

A variety of characteristic derivatives have been made. Thionurate of ammonia [$C_3H_4N_2SO_6(NH_4)_2$] is prepared by acting upon the nitrous derivative with sulphate of ammonia; and amidomalonylurea ($C_4H_3NH_2N_2O_3$), by reducing the former by means of chloride of tin. Alloxantine is made by treating dibromomalonylurea ($C_4H_3Br_2N_2O_3$) with hydric sulphide. This can be changed into alloxan ($C_4H_2N_2O_4$) by adding twice its weight of water and heating to solution with a few drops of nitric acid. Murexide is obtained by treating amidomalonylurea with red oxide of mercury. If tartaric acid ($C_4H_4O_6$) be treated with urea and oxichloride of phosphorus, oximalonylurea is probably obtained, as the product gives a characteristic color by successive treatment with nitric acid and ammonia.

On Amalgams of Chromium, Iron Cobalt, Nickel and Manganese, and on a New Process for the Preparation of Metallic Chromium, H. MOISSAN.—Chromium amalgam is made by acting upon sodium amalgam by solution of protochloride of chromium. This amalgam, heated in a current of hydrogen, gives metallic chromium. An amalgam of manganese is made by decomposing a solution of protochloride of manganese, in the presence of a negative electrode of mercury, by means of a battery. Amalgams of iron, cobalt and nickel, can also be prepared, and from them the pure metals can be reduced.

Analysis of some Metallic Fragments taken from Peruvian Sepulchres at Apcon, near Lima, A. TERREIL.—These analyses were undertaken with the idea that some light might be thrown upon the condition of metallurgy in this country in the sixteenth century. It will be noticed that the first sample contained chlorine. There was much sea sand in the locality where this metal was found. The analyses are as follows:

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
Silver	77.04	33.35	17.27	—	trace.
Gold	trace.	5.42	—	—	—
Copper	7.06	60.83	79.03	65.90	94.35
Zinc	—	—	—	32.04	—
Iron	—	—	—	1.05	—
Chlorine.	15.71	0.22	2.31	trace.	trace.
Oxygen, sulphur, arsenic, carbonic acid, etc., undet.	0.19	0.18	1.39	1.01	5.53
Quartz sand	—	—	—	—	0.12
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	100.00	100.00	100.00	100.00	100.00

No. 1 is a definite alloy $\frac{916}{1000}$ fine. Nos. 2 and 3 are not definite alloys; small quantities of silver and gold present in some of these, is probably due to the presence of these metals in the ores. No. 4 is a sample of brass similar to that used at the present day. As zinc is not found in Peru, it must have been imported from Europe by the Spaniards.

A New Determination of the Chemical Equivalent of Aluminium, A. TERRELL.

Note upon the Presence of Nitriles in the Pyrogenous Products obtained from the Residue from the Industrial Treatment of Beet Roots, CAMILLE VINCENT.—In addition to methyl alcohol and acetonitrile, previously announced, the author has since detected the presence of propionitrile, butyronitrile and valeronitrile, and has made the corresponding acids and salts.

On the Camphor of Borneo.—A claim of priority, J. RIBAN.

On the Nature of Certain By-products obtained in the Industrial Treatment of Pennsylvania Petroleum, L. PRUNIER and R. DAVID.—In the material originally obtained from Dr. Tweddle, of Pittsburg, it is found that the products of fractional distillation (petrocene, carbocene, carbopetrocene and thallene) are not definite compounds, but only mixtures. By acting upon them with different solvents, they may be resolved into a series of hydrocarbons. Anthracene, phenanthrene, chrysene and other bodies obtained in the distillation of coal, have been noticed, indicating a parallel series, with, perhaps, some new terms.

On the Formation of Organic Ultramarines, DE FORCRAND.—In continuation of the subject previously discussed,* ultramarines of sodium, potassium, barium, magnesium, zinc lithium and rubidium have been prepared. The process is simply to heat an intimate mixture of a metallic chloride and silver ultramarine for some time under regulated conditions. Ultramarines of organic radicals have also been prepared by treating in a similar manner; silver ultramarine with iodide of ethyl, for instance. The products gave off sulphide of ethyl upon being heated, but if chloride of sodium was mixed with it previous to heating, it was changed to ordinary blue ultramarine. Similar results were obtained by treating silver ultramarine with iodide of allyl, iodide of amyl, chloride of benzyl, &c. The characteristics of the bodies thus obtained are similar to those of ordinary ultramarine.

* Bull. Soc. Chim., 30, p. 112.