versity of Birmingham, reviews "D-Glucuronic acid in metabolism" in the second of these chapters. The origin, site, and kinetics of D-glucuronide synthesis are among the topics considered. A comprehensive tabulation of biosynthetic D-glucuronides is included.

T. Mori, Tokyo University, in a chapter entitled "Seaweed polysaccharides," reviews the present state of our knowledge of these compounds, with emphasis on the need for further work in this field. The remaining two chapters consist of a discussion of "The substituted sucrose structure of melezitose," by E. J. Hehre, Cornell University, and a detailed compilation of the "Composition of cane juice and cane final molasses," by W. W. Binkley and M. L. Wolfrom, Ohio State University.

This volume represents a valuable addition to the literature of carbohydrate chemistry.

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Crystal Growth and Dislocations. Ajit Ram Verma. Academic Press, New York; Butterworths, London, 1953. 182 pp. Illus. $5.

One of the most dramatic episodes in the development of our understanding of the nature and significance of imperfections in crystals was initiated by the proposal of F. C. Frank, in 1949, that the presence of screw dislocations could account for the previously baffling growth rates of crystals. Frank's paper was soon followed by Griffin's experimental observation of the predicted growth figures on natural single crystals of beryl. These two papers led to a whole series of studies of spiral growth figures, so that now this field represents one of the major successes of dislocation theory.

In the present monograph, Verma reviews these developments, in which he himself played a major part. In the first two chapters, the author summarizes the problems of accounting for the observed growth behavior of crystals as they appeared before Frank's proposal of the screw-dislocation growth mechanism. In the third chapter, the dislocation concept is introduced, and Frank's growth mechanism is described.

The rest of the monograph is devoted to descriptions of the various experimental methods of observing growth patterns on crystals and of the observations that have been made. So much of this material has been widely scattered in the literature that the present connected account is extremely helpful. The text includes a large number of illustrations from the author's own work, many of which have not been published before.

Crystal Growth and Dislocations fills in a very satisfactory way the need for an account of the studies of dislocations and crystal growth.

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New Books

Elements of Food Engineering. vol. II, *Unit Operations.* Milton E. Parker. Reinhold, New York, 1954. vi + 360 pp. Illus. $8.50.

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