Extensive foot-notes point the reader to further sources of information and a full index adds to the value of the book as a work of reference.

This book can well be declared the most complete and most authentic work extant on this important subject and it should be read by the student of physics to whom a knowledge of units and standards is most necessary, as well as by all who wish to be well informed in regard to this interesting topic.

A thorough test has proved that every recognized authority has been consulted and more than one forgotten pioneer in metrology has been given due credit for his contribution to the science. On the whole the book can be commended without reservation and the authors are entitled to our best thanks for placing in compact readable form facts that are accessible to the few and obtained by them after long and tedious research.

J. H. GORE.

Notes on Electrochemistry. By F. G. WIECHMANN, Ph.D. 5 x 9 in., pp. vi + 144. Price, $2.00. New York, McGraw Publishing Company. 1906.

The aim of the author, as expressed in the preface, has been to give 'a clear and concise presentation of the general principles which underlie electrochemical science,' 'to offer a general survey of the subject, to serve as an introduction to its study and to aid in the securing of a proper understanding and appreciation of the work along individual lines.'

In pursuing this aim, the author has devoted seven pages to general principles of science, fourteen to general principles of electrical energy, nineteen to electrochemistry proper, fifteen to electrolytic dissociation, seventeen to electrochemical analysis, forty-six to electrotechnology, and ended up with a name and subject index. Each chapter is prefaced by a list of the most important literature on its particular subject.

We differ in opinion from the author concerning the classification of electrotechnical processes; his division into direct-action and indirect-action processes seems to us to be illogically worked out, at least as far as regards placing 'electrodeposition from fused electrolytes' among the 'indirect action' processes. On page 125, line 6, the accidental omission of 'not' makes the sentence express the reverse of the facts concerning the first news of the manufacture of calcium carbide. There are a few other shortcomings really not worthy of mention, in view of the high standard of excellence and accuracy prevalent in the book.

The plan of the work is admirable, it is carried out in a masterly manner, and the author has produced an introduction to electrochemistry which most satisfactorily fulfills his objects, as quoted above. The style is clear and crisp, the information of a high standard of reliability and surprisingly up-to-date. The balance is excellent. For student, technologist, general scientist or man of affairs, it can be highly commended as a trustworthy, satisfactory and inspiring guide into electrochemistry.

JOSEPH W. RICHARDS.

SCIENTIFIC JOURNALS AND ARTICLES.

The Journal of Experimental Zoology, Vol. III., No. 3 (September 1906), contains the following articles: 'Locomotion of Amœbæ and Allied Forms,' by Oris P. Dellinger. Amœbæ and Difflugias are studied from side view as they creep along the polished edge of a glass slide. From such a view the points of attachment and support which furnish the key to their locomotion are easily seen. All forms studied alternate the points of attachment and pull and squeeze themselves along. 'Light Reactions in Lower Organisms. I. *Stentor Cœruleus,*' by S. O. Mast. 'The Influence of Light and Heat on the Movement of the Melanophore Pigment, especially in Lizards,' by G. H. Parker. A study of the color changes in the skin of the horned toad shows that the so-called reversed color changes of certain lizards, Stellio, Uromastix, etc., are probably temperature reactions and not light reactions, and leads to the conclusion that in all melanophores and other like pigment cells, whether they are in the skin or the eyes of the vertebrates or