The amount of work published and in progress in this subject is prodigious and increasing so rapidly that the problem of selection and compression to produce this relatively short book is difficult. Each knowledgeable reader will have his regrets at omissions. Solid and gaseous aqueous systems receive no mention, the origin of the radicals is mentioned only briefly, one gains the impression that $G(Fe^{3+})$ for α-particles of initial LET equal to 9 eV/Å. is securely established around 5.5 and so on. In my opinion these criticisms are trifling in comparison with the great merit of the book, namely, that the newcomer to the field who reads it will gain a unique synoptic view of a fascinating area of physical chemistry which is approaching maturity. Indeed, in some ways, the personal and testamentary nature adds to the interest. Moreover the author's prose style is extremely agreeable and makes the book a pleasure to read, and a "must" for chemists and biologists interested in the effects of ionizing radiations. The occasional slip, as for example in the middle formula on page 11 and the expression for the dimensionless parameter on page 69, reminds us, perhaps reassuringly, of how even the expert may falter.

DEPARTMENT OF PHYSICAL CHEMISTRY
THE UNIVERSITY F. S. DAINTON
LEEDS 2, ENGLAND

Potenciometrie. By Doc. DR. JAROSLAV ČÍHALÍK, kandidát chemických věd. Nakladatelství Československé akademie věd. Nové Město, Vodičkova 40, Praha 1, Czechoslovakia. 1961. 770 pp. 18 × 24.5 cm. Price, Kčs. 86.50.

This Czech book on potentiometry gives a rather complete description of the use of this physical chemical technique in analytical chemistry. The only serious omission is the use of non-aqueous solvents; this technique is mentioned only in passing.

The book is divided into a theoretical part and a practical part. The theory is given for acidimetry, alkalimetry and for titrations involving the formation of insoluble precipitates, slightly dissociated and complex compounds and oxidation–reduction reactions. The discussion is not as complete in some instances as that which appears in English texts.

In the practical part the description of apparatus and electrodes is followed by application of the various titrations to analytical chemistry. For each of these applications specific determinations are discussed. The references in this part cover the literature through the early part of 1961 and would be the only part useful to a person not acquainted with the Czech language. The names of the anion or cation listed as headings of each section resemble rather closely the English names in most cases and could be recognized easily by the English reader.

DEPARTMENT OF CHEMISTRY
STATE UNIVERSITY OF IOWA STANLEY WAWZONEK
IOWA CITY, IOWA

Progress in Medicinal Chemistry. Volume 1. Edited by G. P. ELLIS, B.Sc., Ph.D., F.R.I.C., Research Department, Benger Laboratories Limited, Holmes Chapel, Cheshire, and G. B. WEST, B.Pharm., D.Sc., Ph.D., School of Pharmacy, University of London. Butterworth, Inc., 7235 Wisconsin Ave., Washington 14, D. C. 1961. ix + 262 pp. 16 × 25.5 cm. Price, $11.25.

This excellent book consists of six chapters of about forty pages each: "Pharmacological Screening Tests," W. G. Smith, Sunderland Technical College; "Hypotensive Agents," R. Wien, May and Baker; "Tranquilizers," M. W. Parkes, Roche Products Ltd.; "Diuretic Drugs," H. Heller, University of Bristol; "Oral Hypoglycemic Drugs," J. D. H. Slater, Postgraduate Medical School, London; "Antifungal Agents," E. P. Taylor and D. F. D'Arcy, Allen and Hanburys Ltd. It invites comparison with the much larger book by Goodman and Gilman, although the arrangement is considerably different. Each chapter contains a summary of all the drugs having the specified end effect irrespective of mode of action, whereas Goodman and Gilman list the drugs acting on specific centers so that the same drug may be mentioned in various chapters, while drugs having similar medicinal effects may be dealt with in different parts of the book because their mode of action is different. The present arrangement gives a concentrated summary of the literature with good bibliographies up to the middle of 1960 at the end of each chapter. American chemists will envy their British colleagues when Dr. Smith records that a pharmacologist carries out 22 tests with 200 mg. of material, most of which is used in the toxicity tests. The adoption of *in vitro* tests is to some extent necessitated by British vivisection laws which make it extremely difficult to get permits for experiments on dogs. In the U. S. a single experiment on a dog can, by automatic registration of blood pressure, respiration, EEG, EGG, etc., indicate most of the *in vitro* effects described in Dr. Smith's chapter. At the end of the chapter a summary of the costs of each test calculated by assuming a technician is continually carrying it out on a series of compounds shows that U. S. costs per animal are about twice those in England and salaries are considerably lower. Most subsequent chapters contain experimental procedures used for determining the particular action studied, including a few unpublished observations, *e.g.*, blood pressure recording (page 42) or the blocking action of chlorpromazine (page 62). Drugs are discussed from the research rather than the practical point of view, with no indication of which drugs are most widely used, although their disadvantages are also recorded. The relative importance of drugs in Britain and the U. S. would not be the same, but many agents lauded in pharmacological publications have never appeared on the market. The list of proprietary and non-proprietary names given by Dr. Wien contains many which are unfamiliar in the U. S., but structural formulas are clearly given throughout the book. In his review of the different classes of tranquilizers, Parkes critically evaluates the methods of studying effects in animals and the hypotheses used to "explain" the mode of action of different types of tranquilizers. The less important drugs in the diphenylmethane series, as well as tetrabenazine and benactazine are discussed. A discussion of blind tests with placebos or dummies having a different pharmacological effect is to the point. The chapter on diuretics contains an 8-page discussion of the causes of edema and the renal mechanisms affected. Mercurials, xanthines, pyrimidines and triazines are summarized and the work on carbonic anhydrase inhibitors finally leading up to the Diuril series is followed by a description of aldosterone antagonists and inhibitors, drugs which act as osmotic diuretics and finally the plasma expanders. Dr. Slater's chapter appropriately devotes most space to the consideration of the sulfonylureas and their metabolism, duration and mode of action, side-actions and historical development. The diguanides and biguanides are included and the limitations of all classes summarized. The final chapter starts with a description of superficial and systemic fungal infections and then contains a list of quaternary ammonium compounds, phenols, including hydroxyquinolines and salicylamides, diamidines and mercury compounds, aralkyl alcohols and glycols and their ethers, undecylenic acid, and antihistamines having antifungal activity. The use of sulfonamide therapy and broad-spectrum antibiotics as well as specific ones against candida and histoplasmosis, emphasizing Amphotericin B, Nystatin, and oral use of Griseofulvin and the limited use of estrogens and work on artificial immunity is summarized, leading to the conclusion that new oral agents are urgently needed.

In spite of the chapters being written by different authors, they are equally well and interestingly written; full acknowledgment is given to American work, references to which predominate in the bibliographies.

VICE PRESIDENT IN CHARGE OF RESEARCH
HOFFMANN-LA ROCHE, INC. J. A. AESCHLIMANN
NUTLEY 10, N. J.