and practical, but there are also many differences between the requirements of one student and another, and this book may well find a place. Its limitations of aim are clearly stated in the preface, the special object being to provide an elementary course in which practice is obtained first and reasons are supplied later. The body of the book contains, therefore, a description of the customary calculations, with relatively lengthy treatment of conditioned observations and triangulation, but with all discussion of precision relegated to the end. This is unusual, and the actual method of calculating the standard (mean square) error, working with an assumed base, is not given, although this method is used for calculating the mean itself. Also no direct reference is made to the minimum property of the standard error. The use of the normal law of error is justified in an appendix by Gauss's first proof, but in a course of this sort one might have expected to find more use made of actual sets of data to illustrate in detail the relation between theory and fact. The treatment is attractive and clear, but there are no examples for practice.

British Earthworms and How to Identify Them. By Hilderic Friend. (How to Identify Series, No. 18.) Pp. 64. (London: The Epworth Press, n.d.) 1*s*. 6*d*. net.

IT is to be hoped that the publication of this admirable and remarkably cheap little book from the pen of an expert will lead zoologists to devote more attention than hitherto to this rather neglected section of the British fauna. Mr. Friend uses "Earthworms" in a wide sense, including in his account the three families (i.) Lumbricidæ, containing eight genera and thirty-seven species, (ii.) Glossoscolecidæ, with two genera and three species, (iii.) Megascolecidæ, of which *Microscolex phosphoreus* is our sole representative. The illustrations, "keys," and tables of species in the several genera render the work of identification of specimens a comparatively easy task: while the book is so small and light that it can be carried in the pocket without inconvenience.

A Study of American Intelligence. By Prof. Carl C. Brigham. Pp. xxv+210. (Princeton: Princeton University Press; London: Oxford University Press, 1923.) 16*s*. net.

THE study is based on the data relative to intelligence and nativity published in the official report of psychological examining in the United States Army. The writer was at first attached to the psychological department of the Canadian Government, but he accepted an appointment in the United States Army when America entered the War.