ART. XV.—*Remarks on the Composition of the Iodide of Platinum.* By ROBERT J. KANE, M. R. I. A., Professor of Chemistry to Apothecaries' Hall, &c.

THE difference between the results of Lassaigne and myself as to the composition of the iodide of platinum being such as could not be accounted for by any possible error in the analyses, immediately on the receipt of his memoir, I recommenced the investigation of the subject, and I am glad to find that it has since engaged the attention of Mr. Phillips, who arrived at the conclusion I had myself adopted, that where a difference existed between my results and those of Lassaigne, the error was most probably on my side, and such I have since determined by experiment to be the case.

Having lying by me a quantity of the iodide that had been prepared at the time of the former experiment, I analyzed it, and found that it gave the results before obtained, viz., $1\frac{1}{2}$ atoms of iodine + 1 atom of platinum. It was, therefore, evident that the source of error was not in the analysis.

Having prepared some perchloride of platinum, freed well from proto-chloride, it was decomposed by hydriodate of potash, and the precipitated iodide collected. In this decomposition iodine was separated, but in small quantity. The iodide of platinum so prepared possessed all the properties by which it has been characterized by Lassaigne and myself. Two analyses were made of it.

In the first, 60 grains were heated to redness; there remained behind 17.7 of platinum.

In the second, 60 grains were heated to redness; there remained 17.4 of platinum.

This iodide was, therefore, by these analyses, composed of—

	Iodine.	Platinum.
1st. - -	42.3	17.7
2nd. - -	42.6	17.4
	<hr/>	<hr/>

On Lassaigue's supposition it should be—

Platinum - - - - 16.8

Iodine - - - - 43.2

On my former view—

Platinum - - - - 20.55

Iodine - - - - 39.45

These analyses prove evidently that Lassaigue is correct, and that probably in consequence of using a perchloride, holding in combination some proto-chloride of platinum, I obtained a mixture of the two iodides of platinum, which of course gave, on analysis, a result intermediate to them.

In reply to a letter from me to my friend Chevalier, Lassaigue stated that having made the iodide of platinum so far back as the year 1829, and determined its composition, he is of course entitled to be considered its discoverer ; but he did not at that time develope its properties ; he had not recognized its power of uniting with the basic iodides ; and in his answer (an abstract of which and of my letter appeared in the *Journal de Chimie Medicale*, for January 1833), he at once allows me priority in that portion of our respective researches, and states his satisfaction at our results agreeing so closely. It will be seen, on reference to my paper, that so far from wishing to deprive him of the honour he so well merits, I expressed my regret at not being able to find his original paper, (my series of the *Journal de Chimie Medicale* commencing 1830, the year that the *Société de Chimie Medicale* did me the honour to elect me a corresponding member,) and extracted from Berzelius' *Traité* all that illustrious chemist says of the substance ; and as he did not mention its composition, I naturally concluded that it was not known. To Lassaigue is, therefore, due the discovery of the two iodides of platinum, but as Lassaigue has allowed me priority in forming its various saline combinations, I trust that no philosophic knight errant shall deem it necessary to contradict what the actual experimenter has approved of.

In his observations on my paper (Philosophical Magazine, March, 1833), Mr. Phillips states that he objects to my nomenclature, and wishes that I would recur to simpler views. I am sorry that he has postponed his remarks on my mode of viewing these combinations, as I have long wished that some of these men whose opinions we habitually reverence, they being the scientific leaders in these countries, would discuss the validity of the doctrines advanced within these few years by Berzelius, Bonsdorf, &c. Of these there are none better qualified for the task than Mr. Phillips; and as I care not at what loss of self-esteem I attain to a knowledge of the truth, the refutation of me would serve as a *coup d'essai* to prove his arms before engaging the more illustrious men of Abo and of Upsal.