drawn (p. 108) regarding the amitotic division of endothelium, the subsequent differentiation of these cells into mesenchymelike tissue, and later redifferentiation into fibroblast, smooth muscle and cartilage cells.

The author is to be congratulated for his broad approach to an important subject. The integration of cytology, cell physiology, and cell chemistry is prerequisite to a better understanding of the endothelial cells and to the many diseases that result from their derangement. This small monograph will be of value to both the research worker and the clinician interested in vascular disease.

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Antibiotics Annual 1954–1955. Henry Welch and Felix Marti-Ibanez, Eds. Medical Encyclopedia, New York, 1955. ix + 1154 pp. Illus.

It is incredible that so much information about antibiotics could be brought together in such a short period of time and published for the benefit of the interested reader. This annual contains 1154 pages of reading material on a wide range of subjects dealing with old, new, and untried antibiotics. The publication of this volume followed the second Annual Symposium on Antibiotics sponsored by the Food and Drug Administration of the Department of Health, Education, and Welfare which was held in October 1954. The President addressed a letter of good wishes to all those participating in the symposium.

For all those interested in antibiotics and for all physicians who use them, this annual will serve as a work of reference as well as a group of papers that will stimulate thought and new ideas.

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The Chemistry of Synthetic Dyes and Pigments. H. A. Lubs, Ed. Reinhold, New York, 1955. xiv + 734 pp. Illus. $18.50.

Although this book was not intended as a single-company production, all of the 19 contributors to this extensive volume have been associated with the Jackson Laboratory of the Organic Chemicals Department of E. I. duPont de Nemours & Co. It is obviously a well-knit group of collaborators, for in many chapters four or five workers are credited with segments of the chapter, and the same collaborator appears in different chapters. The separate collaborators are not indicated in the table of contents but are identified in the sections that they prepared.

This compilation represents a very readable collection and assimilation of the many American and British intelligence team reports on the progress of dye synthesis in Germany prior to World War II, to which has been added much of the known technology in this and other countries in this same field.

The general discussion on colored chemical constitution and organic pigments and the extensive bibliography add much to the value of this book as a general reference to workers in other fields who desire knowledge of dyestuffs. Combination with such standard works as the forthcoming new edition of the *Color Index* or the *Yearbook of the American Association of Textile Chemists and Colorists* will permit easy "translation" into available commercial types.

In the organization of this extensive treatise, there is first presented a general discussion on aromatic intermediates. There follow separate discussions on the important dye classes, including azo, azoic, sulfur, anthraquinones, indigoid, and phthalocyanine and the general bibliographic and discussion sections mentioned in the preceding paragraph. In general the discussion concerns the indicated methods of production of known classes of dyes and modifications to give important variants to the basic type.

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Organic Reactions. vol. VIII. Roger Adams, Ed. Wiley, New York: Chapman and Hall, London, 1954. viii + 437 pp. $12.

The latest volume of what has become a series of standard reference works for the organic chemist comprises eight chapters: "Catalytic hydrogenation of esters to alcohols" by the late Homer Adkins; "The synthesis of ketones from acid halides and organometallic compounds of magnesium, zinc, and cadmium" by David A. Shirley; "The acylation of ketones to form β-diketones or β-keto aldehydes" by Charles R. Hauser, Frederic W. Swamer, and Joe T. Adams; "The Sommelet reaction" by S. J. Angyal; "The synthesis of aldehydes from carboxylic acids" by Erich Mosettig; "The metalation reaction with organolithium compounds" by Henry Gilman; "β-Lactones" by Harold E. Zaugg; "The reaction of diazomethane and its derivatives with aldehydes and ketones" by C. David Gutsche.

The general format of each chapter follows closely the style that has become standard for the series. The book is definitely of interest and, indeed, is wellnigh indispensable to the practical organic chemist. With but few exceptions, mechanistic treatment of the reactions has been held to a minimum. Where a mechanistic discussion is given in some detail, it is necessary for proper interpretations and application of the reaction involved.

The long and exhaustive chapter on acylation of carbonyl compounds by Hauser and his associates provides a welcome survey of the host of applications of this important reaction. It supplements the earlier chapter on the Claisen condensation that appeared in volume II of the series.

The chapter on synthesis of aldehydes from carboxylic acids likewise supplements the earlier chapter on the Rosenmund reduction of acid chlorides that appeared in volume IV. With the discussion of indirect methods of reduction of a carboxyl group to an aldehyde, this important transformation has now been completely covered.

The chapter on β-lactones provides information not only on the modes of synthesis of these interesting compounds but, what is perhaps more important, on the uses to which they can be put in further syntheses.

The volume maintains the high standard of its predecessors. About the only criticism that can be made is that in a few of the chapters, the literature survey has not been brought forward as far as could have been possible and desirable. This is particularly noticeable in Chapter 1; the shortcoming is undoubtedly due to the untimely death of Professor Adkins. Likewise, in Chapter 2, complete literature coverage is claimed only up to mid-1950.

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Electrolyte Solutions. The measurement and interpretation of conductance, chemical potential and diffusion. R. A. Robinson and R. H. Stokes. Academic Press, New York, 1955. xiii + 512 pp. Illus. $9.50.

This volume is the American edition of the book published by Butterworths Scientific Publications of London. The authors, R. A. Robinson, professor of chemistry at the University of Malaya, and R. H. Stokes, reader in physical chemistry at the University of Western Australia, are active workers in the field of electrolytic solutions. They have written a lively, stimulating book: a book