been expanded with judgment and learning by subsequent librarians. Among these was Mr. S. A. J. Moorat, a graduate of Merton, and librarian during 1931–46, a period when the library was still strictly private and generally unknown. He is now keeper of Western Manuscripts in the Library, and to him we are indebted for the first volume of a catalogue which describes all the manuscripts written before 1650. Among the 1,500 items contained in 800 volumes (representing only 15 per cent of the collection of Western MSS.) are many of the first importance to the history of science and medicine. Although concise details of collation, script, etc., are included, Mr. Moorat's main object has been to give information on the authorship and subject-matter of these writings. The descriptions of individual manuscripts are supplemented by no less than 11 indexes which open these treasures to every aspect of scholarly research.

In these two volumes there is a wealth of material for those seeking to show how modern scientific thought emerged from the blend of classical tradition and semi-religious scholasticism that characterized the Middle Ages, and we must be grateful to all who have been concerned in producing what must be widely regarded as a massive contribution to the history of civilization.

K. J. FRANKLIN

RADIOISOTOPES IN BIOLOGY AND MEDICINE

Use of Radioisotopes in Animal Biology and the Medical Sciences

Vol. 1. (Proceedings of a Conference held in Mexico City, 21 November – 1 December, 1961.) Pp. xvi + 563. (London and New York: Academic Press, 1962. Published for the International Atomic Energy Agency.) 115*s*.

VOLUME 1 of *Use of Radioisotopes in Animal Biology and the Medical Sciences* is the first part of the proceedings of an International Atomic Energy Agency Conference held at Mexico City in November 1961. Many conference proceedings are now being published under titles such as this that conceal their true nature, presumably to encourage sales to library committees.

Artificial radioactive isotopes have now been in widespread use in biology and medicine for fifteen years, and international and national conferences on their uses have been frequent during this time. In the early years they were very useful; one thinks, for example, of the well-organized meetings in Oxford in 1951 and 1954. The huge United Nations Geneva conferences in 1955 and 1958 were successively less valuable. The many isotopes available and the methods available for their use were becoming well known. Papers began to be concerned more with investigations and experiments with diverse and valuable results, but in which the use of isotopes was really only a useful incidental, comparable with the use of, say, the microscope, the paper chromatogram or the flame-photometer.

The 1961 Mexico City conference was apparently organized because "although the fields (of human and veterinary medicine) use the same tools, the same training and techniques, and often the same experimental animals, opportunities for the exchange of information between the two fields are all too rare". The papers given, however, cover a wide range of subjects and are by no means confined to veterinary medicine, and only in the very loosest sense to animal biology. Most of the contributors come from North and South America, with a small number from Europe.

There are four introductory review papers by J. H. Lawrence, D. H. Copp, A. A. Kudryatsev and R. F. Glasscock on the use of isotopes in, respectively, medicine, physiology, veterinary medicine and biochemistry. Kudryatsev's paper is in Russian and is a review of entirely Soviet work with 64 references; the subsequent discussion is in English. As in other fields, there is much work done on the central nervous system, and on conditioned reflexes in particular. It is suggested that the weight of farm animals might be raised by small doses of external radiation. The other three papers are extremely good and interesting reviews, but confined in turn to work in the English language.

The main body of the volume consists of thirty-five papers classified as relating to general physiology, hæmatology and glandular function. There are abstracts in English, French, Russian and Spanish and discussions in English.

Space will not allow mention of more than a few individual papers. In the first general section there is a variety of interesting subjects. There is first a paper from Oak Ridge showing many superb autoradiographs of Protozoa incorporating tritiated cytidine, uridine and thymidine. There are papers on different aspects of intestinal absorption. One of these is on the unfamiliar metabolism of tin in sheep, studied because of the use of tin in a fungicide used on plants such as turnips and mangolds fed to sheep and cows. Workers from Chicago gave a valuable paper on the water spaces of the brain as studied by sulphur-35 and carbon-14-labelled compounds, contrasting with results from Moscow outlined in the succeeding discussion. There is a similar contrast between papers from Israel and France investigating spermatogenesis by phosphorus-32 in man and animals, respectively.

The third section, headed "Glandular Functions", consists of ten papers on radioiodine and thyroid function and one on the effect of progestogens on the genital tract of guinea pigs as shown by sulphur-35 autoradiography. There are two interesting reports on endemic goitre in the Philippines and Venezuela; it is suggested that there is a genetic basis for endemic goitre and that there may be a relative increase in the proportion of plasma triiodothyronine compared with thyroxine in goitrous patients.

This kind of publication can be useful in directing attention to unfamiliar work which will only be published elsewhere in foreign journals not necessarily available in accessible local libraries. This particular volume is very well edited and produced and has a limited 'skeleton index'. It can be recommended, in spite of earlier remarks regarding its title, to libraries of veterinary science and animal physiology.

K. E. HALNAN

THE BRICKS OF MATTER

Atomic Physics Today

By Prof. Otto R. Frisch. Pp. vi + 254 + 18 plates. (Edinburgh and London: Oliver and Boyd, Ltd.; New York: Basic Books, Inc., 1962.) 25*s*.

ATOMIC PHYSICS TODAY is based on a number of individual broadcast talks and articles written by Prof. Frisch during the past few years. These have been revised to bring them into line with present-day knowledge, but it is pleasant to note that the original brightness and spontaneity have been retained, in addition to the self-contained character of each of the sixteen chapters. The reader can, with equal satisfaction and profit, either dip into the volume and read any one of the chapters separately or proceed steadily through the book as a whole. The topics discussed cover a wide range. They deal not only with the well-established phenomena of nuclear fission, fusion, radioactivity and elementary particles, but also with the rather abstruse and more difficult concepts and theories relating to waves and particles, quanta, nuclear structure, the neutrino, parity, the individuality and origin of particles of matter, and causality.

The descriptions given by Prof. Frisch are all clearly, simply and lucidly expressed. Nevertheless one is fully