

strong mineral acid the final products are orthophosphoric acid and ammonia. If, however, the action is limited, a series of intermediate acids is formed. Methods were devised for obtaining these acids in pure condition and a number of their salts were made and studied.

*On Certain Derivatives of Trichlordinitrobenzol:* By C. LORING JACKSON and W. R. LAMAR. The results of an investigation of the behavior of various reagents with tribromdinitrobenzol have been published in this JOURNAL. In the present paper the author compares those results with the ones obtained when trichlordinitrobenzol is used. With aniline the reaction in both cases is similar, the product formed being trianilidodinitrobenzol. When sodic ethylate is used, the replacement of two bromine or two chlorine atoms leads to the formation of similar compounds; but the replacement of the third does not follow the same rule, nor is the reaction with malonic acid ester similar in the two cases.

*Camphoric Acid:* By W. A. NOYES. Results obtained by this author have led him to reject the formula proposed for camphor by Bredt, which is the one most generally accepted, and that proposed recently by Tiemann. The evidence against the latter is found in the fact that the rate of esterification of two compounds, which should according to the view of Tiemann be the same, is very different. He has also subjected Armstrong's formula to a synthetic test and finds that his formula for camphor is not true. One of the products obtained in the course of this investigation, dihydro-cis-campholytic acid, has been studied by E. B. HARRIS, and the results are incorporated in this article.

*On Diacid Anilides:* By H. L. WHEELER. Diacid anilides may be divided into two classes, the first consisting of those which have identical acid groups, and the second of those with unlike acid groups. The second class have not been obtained by the same methods as the first; but the author of this paper has devised a method for their formation, which consists in treating silver or mercury acid anilides with an aliphatic acid chloride, when the action is similar to the one in which benzoylchloride is used. A number of these mixed diacid anilides

were prepared and studied. When silver and mercury salts of the amides were used, imidoethers were formed and not diacidamides, as was expected.

*Iodometric Determination of Selenious and Selenic Acids:* By J. F. NORRIS and H. FAY. This method depends on the reaction between sodium thiosulphate and selenious acid in the presence of hydrochloric acid. If the selenious acid in the presence of hydrochloric acid is treated with an excess of sodium thiosulphate, and then titrated back with iodine, very satisfactory results can be obtained. The complete reaction which takes place here is as yet unknown. Selenic acid must be reduced by boiling with hydrochloric acid before the selenium can be determined. Mixtures of the two can be easily analyzed by first determining the selenious acid and then the total after reduction of the selenic acid.

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#### NEW BOOKS.

*An American Text-Book of Physiology.* Edited by WILLIAM H. HOWELL. Philadelphia, W. B. Saunders. 1896. Pp. 1052.

*Die Bedingungen der Fortpflanzung bei einigen Algen und Pilzen.* GEORG KLEBS. Jena, Gustav Fischer. 1896. Pp. xviii+543.

*Die Morphologie und Physiologie des pflanzlichen Zellkernes.* A. ZIMMERMANN. Jena, Gustav Fischer. 1896. Pp. viii+188.

*On Certain Problems of Vertebrate Embryology.* JOHN BEARD. Jena, Gustav Fischer. 1896. Pp. vi+77. M. 2.

*Evolution of the Art of Music.* C. HUBERT PARRY. New York, D. Appleton & Co. 1896. Pp. x+342.

*Alterations of Personality.* ALFRED BINET. Translated by HELEN GREEN BALDWIN. New York, D. Appleton & Co. Pp. vii+356.

*Number and its Algebra.* ARTHUR LEFEVRE. Boston, D. C. Heath & Co. 1896. Pp. 230.

*The Coming Ice Age.* C. A. M. TABER. Boston, Geo. H. Ellis. 1896. Pp. 94.

*Genius and Degeneration.* WILLIAM HIRSCH. Translated from the second edition of the German work. New York, D. Appleton & Co. 1896. Pp. vi+333.