heim, that yellow-hot platinum, by an intermediate formation of platinic chloride, may partly be volatilized, though platinous chloride is completely decomposed already at a temperature below 600° C.

I have frequently repeated Troost and Hautefeuille's experiment, and have investigated it likewise with regard to the quantitative proportions, and have found that in this, as in others, where the quantity of the one or other is to be considered, time forms an important element. Of a certain quantity of platinum which, at 1570° C., was acted upon by a lively current of dry chlorine gas, but one per cent. was volatilized. From this it is evident why, in our experiments, no perceptible quantities of platinum could be volatilized. For if the volatilized quantity of platinum is, within one hour, and in a rapid current of chlorine gas, but one per cent., it is evident that, in our case, within a few seconds, when the chlorine is moreover not in motion, the volatilized quantity of platinum can hardly amount to hundredths of this one per cent.—that is, a quantity which cannot be weighed, as not more than 0.07 grm platinum was present.

ZUERICH, November, 1879.

Abstracts from American and Foreign Journals.

American Chemical Journal.

Vol. I, No. 4.

Abstractor, J. P. BATTERSHALL, PH. D.

Researches on the Complex Inorganic Acids, WOLCOTT GIBBS, M. D.—The term "complex inorganic acids," is applied to those acids which are formed by the union of two or more acids, with elimination of water, the product possessing properties like an acid containing a single radical. The author refers to the previous investigations of Laurent, Scheibler, Marignac and others, on the alkaline salts of tungstic acid, and remarks that the accurate study of these compounds presents peculiar difficulties, owing, principally, to the fact that the salts are frequently very complex in character—those of one series also often approaching those of another in composition—and that they are efflorescent, and are decomposed by boiling water. The tungstic oxide in the compounds referred to was determined by the method of Berzelius, modified as follows:

Mercurous nitrate is added in slight excess to the boiling solution of the tungstate, and mercuric oxide added until the mercurous tungstate formed assumes a persistent reddish hue; the precipitate is then strongly ignited. The water was determined by simple ignition, and the alkaline base was generally estimated as difference.

Numerous complex salts are mentioned, and their method of preparation described. The classification of alkaline tungstates already noticed in this JOURNAL (*vide*, JOURN. AM. CHEM. SOC., I, 4, 111), is repeated, and the following arrangement of the alkaline molybdates is given:

NORMAL SERIES.

$MoO_3.Na_2O + 2Aq.$
$2MoO_3.2Na_2O + H_2O.$

META SERIES.

$4MoO.Na_2O + 6Aq.$
$6MoO.2Na_2O + 14Aq.$
$8MoO.Na_2O.2H_2O + 2Aq.$
$10MoO.Na_2O.3H_2O + 9Aq.$
$14MoO.6Na_2O + 44Aq.$
$16MoO.2Na_2O.5H_2O + 3Aq.$
$18MoO.2BaO.6H_2O + 2Aq.$

The remainder of this article is devoted to graphical formulæ of alkaline tungstates.

Contributions from the Sheffield Laboratory of Yale College. (No. 2.)

On some Compounds of Aromatic Amines with Silver Nitrate and Sulphate, W. G. MIXTER.

Aniline silver sulphate is prepared by dissolving silver sulphate and aniline in boiling water, filtering hot, and washing and drying the crystalline compound which separates out upon cooling. The analysis gave results corresponding to the formula: $(C_6H_5NH_2)_4.Ag_2SO_4.2H_2O$.

Paratoluidine silver sulphate is obtained in an analogous manner, and has the formula: $(C_7H_7NH_2)_4.Ag_2SO_4.2H_2O$.

Metanitraniline silver nitrate.—Prepared from an alcoholic solution of metanitraniline and silver nitrate; fuses at 124–125° C., and has the composition: $(C_6H_4NO_2NH_2)_4.AgNO_3$.

Nitrotoluidine silver nitrate is obtained from the aqueous solution of the nitro-amine and silver salt; it fuses at 131–132° C., and has the formula: $(C_7H_6NO_2NH_2)_4.AgNO_3$.

Paratoluidine silver nitrate melts at 101° C., and has the composition: $(C_7H_7NH_2)_2.AgNO_3$.

On Clarke's Method for the Separation of Tin from Arsenic and Antimony, FRED. P. DEWEY.