lems in the formation of metal complexes," including a section concerning complex formation of hemoglobin and ferrihemoglobin. In other approaches to the broad problem, George Scatchard, Walter L. Huges, Jr., Frank R. N. Gurd, and Phillip E. Wilcot present "The interaction of proteins with small molecules and ions," and Jack Schubert discusses "The interactions of metals with small molecules." In this latter chapter an interesting section concerns "Metal chelates in relation to drug action." Richard B. Turner directs attention to "Physical and chemical properties of the steroids related to protein binding." Thomas F. Gallagher in "Biochemical problems of the steroid hormones" points out, with some possible answers, the question of why large amounts of a hormone are often necessary to produce an effect, even though great rapidity of disposal leaves only a small amount in the tissues. Shields Warren notes that "The effects of x-ray and other radiation on proteins and living tissues" may be attributed to the hitting of some sensitive volume of the cells.

In chapters that record progress of work, in each instance later carried much further, Vincent du Vigneaud describes the purification and analysis of oxytocin and vasopressin, and Waldo E. Cohn discusses the application of ion-exchange chromatography to the isolation of *a* and *b* nucleotides and further studies on the structure of nucleic acids.

This book, in a fascinating way, shows how contemporary hypotheses and techniques are being applied to the study of the nature, until recently very obscure, of the chemical forces involved in the long-known specificity of biological interactions.

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Organic Peroxides. Their chemistry, decomposition, and role in polymerization. Arthur V. Tobolsky and Robert B. Mesrobian. Interscience, New York–London, 1954. x + 197 pp. $5.75.

The appearance of this book, which was inspired by the desire to elucidate the interesting role of organic peroxides in catalyzing chain reactions such as observed in vinyl polymerizations, dealing as it does with one phase of this broad subject, is convincing evidence of the widespread interest that has developed in high-polymer science in recent years. The excellent review of the chemistry and decomposition of these materials should be of equal interest to many readers. One welcomes this work by these well-known authors, since it serves to draw together many scattered treatments of this subject and to regiment the data into an orderly pattern.

The authors elected to treat their subject under three major headings. The first section deals with the preparation, properties, and structural classification of organic peroxides, which include the hydroperoxides, dialkyl and diaralkyl peroxides, peroxy acids, peroxy esters, diacyl and diaroyl peroxides, and the peroxy derivatives of aldehydes and ketones. The authors have drawn quite freely upon published information in preparing this section and do not attempt to treat the subject in a comprehensive manner in terms of complex organic chemical reactions. In the preface they indicate that this was their intention. Much of the information would have to be augmented by study of the original papers to be useful in the preparation of some of these materials.

The second portion dealing with the physical chemical aspects of the cleavage of the peroxide molecule is discussed as thoroughly as knowledge of the subject will permit. Because the general chemical reactivity between members of this family of compounds is so similar, certain parts of this review seemed repetitious. The mechanism for the decomposition of peroxides by amines proposed by L. Horner and E. Schlink was taken from their early work published in 1949 and does not completely reflect their recent views on the subject, which they published 2 years later. Aside from this, the literature on this phase of the subject seems to have been well covered.

The third section, dealing with the initiation of vinyl polymerization by peroxide decomposition, is treated in a thorough, quantitative manner. Since Tobolsky has been very active in the study of polymerization kinetics, a large portion of this material is taken directly from his work. It could not have been written by a person with a more appropriate background, and it reflects his sincere interest in this field.

The value of this book is greatly enhanced by an appendix of 28 pages in which data are presented on the physical constants of selected organic peroxides, the explosive nature of peroxides, some commercially available organic peroxides, and catalyst efficiency. Several errors in chemical structure appear throughout, but I was well pleased with the format and the adequate author and subject index.

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Biochemistry of Cancer. Jesse P. Greenstein. Academic Press, New York, ed. 2, 1954. xiii + 653 pp. Illus. $12.

This book by Jesse Greenstein of the National Cancer Institute is far more than a second edition of a routine textbook. It is a critically prepared, carefully written, and precisely documented presentation of the reliable facts concerning an important and complex topic. Too frequently books of this type become routinized compilations without order of the facts accumulated since a previous edition, but whether perused by a worker in the field or one seeking basic information, this one can scarcely be laid down. The language is clear and simple. The material is conclusive and orderly. The conclusions are cautious and reliable.

It is pleasant indeed to be able to recommend the book to anyone actually or potentially concerned with the problem to which it is addressed. To Greenstein and his many collaborators, great credit is due.

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