director, who was highly respected not only as a scientist, but also for his noble spirit.

As some readers may not be acquainted with the controversy, we will briefly recapitulate the state of matters.

Flammarion has mentioned in his "Catalogue des étoiles doubles," issued 1878, that he had discovered independently of O. Struve the irregular motion of the component C in the system of ζ Cancri, but explains it otherwise than Struve, who ascribes it to the influence of a fourth invisible body.

Some years later Flammarion gives in his popular book "Les étoiles et les curiosités du ciel" the following statement: that he had written to Otto Struve asking the latter to communicate his latest observations of ζ Cancri in order to complete the material available. Struve did not answer this letter, but sent some months later to the Paris Academy a paper, in which he assigns to himself the discovery of the irregular motion of the companion. C. Flammarion adds some ironical suggestions concerning singular coincidence of circumstances that he and Otto Struve simultaneously studied ζ Cancri, that they both applied the same method and that Struve made his discovery after receipt of Flammarion's letter.

Mr. Miller raises in his "Biography of Flammarion" this quite unfounded suspicion, and accuses Otto Struve of plagiarism and "dishonorable conduct."

The letter of Flammarion to Struve is still preserved and an authenticated copy of the letter of April 29, 1874, quoted by Flammarion, is at hand *in extenso.*

We can confirm all that has been said by Messrs. Georg and Otto Struve in their reply to Mr. Miller's attack, namely, that the letter as concerns ζ Cancri contains only a request to send new observations of this double star, about which Flammarion writes "c'est celui auquel je tiendrai le plus à cause de son importance comme système triple."

The discovery of an irregular motion is not even mentioned. Besides there was absolutely no need to call Struve's attention to ζ Cancri, as he had observed the star since 1840 and the great leaps in the observations of this component had been indicated in 1855 by Winnecke in the *Astronomische Nachrichten.*

Although Mr. Miller explains in his second note his assertion, Flammarion had communicated to Struve "full particulars" of his discovery, expressed in the December issue of the *Journal of the Royal Astronomical Society of Canada,* by a mistake of his secretary, he seeks to find in the words "il ne répondit pas" a proof of dishonorable behavior by Otto Struve.

We find quite insignificant the fact that Flammarion did not receive an answer to his letter of April 29, 1874, but it may be by an omission on the part of Otto Struve, quite excusable owing to the extent of his correspondence, or by some possible neglect in the post.

Furthermore there is no reason to think that Struve intentionally kept secret his latest observations, as in the same letter Flammarion thanks Struve for the communication of observations of ζ Cancri.

We do not examine here to what extent Flammarion was right in concealing from Otto Struve the results of his own studies of ζ Cancri, while the latter obligingly put at the disposal of Flammarion his unpublished observations of this star.

After the contents of the letter of April 29 became known, there is no more need for further testimony to the fact that Flammarion did not inform Otto Struve of his discovery; thus the suspicion of plagiarism, of which a hint is given by Flammarion himself and which is so categorically expressed by Mr. Miller, has no foundation in fact.

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THE DISSOLUTION OF INSULIN INTO TWO NEW ACTIVE SUBSTANCES

AT the scientific meeting of the State Institute of Hygiene in Warsaw on November 4, 1926, I read a paper on the separation from insulin of two extremely interesting new substances. This preliminary report can be amplified as follows:

From the insulin produced in our institute the clinical unit being 0.07 mg. by an extremely mild fractionation procedure, for the present two substances could be obtained in a crystalline state, which are being designated in the preliminary way as A and B.

The substance A is contained in the insulin in a larger proportion, the yield corresponding to over half of the initial insulin and unlike the usual insulin it decreases the blood sugar in 70 to 80 per cent. of normal rabbits, but having a high initial blood sugar it decreases the blood sugar by 10 to 44 per cent. Similarly in rabbits with low initial blood sugar it produces either no effect or causes increases from 5 to 20 per cent. This observation has led me to apply the substance clinically on diabetics and non-diabetics in conjunction with Dr. Marceli Landsberg, of Warsaw. From the small number of cases investigated it would be premature as yet to reach a definite conclusion, but so far we had increases of blood sugar or no effect in non-diabetics and marked decreases in diabetics.

As to the substance B it represents a new hormone of complicated and not easily understood action.

Substance B when injected or given per os causes marked and lasting increases in blood sugar so that we have produced hyperglycemia and glucosuria in normal rabbits at six doses of 0.2 mg. of substance per day. The substance B causes a high-grade dilution of the blood with enormous retention of water and if one takes that dilution into account blood sugar increases amounted to over 800 per cent. The rabbits eventually died, and we are investigating the pathological changes, especially in the pancreas, on which a report will follow later. As the substance B was found in insulin and the latter hormone in a number of organs and therefore probably in food and as it acts per os one naturally suspects that this substance may have something to do with the causation of at least certain forms of diabetes.

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QUOTATIONS

"NARCOSAN" AND DRUG ADDICTION

NEWSPAPERS throughout the country holding membership in the North American Newspaper Alliance carried a story, December 15, concerning the discovery by "Dr." A. S. Horovitz of a new remedy for drug addiction known as "narcosan." Since his arrival on these shores in 1913, Horovitz has been continuously identified with attempts to promulgate cures for all sorts of disorders by mixtures of lipoids and vegetable substances of the nature of non-specific proteins. Included in his records are the Horovitz-Beebe "cure" for cancer, the Merrell proteogens for the cure of practically everything and more recently "narcosan," originally brought out about 1920 under the name of "lipoidal substances." Horovitz's present effort to promote "narcosan" as a cure for narcotic addiction is supported by a clinical investigation by Drs. Alexander Lambert, ex-president of the American Medical Association, and Frederick Tilney, one of the editors of the *Archives of Neurology and Psychiatry*. The paper by these investigators appears in the *New York Medical Journal and Record* for the week of December 17. This paper was rejected by the *Journal* of the American Medical Association because the Council of Pharmacy and Chemistry rejected the product known as "lipoidal substances" in 1921, because up to the present time the product has not been resubmitted and is apparently still of unestablished composition, and because the clinical investigations are not set forth in such a manner as to indicate even ordinary controls, such as might have been secured by treating an equal number of patients with the non-specific proteins alone. Furthermore, on their admittance into the hospital, the patients were given a cathartic mixture consisting of seven ingredients, including some of those in the compound vegetable cathartic pill and a few others. Nevertheless, the paper was promptly accepted by the *New York Medical Journal and Record*, and simultaneously with its appearance in that periodical, a complete statement, highly exaggerated, was issued by the North American Newspaper Alliance. This statement appeared in three parts: the first, an account of the Lambert clinical investigations; the second, life stories of some of the patients, and the third, a highly sensational account of the life of A. S. Horovitz, omitting, however, all the points in his record to which reference has been made earlier in this comment. As soon as it was learned in the headquarters office that the newspaper publicity mentioned had been released by the North American Newspaper Alliance, a statement was given to the Associated Press defining the position of the American Medical Association headquarters office in this matter. Perhaps time will reveal sufficient basis in the Horovitz discovery to warrant its acceptance; possibly the clinical investigations made by Drs. Lambert and Tilney have been strictly accurate and scientific; maybe something actually worth while will come from this attempt to control drug addiction. Nevertheless, there is a method which has been repeatedly defined by the American Medical Association as the safe and scientific method of introducing a new proprietary. The American Medical Association has established a council which will act promptly in passing on the claims made for such products and on their worthiness.—*Journal* of the American Medical Association.

SCIENTIFIC BOOKS

Colloid and Capillary Chemistry. By HERBERT FREUNDLICH. Translated from the third German edition by H. Stafford Hatfield. New York, E. P. Dutton and Company, 1926. 886 pages, 156 figures.

THIS monumental work has hitherto been available only in the original German, but its value as a classic has long called for a translation. At first it was styled "Kapillarchemie," and capillary chemistry still receives a great deal of attention from the author. However, colloidally dispersed systems cover more than half the pages of this book.

The physicist will enjoy the author's treatment of the interfaces liquid-gas, liquid-liquid, solid-gas, solid-solid and also the chapters on capillary-electrical phenomena and the properties of interfacial layers. Nor will he be disappointed with the attention given to membrane equilibria and the osmotic pressure of lyophilic sols.