tables list the starting materials, reaction products, reaction conditions, yields and references to the literature.

At the end of the book there is an index prepared in a tabular fashion which covers not only the material contained in volume three, but the contents of the two previous volumes as well.

The concise arrangement of material, the very extensive use of attractively printed formulas throughout the text and the wealth of literature references given both in the text and in the tables should contribute to make this series a source of valuable information in a readily accessible form.

The editor and authors should be thanked for this major undertaking which should prove to be of great value to those needing information concerning synthetic methods.

RESEARCH DIVISION
BRISTOL LABORATORIES INC. YVON G. PERRON
SYRACUSE 1, NEW YORK

Encyclopedia of Chemical Technology. First Supplement Volume. Edited by the late RAYMOND E. KIRK, Head, Department of Chemistry, Polytechnic Institute of Brooklyn, and DONALD F. OTHMER, Head, Department of Chemical Engineering, Polytechnic Institute of Brooklyn. Assistant Editor, ANTHONY STANDEN. Interscience Publishers, Inc., 250 Fifth Avenue, New York 1, N. Y. 1957. xviii + 974 pp. 19.5 × 26.5 cm. Price, $25.00.

Long before the last volume of the 15-volume "Encyclopedia of Chemical Technology" appeared in print, the editors must have debated the problem of how to keep it up to date. Instead of issuing an annual yearbook or revising the articles volume by volume to the extent that they might need it, the editors chose to prepare a supplement volume, presumably the first of a series, which contains articles on those areas of chemical technology that have undergone major developments during the past decade or so. Consequently, this supplement will be of much greater current interest and value than if it were a revision of "A to Anthrimides."

Some 51 articles are included, ranging in length from nearly one hundred pages devoted to Nuclear Reactors to articles of from four to six pages each on such subjects as Isosebacic Acid, Patents, and Kojic Acid. Approximately half of the articles are on subjects treated in the original Encyclopedia and serve to bring them up to date; the others are on new topics such as Computers, Fluidization and Water Demineralization or on a particular aspect of an earlier subject in which developments have been very rapid, as on Antibiotics—Non-medical Uses, or Boron Hydrides. The method of presentation is similar to that used in the original Encyclopedia. As in the Encyclopedia itself, the articles here range over processes, classes of substances, specific chemicals, unit operations and extend into areas such as Solid State where advances in a science will increasingly affect future technology. Each person will probably have a different preference as to the topics he would like to have seen chosen and the relative space to have given to each, but in general the choice of subjects seems judicious to this reviewer, and the presentations are well balanced and up to date. Judging from the many recent references throughout the book the editors must have had extraordinary success in getting their authors to submit their manuscripts on time.

The contributions come almost exclusively from Americans of whom about three-quarters are in industry. In essentially every case the contributor or the organization with which he is associated is in the forefront of activity in the subject discussed. As might be expected, the styles vary substantially, in a few cases being little more than an annotated bibliography, but usually being a unified and critical presentation. The treatments here will be of particular value to the chemist or chemical engineer who wishes to obtain a perspective on a field outside of his own specialty, but who may then wish to go to one or more review articles for more complete guidance to the literature. As is appropriate in any encyclopedia, the references are selective rather than exhaustive in many cases.

This volume contains its own comprehensive index and the articles have many cross references to the Encyclopedia. Nevertheless, in this method of keeping the Encyclopedia up to date, the problem of retrieval of information will become rapidly more complicated as additional supplement volumes are published. For the person who wants to know quickly if a subject of interest to him is included in a particular supplement volume, an alphabetical listing of the articles in a prominent place in the front of the volume would be of help; at present, they are distinguished only by bold face type in the index and in conjunction with a listing of authors.

All-in-all, this supplement volume provides a fine means whereby one may acquire an authoritative and up-to-date survey of many topics in chemical technology of current and increasing interest.

DEPARTMENT OF CHEMICAL ENGINEERING
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASSACHUSETTS CHARLES N. SATTERFIELD

Physico-Chemical Effects of Pressure. S. D. HAMANN, M.Sc., Ph.D. Academic Press Inc., 111 Fifth Avenue, New York 3, N. Y. 1957. ix + 246 pp. 15 × 22 cm. Price, $8.50.

This book is a discussion of the changes in the properties of matter which are induced by the application of pressure. The book is concerned largely with changes which are brought about by pressures above and about one hundred atmospheres. A good deal of emphasis is placed on the experimental techniques used to obtain high pressures and in measuring the various properties. In some cases a molecular interpretation of the results is discussed.

Two chapters are devoted to the experimental determination of the equation of state and the phase behavior of various pure substances and mixtures at extremely high pressures. Some of the results are interpreted in terms of the principle of corresponding states and in terms of the Lennard-Jones Devonshire equation of state.

Measurements of the effect of pressure on the transport coefficients are also discussed. A brief summary is given of the theories of transport phenomena in dense gases and liquids. Subsequent chapters are devoted to the effect of pressure on the dielectric and optical properties, on electrolytic conduction, and on the rates of chemical reactions.

The book will be of interest to many readers who are unfamiliar with the variety of new effects which appear at high pressures. Others will find the review of recent developments and the extensive bibliography of considerable value.

NAVAL RESEARCH LABORATORY
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Inorganic Syntheses. Volume V. Editor-in-Chief, THERALD MOELLER, University of Illinois. McGraw-Hill Book Company, Inc., 330 West 42nd Street, New York 36, N. Y. 1957. xiv + 265 pp. 16 + 23.5 cm. Price, $6.00.

Inorganic chemistry has undergone a rapidly accelerated growth during the past 25 years. The Manhattan Project provided a tremendous stimulus in awaking interest in this long neglected field, but the real explanation of the renewed interest is the success of the modern physical theories in interpreting the structure of atoms and the mechanisms of chemical bonding. At last inorganic chemistry has begun to make sense, and it is possible to correlate the physical, mechanical and chemical behavior of materials in terms of fundamental parameters, not merely to catalog these properties. In the United States a nucleus of devoted and competent inorganic chemists provided the energy and drive, and their efforts have at last culminated in the establishment of a Division of Inorganic Chemistry in the American Chemical Society. This is about the same group of chemists who established in 1939 the "Inorganic Syntheses" series, which has now reached Volume V. The present list of editor-in-chief, associate editors, and members of the advisory board, still carries names of several of these pioneers. Volume V is dedicated to the memory of Raymond E. Kirk and Arthur A. Blanchard, who have died since the publication of Volume IV in 1953. The continuance of the same chemists on the editorial board has ensured a continuity of policy, and while Volume V differs from its predecessors in content, it follows the same plan. The syntheses are considered as separate contributions, as in a