

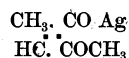
tempts to replace the chlorine by the cyanogen group by treatment with potassium cyanide under various conditions were only partially successful. The acid amide was converted into caffeine carboxylic acid and a number of salts were prepared and studied. All the compounds could be explained by the accepted structure for caffeine.

Shober and Kiefer describe the results of a series of experiments on the decomposition of metadiazobenzene sulphonic acid. They find that this acid when boiled with methyl, ethyl and propyl alcohols, at different pressures, gives both the methoxy and hydrogen reaction, while the corresponding para compound gives only the hydrogen reaction. Kastle and Keiser have a paper on the colorimetric determination of the affinity of acids by means of potassium dichromate. The reaction depends upon the fact that when a solution of potassium dichromate is treated with a solution of sodium acetate or the sodium salt of other acids, the base is equally distributed and the normal chromates are formed. They used as a standard a solution of potassium dichromate to which a solution of tenth-normal sodium hydroxide was added until an equal color was obtained. They could determine the amount of decomposition and, assuming the affinity of potassium dichromate as 1, could calculate the relative affinities of the acids. For many of the acids the results agree fairly well with those obtained by Ostwald; but for some acids the method could not be used. Mixer gives the methods of preparation and properties of some azo and azimido compounds, and Noyes contributes another article on camphoric acid. He finds that in the formation of campholytic acid, from di-hydroamino-campholytic acid, by the action of nitrous acid, another acid is formed, whose reactions, along with other facts, furnish strong proof that the carboxyl groups of camphoric

acid are combined with adjacent carbon atoms. He considers the two isomeric campholytic acids to be stereoisomeric.

An article by Wheeler contains a description of benzimidomethyl ether and its action on aromatic ortho compounds. No new compounds were obtained, as the reactions took place differently from what he expected.

Curtiss has repeated some of Nef's work on the action of ethyl iodide on silver acetyl-acetone



and explains the formation of two products by the assumption that the molecule has two points about equally susceptible of attack, namely, the silver atom and the double bond between the two carbon atoms. The ethyl, therefore, replaces the silver directly, or the ethyl iodide is added to the doubly bound carbonatom. He has also shown that Claisen's objection to Nef's statement, that oxymethylene compounds and acetacetic ether, in the free state, show close analogy, does not hold, as he has obtained an ester by the action of dry hydrochloric acid gas on acetacetic ether in alcohol. Randall contributes a report of articles by Ramsay on 'The molecular complexity of liquids.' This number also contains obituary notices of James A. Dana, Lothar Meyer and Gerhard Krüss.

J. ELLIOTT GILPIN.

NEW BOOKS.

- Fingerprint Directories.* FRANCIS GALTON. London and New York, Macmillan & Co. 1895. Pp. 123. \$2.00.
- Annual Report of the Department of Health of the City of Chicago.* ARTHUR R. REYNOLDS. Chicago. 1895. Pp. lix+268.
- A Text Book of Physiology.* M. FOSTER. New York and London, Macmillan & Co. 1895. Pp. xlviii+1183. \$5.00.