

*The Physics of Experimental Method*, by H. J. J. BRADDICK, Chapman and Hall, London, 1954, 404 pages, 190 figures and tables, 35 s.

Though primarily intended for advanced students in physics, this book also fulfils an excellent purpose for all those engaged in research problems in other fields where the use of instruments plays an important role or needs to be introduced.

The general principles of physical measurements and the dependence on good instrument design to obtain reliable results are presented in a concise and clear way and illustrated by a great number of general and specific applications. The chapter on errors and the treatment of experimental results, with its appendix on curve fitting, polynomials, least-square calculation, numerical integration and the accuracy of solutions, is a very valuable one.

Chapters III and IV deal with mechanical design, constrained motion, slides, rotation, balancing and with materials of construction (metals, plastics, insulators *etc.*). 30 pages of Chapter V are devoted to vacuum techniques. Electrical measurements and apparatus, including motors, electronics and the typical techniques of nuclear physics (Geiger- and scintillation counter *etc.*) and the limitations of measurement by thermal noise and statistics are amply discussed (135 pages).

Much less stress is laid on optics and the working and design of optical parts. However, this does not affect the usefulness of this book; for those whose problems lie especially in that field, the combination with another book on the same subject, *Laboratory instruments, their design and application* (A. ELLIOTT AND J. HOME DICKSON, Chapman and Hall, London, 1951, 414 pages, 32 s) covers the whole subject. In the latter book attention is mainly focused on glass, glass working, lenses, mirrors and optical instruments, and there are prefatory chapters on general design, workshop techniques, constrained motion, mechanical and optical magnification of motion, *etc.*

Indexes and references to current literature and specialized textbooks are included in both books.

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*International Review of Cytology*, Vol. III, edited by G. H. BOURNE AND J. F. DANIELLI, Academic Press Inc., Publishers, New York 10, N.Y., 1954, pages 1-530, \$ 9.50.

This volume of the *International Review of Cytology* contains 16 articles on actual cytological problems. The fact that the authors of the articles are specialists in their fields makes the exposition very clear and interesting.

The problem of the nutrition of animal cells, with particular reference to the nutritional needs of the cells cultivated *in vitro*, is reviewed by CH. WAYMOUTH. O. BUCHER describes the principles of his own statistical method for the determination of nuclear and nucleolar sizes in tissue cultures. I. CORNMAN reviews the present knowledge in the field of the mechanism of action of urethan and of its influence on the mitosis. M. ALFERT reviews the problems on the chemical composition and the structure of giant chromosomes of *Dipteran* salivary glands as well as of the "lampbrush" chromosomes of Vertebrate oocytes. The number of chromosomes in both germinal and somatic cells of mammals is the object of an article by R. A. BEATTY. A. L. DOUNCE reviews the experimental data on the problem of the presence of enzymes within the nucleus and of the permeability of the nucleus to cytoplasmic proteins. The recent progress in the field of differential centrifugation is reviewed by CH. DE DUVE. The theoretical background for the differential centrifugation technique is discussed and many practical suggestions are included. T. GUSTAFSON reviews the enzymic aspects of embryonic differentiation, with particular reference to the behaviour of cytoplasmic particles. A. G. E. PEARSE discusses the validity and the limitations of the azodye methods in enzyme histochemistry. A description of the very interesting results obtained in living mammals by the method of transparent chamber microscopy is given by R. G. WILLIAMS. G. ASBOE HANSEN describes the present status of knowledge in the field of mast cells and emphasizes his idea that mast cells produce hyaluronic acid. E. W. DEMPSEY AND A. I. LANSING review the present knowledge on the morphology and the chemical composition of elastin. S. O. BRATTGÅRD AND H. HYDÉN describe the results they have obtained with microradiographic and microchemical methods in the problem of the chemical composition of nerve cells.

The importance and the variety of the treated matter render this book a very useful tool for every scientific worker.

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