in the hands of a beginner. To any one who has mastered the elements of physical chemistry this book is indispensable, and it should be read by all who desire to keep abreast with the newest and best which has appeared in the field of general chemistry.

H. C. J.

Determination of Radicles in Carbon Compounds. By Dr. H. Meyer, Docent and Adjunct of the Imperial and Royal German University, Prague. Authorized translation by J. Bishop Tingle, Ph.D., F.C.S., Instructor of Chemistry at the Lewis Institute, Chicago, Ill. New York, John Wiley & Sons; London, Chapman and Hall. 1899.

This English edition of Dr. H. Meyer's 'Anleitung zur quantitativen Bestimmung der organischen Atomgruppen' will be heartily welcomed by all teachers and advanced students in organic chemistry. As the translator well says in his preface: 'The quantitative side of organic chemistry, apart from elementary analysis, is almost always neglected in the ordinary courses of instruction, and when the need for it arises, in the prosecution of research work, for instance, it is difficult to obtain a comprehensive view of the methods which are available without undue expenditure of time.' The present work supplies a systematic treatment of the various methods in use for determining quantitatively most of the groups ordinarily found in carbon compounds in a very convenient and compact form. It is to be hoped that it will bring about the introduction of some quantitative work into the regular college course of organic preparations. Some idea of the character of the book may be given by the following brief synopsis of its contents. The book is divided into five chapters. Chapter I., which is introductory, treats of the determination of hydroxyl (—OH); Chapter II. of methoxyl (CH_3O—), ethoxyl (C_2H_5O—), and carboxyl (—COOH); Chapter III. of carbonyl; Chapter IV. of the amino and related groups and Chapter V. of the diazo-, hydrazide-, nitro-, iodoso- and iodoxy-, and the peroxide-groups. The author has made various corrections and additions to the English edition, so that it is an improvement on the German one. The book is well printed and bound in convenient form for laboratory use. It has a good index of both subjects and authors' names, and an appendix containing some useful tables. The book can be most heartily recommended to all organic chemists.

W. R. Orndorff.

SCIENTIFIC JOURNALS AND ARTICLES.

In *The American Journal of Physiology* for November, J. C. Herrick reports an investigation of the influence of temperature on nervous conductivity. He found that a strong or moderate action current produced by an induction current or condenser discharge was not changed in intensity when the nerve impulse passed through areas varying in temperature from 8° C. to 40° C. Usually a decrease in current followed the application of temperature beyond these limits. An increase in the strength of action current in passing the impulse through a warmer area occurs, however, under two conditions—when the action current is only a small fraction of the maximum, and when the entire nerve except the warmed part is below 10° C. From his observations he concludes that the action current ordinarily observed and studied probably lies far beyond those accompanying maximal functional impulses.

Porter and Muhlberg present an experimental criticism of the theory that injury produces prolonged inhibition of the activities of the spinal cord. Believers in automatism of the cord have explained the failure of the cord to continue orderly functioning after separation from the brain, by assuming that the conditions of experimentation inhibit the spinal centers for a long period. To settle the question, the cell bodies of the respiratory nerve of the diaphragm were separated on one side of the spinal cord from the respiratory center in the brain. After this was done, these cells were still able to discharge motor impulses, but their apparently automatic rhythmic respiratory power was gone. Animals kept for a long period after this operation proved that the loss was permanent, and that it could not, therefore, be ascribed to inhibition.

Artificial division of egg cells, now attracting so much attention, has been further investi-