Again one will find it very convenient to introduce cardboards into these figures to represent planes of symmetry, etc.

If one desired especially durable models the rubber-tube connectors might be replaced by thin-walled, strong, metallic tubes slitted throughout their lengths.

Of course, to represent atoms other than carbon, colored corks, or card-board disks may be used.

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NEW BOOKS.

Ion. A Journal of Electronics, Atomistics, Ionology, Radioactivity, and Raum-chemistry. Edited by CHARLES H. WALTER.[1] Vol. I, Fasc. 1. pp. 80. Nov., 1908. London: Publishing and editorial office, 16 Heathfield Gardens, Turnham Green, London W. Issued monthly. Price per volume of six numbers, 30 s. Single numbers, 6 s.

The multiplication of journals devoted to special lines of scientific study has become particularly marked in Germany. Great Britain, on the other hand, has relatively few specialist's periodicals in science. Physical Chemistry, a well-established department of scientific study, has no journal in England. The founder of the new journal, believing that the time is ripe for starting an organ in this domain, aims to make ION the "Physico-Chemical Journal of Britain."

The field of the journal is further outlined in the opening editorial as follows: "As a point of departure in the theoretical consideration of physico-chemistry we have followed the electron theory; physico-chemistry is, in our view, only the teaching of the equilibrium and of the motion of the electrons and of their complexes. The special application of the electron theory to chemical problems we have comprised in the term Raum-Chemistry—by which we understand the geometry of the electrons in chemical compounds of matter. The bankruptcy of the chemical formula in their present form is evident. .... It is undoubted that this bankruptcy has driven many inquirers away from atomistics to so-called energetic views, which certainly do not go very far, and possess as their sole attraction that of novelty. Raum-Chemistry will not be able to furnish any ideal condition, and its hypothetical character must be strongly emphasized in order to prevent our falling into the errors of contrary views. A science without hypotheses would posit a humanity without error, a state of things which not only a Lessing would find unendurable." In view of the wonderful results achieved by Brit-

[1] The name of Frederick Soddy appears on the title page of the first issue as joint editor, but in the next issue (Dec.) his name is omitted. In *Nature* for Nov. 26th, p. 99, Professor Soddy announces that he has "withdrawn from all connection with the journal."

ish investigators in Radioactivity, this branch will be given special attention.

The names of the following scientists appear on the title-page as consulting staff: Sv. Arrhenius, Stockholm; W. H. Bragg, Adelaide; A. S. Eve, Montreal; O. Hahn, Berlin; W. H. Julius, Utrecht; A. Werner, Zurich; G. Bruni, Padua; Mde. Curie, Paris; C. E. Guilleaume, Paris; J. H. van't Hoff, Berlin; W. Marckwald, Berlin; W. Wien, Würzburg. The second issue shows the following additions to the associated list: B. B. Boltwood, New Haven; E. Goldstein, Berlin; John Joly, Dublin; St. Meyer, Vienna; A. Reychler, Brussels; J. W. Brühl, Heidelberg. We hope that the staff will be further strengthened by the co-operation of other English men of science who are to-day making such conspicuous contributions in Electronics and Radioactivity.

The first number of ION opens with a tribute to the founder of radioactivity, M. Henri Becquerel, by F. Soddy. The same author also has a paper on the charge carried by the α-particle. The other papers in the first issue are: Uranium and geology, by John Joly; the measurement of energy in the world of electrons, by H. W. Julius; Actinium C, a new quickly decaying product of actinium, by O. Hahn and Lise Meitner. Sixty-two pages are taken up by these contributions. Then follow twenty pages of reports by the authors of papers published elsewhere and notices of new books.

The journal pages are 7 x 11 inches. Clear type and a good quality of paper are used. Hasty proof-reading is evident. H. SCHLUNDT.

Analyse und Konstitutionsermittelung organischer Verbindungen. DR. HANS MEYER, o. ö. Professor der Chemie an der Deutschen Technischen Hochschule zu Prag. Zweite, vermehrte und umgearbeitete Auflage. Mit 1003 Seiten und 235 in den Text gedruckten Figuren. Berlin: Verlag von Julius Springer. 1909. Preis, 31 M.

The investigator in the field of organic chemistry who prepares a new compound must often recognize the necessity of going beyond the usual data obtained by ultimate analysis, and the theory of the reaction of formation, and seek to prove the structure by showing the presence of characteristic groups in the molecule of the new substance. This need is recognized and well met by the author of this work, who has here brought together a large number of methods for this purpose.

The subject matter is treated in three parts. The first deals with the methods of purification, elementary analysis, and molecular weight determination.

The second part, which covers 65 pages, and is not found in the older edition, contains the methods for determining the fundament of the molecule with chapters on oxidation, reduction, and alkali fusion, as means to this end.