BOOK REVIEWS

Selection of books for review is based on the editors' opinions regarding possible reader interest and on the availability of the book to the editors. Occasional selections may include books on topics somewhat peripheral to the subject matter ordinarily considered acceptable.

AN EXCELLENT REFERENCE

Title Chemical Reactions of Polymers

Editor E. M. Fettes

Publisher Interscience, Division of John Wiley & Sons, 1964

Pages 1304

Price $40.00

Reviewer Arthur A. Armstrong, Jr.

This book gives a general survey of the various types of chemical reactions that have been carried out in the entire field of polymeric materials. The editor and contributors have done an excellent job in covering this broad field. Forty-seven authors from the United States, England, Scotland, France, and Belgium, who are specialists in their particular fields, contributed to a balanced treatment of the subject.

This treatise covers the general chemical reactions of polymeric materials. Of particular interest are the sections on the effects of morphology and physical factors on the chemical reactivity. The work covers the degradation reactions that limit the use of polymeric materials as well as the beneficial reactions that improve the utility of polymers. Particular attention is given to cross-linking and graft polymerization initiated by chemical, mechanical, and radiation techniques.

This volume is an excellent reference book on the field of chemical reactions of polymeric materials. It should be of interest to the polymer chemist as well as those in the field of applications of polymers. The textile chemist and textile finisher should find in this book a wealth of information for his applications.

Arthur A. Armstrong, Jr. is Head of the Radiological Laboratory at the School of Textiles, North Carolina State University, Raleigh, where for the past five years he has directed research on the modification of textile fiber properties by radiation-induced graft polymerization. He was Associate Professor of Chemical Engineering at the University of South Carolina and Associate Professor of Engineering Research and Textile Chemistry at N.C. State. His industrial experience includes research and development positions with General Electric, Duke Power, Chemstrand, and Celanese. Author of 17 publications, he received the BS, MS, and PhD degrees (chemical engineering) from North Carolina State College in 1947, 1949, and 1957, respectively.

A CASE STUDY IN REAL-TIME DATA PROCESSING

Title Real-time Data-Processing Systems: Introductory Concepts

Author William H. Desmonde

Publisher Prentice-Hall, 1964

Pages xii + 186

Price $7.95
One of P-H Series in Automatic Computation

Reviewer Ronald E. Williams

This book is of interest as a case study of the American Airlines Sabre system for reservations. The problems encountered in designing, installing, and operating the system are described in considerable detail. Computer systems for the Mercury and Gemini programs are also discussed, but the author's main interest and concern is with the airline system.

The book is frustrating in that the real-time "concepts" are discussed largely in relation to specific pieces of equipment, namely the IBM 7080, 7094, 7750, and 1301. A broader survey, including applications of competitive equipment would have provided more useful concepts and principles for the real-time systems designer. Too much emphasis is placed on techniques related to these IBM computers, and too little, on concepts useful with present or future generations of equipment.

This is not to say that the book will be of no interest or value. As a study of the types of problems that are encountered in real-time processing, it will be most useful. The solutions described, while related to specific machine configurations, can assist in resolving similar problems on other equipment. Some of the techniques described, such as polling, trapping, enabling, queuing, and nesting will be of much interest to the batch-system oriented programer and systems designer.

This is not an easy book to read, especially for those unfamiliar with the jargon and trappings of programing. It is suggested that nonprogramers read Chapter 1 and 10 first, and then attempt to plow through the remaining chapters, if they have the time and the patience. In the chapter on disk file organization, the author states, "It is assumed that the reader has some familiarity with the IBM 1301 disk file". It would also be helpful if the reader were experienced in using the IBM 7094 system.