izing the available knowledge and current theories into a very readable book. The basic radio techniques involved are described. References as recent as 1951 are assurance that this book is as up to date as possible in a rapidly developing scientific field. Illustrations are used generously and are well chosen. The text is well bolstered with references and experimental data, which are generally presented in the form of graphs or histograms, with the sources of the data and conditions of the experiments clearly stated.

There is scarcely any field of science in which one does not encounter apparently conflicting theories. This is particularly true of one as new as radio astronomy. The authors could scarcely have evaded such controversial subjects as the high equivalent solar temperatures deduced from radio measurements, electron densities in the aurorae, hyperbolic meteor velocities, etc. In the opinion of this reviewer such subjects have been treated with scientific fairness.

More space is devoted to meteors than to any other branch of radio astronomy, probably because the authors have been most active in this field. The chapters on solar radio emissions summarize the work of Reber, Southworth, and others and discuss rather briefly some of the unexpected results obtained by the measurements of solar radio noise. The same general statement can be made about the chapters on galactic radio emissions. The treatment of solar and galactic radio emissions, although relatively brief, is informative and interesting and is probably sufficient for a book of this type. The twinkling of radio stars is discussed in a short but interesting chapter. The chapter on "Radio and the Aurora Borealis" should be of particular interest to those concerned with radio-wave propagation in northern latitudes. The final chapters deal with the techniques employed in the radio exploration of the moon and the possibility of perfecting these techniques for the purpose of obtaining radio echoes from the planets.

This book, in its text, references, and bibliography makes nearly all the existing information of any consequence about radio astronomy available to the reader. It will therefore be very useful to those interested in the subject.

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A Stereoscopic Atlas of Human Anatomy. Section 1, ***The Central Nervous System.*** David L. Bassett, with photography by William B. Gruber. Portland, Ore.: Sawyer's, Inc., 1952. Williams & Wilkins, Baltimore, Md., exclusive agents for the U. S., except the 11 Western states; J. W. Stacy, Inc., exclusive agents for the 11 Western states. 500 pp. 34 reels. $27.50. Viewing equipment extra.

The publication of this atlas brings to teachers and students a new and invaluable tool. The author has done a careful dissection of the central nervous system and has recorded each step by means of transparencies. Viewed through the View-Master stereoscope, they offer a three-dimensional method for study. The anatomical and surface relationships of all structures are clearly seen; where possible, the dissection was carried through on the same cadaver, thus providing a continuity not usually available in material of this type.

There are 238 stereoscopic views mounted on 34 View-Master reels, which are stored in the cover of each of the four volumes. Each view is accompanied by a labeled drawing made from an enlarged tracing of the picture, so that all the structures can be easily identified. This method also avoids the necessity of placing confusing lines on the pictures.

The circulatory system has been clearly outlined by injection of red or blue latex, and the blood vessels therefore stand out clearly; their course and distribution are easily demonstrated. Also included are pictures of normal radiographic brain studies, angiograms, and pneumoencephalograms.

Section 1 is the first of seven that are in preparation. The entire human body will eventually be included in sections dealing with the head and neck, thorax, abdomen, pelvis, upper extremities, and lower extremities.

Dr. Bassett and Mr. Gruber are to be congratulated for this beautiful work. The photographs are unusually excellent in composition, clarity, and detail. The atlas, which is well indexed for easy reference to various anatomical structures, will assist the teacher in outlining dissection and will prove a convenient study aid for the student. For the surgeon, it offers a quick review of regional anatomy for preoperative preparation. The slides are adapted for either three-dimensional viewing in the View-Master or for two-dimensional viewing using projection apparatus. This makes them ideal for classroom work.

The entire project is a notable contribution to the field of anatomy, and we look forward to the publication of succeeding sections with eager anticipation.

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Harwell: The British Atomic Energy Research Establishment, 1946–1951. Prepared by the Ministry of Supply and the Central Office of Information. New York: Philosophical Library, 1952. 128 pp. Illus. $3.75.

This small book, which contains 92 pages of technical material with an additional 36 of appendices, is an extremely well-written, factual volume devoted to the scientific aspects of the British Atomic Energy Establishment at Harwell, with mention of the Windscale production site. Although it does not include any great amount of new or surprising material that is not available in the nuclear science literature, it does give a clear picture of the administration and the type of research problems and facilities that characterize this work in the United Kingdom.

The treatment of the various types of research is to give a thumbnail sketch of the fundamental problem involved and a clear statement as to what approach is

being used, and in many cases what the results might mean. The book is replete with refreshing statements, such as pointing out that plutonium is made from uranium "atom by atom" and that "the nuclear reactor is in fact one of the most sensitive barometers known to man, if also one of the most expensive."

The book (one could almost call it a pamphlet if it were not so crowded with information) contains chapters on the origin and organization of the AERE and a general description of the "programmes" of work. Chapters are then devoted to the production of isotope reactors and the accelerator programs. The health physics, or radiation safety, program is quite similar to that of the U. S., as are most of the general types of fundamental research. Here, again, the concise description of the problems convey a ready understanding of their nature. The extramural relations of the establishment are interesting in that the relations with the universities are possibly not so formal as in this country, where the counterpart might be the Brookhaven and Argonne national laboratories and the Oak Ridge Institute of Nuclear Studies. Apparently industrial cooperation and contacts are considerably better in England than in this country.

The book includes appendices listing the senior staff, a description of the Gleep and Bepo reactors, a rather extensive list of scientific papers by the staff, and a reading list and glossary. The net result is a book which, although not containing material of a unique nature, might well be included in the library of anyone interested in the nuclear field.

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Introduction to the Study of Physical Chemistry. Louis P. Hammett. New York–London: McGraw-Hill, 1952. 427 pp. Illus. $6.00.

Hammett's new book differs from the usual textbook of elementary physical chemistry in that it is rather short and that it makes considerable use of the statistical approach to thermodynamics. The first five chapters deal with gases, kinetic-molecular theory, dilute solutions, the first law of thermodynamics, and thermochemistry. Chapter 6 is entitled "An Elementary Discussion of Quantum Principles and the Use of the Boltzmann Equation." This is followed by two chapters on chemical equilibrium and then chapters on reaction rates (homogeneous systems), galvanic cells, free energy, phase diagrams, conduction in solutions, ionic reactions, effects of pressure and temperature on free energy, and effects involving surfaces. The appendix discusses mathematical techniques and the relations between probability and the Boltzmann equation.

One of the most serious dilemmas that confront teachers of courses in elementary physical chemistry is that of which topics to include and which to omit. Often the material on atomic and molecular structure is omitted from beginning courses in physical chemistry; this is unfortunate, for such an omission makes it virtually impossible to teach a thoroughly modern course. Professor Hammett has met this problem by presenting in Chapter 6 brief accounts of quantum theory, atomic and molecular structure, the Boltzmann equation, and the correlation of these with heat capacities. Although this chapter seems to provide the necessary background for the statistical treatment of thermodynamics which follows, undergraduate chemistry students need a more thorough discussion of these topics, such as is usually available in a course in atomic physics.

The statistical approach to thermodynamics is the unique feature of the book. The omission of a discussion of the classical approach to entropy will disturb some teachers, but the elementary statistical method used in this text may actually be easier for the beginning student.

In an excellent foreword to the student, the author explains the point of view of physical chemistry and also gives his reasons for omitting such time-honored topics as x-ray crystallography. This particular omission does not seem serious when one considers the usually poor understanding of x-rays and crystal structure obtained by most undergraduate students.

On the whole, the book gives a first-class treatment of a selected number of topics from physical chemistry, chosen so as to provide a modern point of view. The writing style is clear, and the book could be studied independently by capable students. The several mathematical techniques given in the appendix should be helpful to students who have forgotten much of their calculus or who fail to see the connection between mathematics and physical chemistry.

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General Genetics. Adrian M. Srb and Ray D. Owen. San Francisco: Freeman, 1952. 561 pp. Illus. $5.50.

The aim of this new textbook of genetics is to present the material in its interrelations with other biological fields and to use genetics as an integrating principle for the student's information in all fields of biology.

The book is well written, and the presentation of the material is clear and stimulating throughout. Discussions of complicated situations are very lucid and concise—e.g., the description of the rh alleles in the chapter on "The Gene." The book contains a large number of original and admirably executed illustrations. The arrangement of chapters does not deviate from that usually found in genetics textbooks. There is a tendency to select fresh material for the examples, such as the use of the fox rather than the customary rodents for the illustration of color inheritance in mammals. Each chapter closes with a short summary, a set of problems, and a bibliography. The problems are original and thoroughly considered, leading the student on from the material presented in the chapter itself. The bibliography is characterized by