

Paris Academy of Science.

Meeting of Jan. 6th, 1879.

Abstractor, P. CASAMAJOR.

On the Formation of Organic Ultramarines, M. de FORGRAND.

—Silver ultramarine is prepared by the process of Mr. Heumann.* By heating the silver ultramarine in the dry, with a chloride of a metal, the author obtained chloride of silver and an ultramarine of the metal. This process was published in the *Bulletin de la Société Chimique*, vol. xxx, p. 112. As this reaction is very general, he applied it to the production of organic ultramarines, by heating silver ultramarine with the chlorides and iodides of the various alcoholic radicals.

The silver ultramarine is placed in a closed vessel and heated to 180° C., with an excess of ethylic iodide. After heating 15 to 18 hours, the product is washed with sodic hyposulphite and water, and heated again in the closed vessel in presence of an excess of ethylic iodide. This operation is repeated until the product, after being washed, contains no more silver, this metal having been removed in the state of iodide.

The result is a light grey powder which, on being heated, gives ethylic sulphide. If the powder is mixed with pulverized sodic chloride and the mixture is heated, ethylic sulphide is not given off, and the powder turns from grey to blue, reproducing ordinary ultramarine with all its characteristics.

To ascertain the presence of ethyl in this substance, the author collected the substances resulting from its decomposition by heat in mercuric chloride. The crystalline precipitate, on being analyzed, shows, that the substance obtained was a true ethylic ultramarine.

Analogous reactions were obtained with the iodides of other alcoholic radicals, also with a certain number of iodides of ammonium quaternaries. These results will be given in future communications

Researches on Ozone and Electricity, M. BERTHELOT.—The most important experiment of the author is the following: "The decomposition of pure carbonic acid by electricity, in a space free from mercury and from oxidizable substances, gives rise to interesting phenomena which lead us to suspect the existence of per-carbonic acid. After passing electricity for 12 hours in the annular space

* Deutsche chemische Gesellschaft, vol. x, p. 991.