ART. XLIII.—*On the action of Ferrocyanid of Potassium on Monochloracetic ether*; by O. LOEW, assistant in the Laboratory of the College of the City of New York.

KOLBE was the first to prepare cyanacetic acid, which is especially interesting from its transformation into malonic acid by treatment with potassa. In a similar manner Heintz prepared sulphocyanacetic acid, by boiling monochloracetic ether with sulphocyanid of potassium. This led me to try the action of ferrocyanid of potassium upon monochloracetic ether, to ascertain whether the radical ferrocyanogen can participate, as such, in the reaction. I boiled monochloracetic ether, dissolved in alcohol of 90 per cent, with powdered ferrocyanid of potassium for 4 to 6 hours. An action gradually took place, by which chlorid of potassium was formed, together with another light blue amorphous substance, which became of darker color on exposure to the air, and was undoubtedly Prussian blue.

When the liquid was filtered and boiled with caustic potassa, ammonia was developed; after the latter ceased to be evolved, the liquid was mixed with sulphuric acid and agitated with ether. On evaporating the ether I obtained white crystals, having the appearance of malonic acid. This substance was converted into the lead salt by precipitation with acetate of lead: 0.2997 grm. yielded 0.2904 grm. sulphate of lead = 66.99 per cent Pb. The malonate of lead contains 66.99 per cent Pb.

The reaction is therefore not analogous to that above cited, but the radical ferrocyanogen is broken up into cyanid of potassium and cyanid of iron. The former yields, with chloracetic ether, chlorid of potassium and cyanacetic ether, while from the last named body malonic acid is produced.

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