

at an early date in the nut's development the migration of free fatty acids into the capsule had ceased, if any such phenomenon had ever taken place. The successive steps in the metamorphosis of the kernel proceed from the interior surface of the capsule membrane. The fluid pressure is quite probably due to osmosis. May it not be that the interior cells of the capsule membrane cause the decomposition of tannin, produce metamorphic syntheses and allow the osmosis of these newly formed substances into the interior of the capsule? After the kernel had become solid the increase of fat went on, although there was no substantial change within the kernel in reference to the other components and there was no marked development of fat elsewhere in the nut than in the kernel. The most noticeable development aside from the fat was the tannin in the hull.

The author plans to study further this subject. He wishes to thank Prof. L. B. Mendel, of Yale University, for friendly criticism and advice.

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NEW BOOKS.

Grundriss der Kolloidchemie. By WO. OSTWALD. 525 pp., Steinkopff, Dresden, 1909. (Paper, M. 12; bound, M. 13.5.)

The author of this comprehensive work has apparently inherited the well-known powers of his father, and by this book and his editorship of the *Zeitschrift für Chemie und Industrie der Kolloide*, he seems to be standing in relation to colloid chemistry where Wilhelm Ostwald stood with respect to physical chemistry a decade ago. A thorough treatment of the subject is to be expected from a man in his position, and the reader is not disappointed. It is a surprise even to one who has followed the subject, to note that the author has read and used in this book not far from one thousand articles on the subject of colloids. No known part of the subject has been neglected, and the book is a much more exhaustive treatise than any other one on the subject. We hope an English translation will be made, as the subject and this treatment by Ostwald well warrant it.

W. R. WHITNEY.

Problems and Questions in Chemistry. By FRANKLIN TURNER JONES, University School, Cleveland, O. 46 pp. Published by the author, Price, 40 cents.

This little pamphlet contains 460 questions compiled from college entrance examination papers sent by Harvard, Sheffield, Princeton, Regents, Board, Case and Cornell. There are also 4 pages of hints on the solution of numerical problems and 295 incomplete equations stated in words. The value of such a compilation for teachers is evident. Its use by students would probably increase the examination evil about which so much has been written in England. Possibly, however, we are in more danger from lack of examinations in America. W. A. N.