GELATINOUS SILVER CYANIDE.

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In the *Comptes Rendus*, **73**, 998, Stas has described the occurrence of four different varieties of silver chloride, viz :

- (a) the gelatinous ;
- (b) the cheesy, flocculent ;
- (c) the pulverulent ;
- (d) the granular crystalline variety.

No methods are given for obtaining these varieties, nor could the author find any reference in the literature to any other salts of silver having the above properties. The following will, therefore, be of interest.

Recently the author instructed one of the students in the University laboratory to reduce silver chloride to metallic silver by fusion with potassium cyanide. As the work was purely experimental, no weighed quantities of the substances were taken, nor was any notice taken of the temperature at which the fusion took place. The cooled mass and porcelain crucible were placed in a beaker, covered with water, boiled for thirty minutes, and then put aside until the following day. On examining the contents of the beaker, instead of finding the liquid above the crucible clear, as had been expected, it was filled with a transparent gelatinous mass, somewhat resembling aluminum hydrate, but of greater consistency. A portion of this precipitate was removed from the solution, carefully washed with cold water until the filtrate reacted neither with silver nitrate nor with dilute hydrochloric acid, and then carefully dried.

A qualitative examination showed the following: The substance is readily soluble in ammonium hydroxide, from which solution it is re-precipitated by nitric acid. It does not fuse on heating, but decomposes readily, leaving a residue of metallic silver. The presence of cyanogen was readily detected by the "prussian blue" reaction. No chlorine was found.