Aside from a few fundamental formulas, one finds no mathematics in the book. Instead, the authors have attempted to explain the ways of electrons with words and well-designed drawings. It is perhaps not generally recognized by physicists, hardened to the frequent use of equations, that the easy way for authors lies in the use of equations and symbols. Burton and Kohl will be thanked by the nonmathematical reader for their very real effort to explain physical phenomena in words and pictures instead of symbols.

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Advancing fronts in chemistry. **Vol. II: *Chemotherapy.* Wendell H. Powers. (Ed.) New York: Reinhold, 1946. Pp. 156. (Illustrated.) $3.25.**

This volume is a collection of lectures delivered in 1945 as a symposium at Wayne University. The scope is indicated by the chapter titles. Chapter I, by W. H. Feldman, covers "Chemotherapy in Experimental Tuberculosis." One is impressed by the relative paucity of significant results attained in this field, and as a result the chapter deals principally with work with the sulfones, largely by the chapter's author and co-workers.

Chapter II, by F. H. Blicke, covers "Antispasmodics." One may question the presence of this chapter in a work on chemotherapy, but the presentation is an interesting example of how the chemists have juggled leads, in this case principally tropic acid and tropine, to evolve synthetics with more desirable properties than those of the natural compounds first known to have antispasmodic effect.

Chapter III, by E. H. Northey, deals with the sulfa drugs and includes an adequate consideration of the ideas of competition between prevailing drugs and a related "essential metabolite" for a place in the economy of the bacterial invader. Other theories of the mechanism of the action of the sulfa drugs are also considered.

"The Antimalarial Problem," by H. S. Mosher, is the subject matter of Chapter IV. In addition to chemicals used for treatment and prophylaxis, methods of control by sanitary means and chemical extermination of the insect carriers are considered. Brief mention is given the notion that the antimalarial drugs may act as the sulfonamides may act, *i.e.* by competition with some metabolite essential to the growth of the malarial parasite.

C. K. Banks contributes a chapter on "Organometallic Compounds as Chemotherapeutic Agents." With relatively brief space available for each metal, a satisfactory outline is given of the uses of the compounds of arsenic, antimony, mercury, bismuth, gold, and silver in the treatment of infections.

The last chapter, by W. H. Wright, on "Past and Present Needs in Chemotherapy of Parasitic Diseases" is the most detailed chapter, as well as the longest (42 pp.). In fullness it more nearly approaches a monograph than does any other chapter. There is necessarily some overlapping of subject matter with the preceding chapter.

The absence of a chapter on antibiotics is a glaring hiatus. This subject was covered in the symposium in a lecture by H. E. Carter, but the editor explains in the Preface that the author was unable to prepare the lecture for inclusion in the book.

As is probably inevitable in a symposium, there is some variation in the degree of excellence of presentation among the different chapters. However, in all cases there is a satisfactory pharmacological color, in that the relation of chemical considerations and biological problem is always borne in mind and made clear.

While the book is in no sense a monument of reference, it will be a very useful starting point for chemical students wishing to become acquainted with the present status of chemotherapy. The full references at the end of each chapter will be ample keys for those wishing to explore the subject in full detail.

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Photometric atlas of stellar spectra. **W. A. Hiltner and R. C. Williams. Ann Arbor, Mich.: Univ. Michigan Press, 1946. Books I–IX. (Illustrated.) $7.50.**

The University of Michigan possesses a microphotometer, constructed by Williams and Hiltner, which has the property of recording spectra on a direct intensity scale (for description see *Publ. Observ. Univ. Mich.*, 1940, 8, 45).

The first major batch of results is before us in the *Photometric atlas of stellar spectra*, published in the form of nine separate booklets, held together in a sturdy folder. Marvelous tracings of the spectra of α Bootis, α Cygui, β Orionis, α Lyrae, α Canis Majoris, α Canis Minoris, α Persei, and α Orionis fill Books II to IX, and Book I contains general information concerning the use of the *Atlas*. The stellar spectra were photographed with the Coudé spectrograph of the 82-inch reflector at the McDonald Observatory of the University of Texas while the star image was driven very slowly along the 0.05-mm.-wide slit of the spectrograph. The length of the slit was at the most 3.0 mm., and the maximum length of the analyzing slit of the microphotometer was 2.5 mm.

The tracings in the *Atlas*, reduced to one half the originals, show a magnification of 21.6 with respect to the spectrograms, and the dispersion ranges from 12 (mm./A.U.) in the violet to 2.5 in the red. The intensity scale, reproduced with each tracing, permits reading to 1 per cent (corresponding to about 0.5 mm.), and this represents, as the authors point out, the real accuracy of the intensities. It is, perhaps, somewhat unexpected that the wave lengths are indicated only at the ends of the tracings; a wave-length scale would have been convenient to many students in this field.

To say that spectroscopists will welcome the *Atlas* is doubtless an understatement, since it is the first time that stellar spectra have been made available on a scale hitherto possible only for the sun.

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