I will be surprised if any dermatologist interested in the scientific basis of his art will neglect to add this volume to his reference shelves, or if any physiologist involved with skin function will be content merely to borrow it from the departmental library. For the medical historian, it is an excellent example of the fruits to be expected from the marriage of Teutonic thoroughness and New World productivity.

DOUGLAS H. K. LEE
Department of Environmental Medicine, Johns Hopkins School of Hygiene

Yeast Technology. John White. Wiley, New York, 1954. xvi + 432 pp. Illus. + plates. $8.

The meager literature on yeast technology is considerably enriched by this book, which is based on a series of papers published several years ago in *The American Brewer* and the *Journal of the Institute of Brewing*. The author has included "a great deal of further material necessary to produce a reasonably balanced account of the properties and technical employment of the Yeasts."

The work aims at a presentation of some of the important biological factors governing yeast growth and development, together with an account of modern methods used in the industrial propagation of yeasts.

Of particular interest is the mathematical treatment of the problems of yeast growth and fermentation. Such factors as the rate of growth of yeast, deduction of the quantities of yeast present in a fermentation at various times, the amounts of molasses (or other sugar source) and inorganic salts required at various stages, air requirements, and other data depend on simple mathematical laws. Since these are inadequately dealt with in most textbooks they are presented here from first principles.

A convenient index of microorganisms supplements adequate subject and author indexes. The volume will be welcomed by food technologists, chemists, and biologists engaged in all branches of the fermentation, brewing, and baking industries.

CLINTON L. BROOKE
Chemical Division, Merck & Co., Inc.

Gmelins Handbuch der Anorganischen Chemie: Schwefel (Sulfur), System No. 9. Edited by Gmelin Institute. Verlag Chemie (U.S. distrib.: Walter J. Johnson, New York, and Stechert-Hafner, New York), Weinheim, West Germany, ed. 8, 1952–53. Section A-2. 450 pp. Illus. Paper, $35.30. Section A-3. xvi + 252 pp. Illus. Paper, $34. Section B-1. 372 pp. Illus. Paper, $29.40.

Prepared with painstaking care and thoroughness, this classic handbook of inorganic chemistry ranks as the most authoritative reference work in its field. Each new portion maintains the same high standards of excellence characteristic of its other portions. Those who know and use Gmelin will welcome the appearance of the up-to-date revisions and appreciate the untiring effort expended by those who make these revisions possible.

Since the three sections on sulfur considered here, together with section A-1 which is of a historical nature, have already appeared, section B-2, scheduled for the spring of 1955, will complete the treatise on this element.

Section A-2 is of primary interest to the industrial worker. It covers the occurrence of sulfur and its compounds. It also includes some 300 pages on the technology of sulfur, its di- and trioxide, and sulfuric acid; a brief account on patents; a chapter on colloidal sulfur; and a few pages on the physiological effect of sulfur, hydrogen sulfide, sulfur dioxide, and a few sulfur chlorides.

Section A-3 is concerned with the physics and chemistry of elemental sulfur, including the laboratory refining of the element, the preparation of different modifications of sulfur, and the concentration and separation of its isotopes. The sulfur system, as well as the crystallographic, magnetic, and electric properties of the element, are given in detail. Included also are chapters on the electrochemistry of sulfur, the behavior of sulfur with various substances, and the solution of sulfur in nonaqueous mediums.

Section B-1 covers in minute detail the physical and chemical properties of the hydrides and oxides of sulfur and the chemical reactions of these compounds; the portion on sulfur dioxide is particularly extensive.

RALEIGH GILCHRIST
Inorganic Chemistry Section, Division of Chemistry National Bureau of Standards

For a Science of Social Man. Convergences in anthropology, psychology, and sociology. John Gillin, Ed. Macmillan, New York, 1954. 289 pp. $4.

This is an unusual symposium in conception and in execution. It represents neither the proceedings of a symposium nor a collection of papers solicited and organized by an editor. The volume has as its background an interdisciplinary faculty seminar held at the University of North Carolina in 1949–50. John Gillin then called a conference of the contributors to the present book. They agreed upon a plan, returned to their respective universities, and, with some correspondence between them, wrote their chapters. At a second meeting of the group (both conferences were supported by the Wenner-Gren Foundation for Anthropological Research) the chapters were discussed and later revised.

The interdisciplinary net is not spread too widely. It was felt more useful to restrict the inquiry to three fields that are actually in close contact with one another and which many regard as the core of the behavioral sciences. The plan called for a double examination of each paired relationship. Thus Murdock, an anthropologist, reviews sociology and anthropology, while Becker, a sociologist, considers anthropology and sociology. The anthropology-psychology pair is dealt with by Smith and Hallowell, and the psychol-

ogy-sociology pair is handled by Parsons and Newcomb. The editor contributes an introduction and "The forward view."

The chapters are unequal in length and in quality. However, all make useful points and are fundamentally sound. On the whole, the six reviews are more impressive as historical surveys (some of them are very learned indeed) than as builders of new theoretical bridges. There are points of detail with which many professional social scientists would quarrel, but this is a solid and highly useful contribution that should help to clear away needless confusions and misunderstandings. The goal of "the generally accepted rules and definitions of plain English" (p. 7) is not attained in every chapter. The portions written by the editor are clear and forceful.

Gillin takes a rather optimistic view of social science and its potentialities for social action. However, he is no advocate of "cheap and easy integration":

> In approaching the possibilities of interdisciplinary collaboration, we propose, if the figure be appropriate, not a Monolithic State, but rather a Federal Union of the specialties dealing scientifically with human behavior in society. In such a Federal Union the several member disciplines would be able to pool their scientific resources for the solution of certain problems requiring multidisciplinary treatment while maintaining a species of "states' rights" that would guarantee full freedom for each member to attend to concerns that seem to be of more specialized interest (p. 4).

In his concluding chapter Gillin considers various theoretical problems, such as models, postulates, and theorems, and the "translation" of underlying biological concepts and propositions about human behavior into social science terms. He considers the following categories common to the three disciplines under review: behavior, grouping, culture, social structure, personality, symbolization, and communication.

CLYDE KLUCKHOHN
Russian Research Center, Harvard University

The Biochemistry of Clinical Medicine. William S. Hoffman. Year Book Pub., Chicago, 1954. xx + 681 pp. Illus. $12.

This volume presents the biochemistry of the body in health and disease for purposes of review and reference by the student and practitioner of medicine. Rather than being organized exclusively on the basis of individual diseases, it deals with the subject through a multiple approach. The biochemistry of the utilization and metabolism of the various nutrients and metabolites and the effects of hormones is considered in some detail. Attention is then paid at appropriate intervals to the biochemistry, physiology, anatomy, and pathology of individual organs, and, finally, individual chapters are devoted to a consideration of the etiology, biochemical pathology, and treatment of various diseases. By this threefold approach, the biochemistry of man not only is well-covered but is put in the context of over-all body function or malfunction.

An important portion of the book is concerned with practical information on clinical biochemical procedures, the laboratory findings in health and disease, and their significance. The author writes with a background in chemistry and medicine and with experience as director of biochemistry in a large general hospital.

With its avowed didactic approach, it is well and competently written and avoids shallowness on the one hand and highly technical physical or chemical excursions on the other. The paper, type, and typography are of a high standard.

Despite the publication date of 1954, it would appear that many subjects have not been carried beyond 1952 or even earlier. Coverage is thorough but not exhaustive, as a reader will find who is interested in, for example, hepotolenticular degeneration (Wilson's disease). Much of the chapter dealing with the vitamins is so general, brief, or outdated that it is in contrast with the general high level of most of the book. It is regrettable that this chapter and those concerned with biological antagonists and isotopes could not have been more useful and informative in view of the growing importance of these fields in clinical medicine.

MAURICE E. SHILS
School of Public Health, Columbia University

New Books

Optics. Lectures on theoretical physics. vol. IV. Arnold Sommerfeld. Trans. by Otto Laporte and Peter A. Moldauer. Academic Press, New York, 1954. 383 pp. $6.80.

The Hidden Life of Flowers. Trans. from the French text of J. M. Guilcher. Photographs by R. H. Noailles. Philosophical Library, New York, 1954. 93 pp. $4.75.

Organic Analysis. vol. II. John Mitchell, Jr., I. M. Kolthoff, E. S. Proskauer, and A. Weissberger, Eds. Interscience, New York–London, 1954. 372 pp. $8.50.

Modern Aspects of pH. With special reference to plants and soils. James Small. Van Nostrand, New York, 1954. 247 pp. $5.

Margins of the Sea. Maurice Burton. Harper, New York, 1954. 212 pp. $3.

Many Worlds: Seen and Unseen. Edith Raskin. McKay, New York, 1954. 226 pp. $3.50.

Science Reasoning and Understanding. A handbook for college teachers. Intercollege Committee on the Evaluation of Science Objectives of the Cooperative Study of Evaluation in General Education, Paul L. Dressel, director. Brown, Dubuque, Iowa, 1954. 223 pp. Paper, $3.50.

Physical Measurements in Gas Dynamics and Combustion. vol. IX of *High Speed Aerodynamics and Jet Propulsion.* part 1, R. W. Ladenburg, Ed; part 2, B. Lewis, R. N. Pease, and H. S. Taylor, Eds. Princeton Univ. Press, Princeton, 1954. 578 pp. $12.50

Science Awakening. B. L. Van der Waerden. Trans. by Arnold Dresden. Noordhoff, Groningen, Holland, 1954. 306 pp. $5.

Geology of Petroleum. A. I. Levorsen. Freeman, San Francisco, 1954. 703 pp. $8.