

ciated Universities, and has been Executive Director since its inception. He is a priest serving St. Stephens Episcopal Church in Oak Ridge.

Dr. Pollard did his graduate work at Rice and has authored many papers and books, the latest being Man on a Spaceship.

**The Technical Applications of Radioactivity.** By Engelbert Broda and Thomas Schönfeld. Pergamon Press (1966). 336 pp. \$15.00.

This volume is the English translation of the third German edition of *Die technischen Anwendungen der Radioaktivität*, Band I. The first and second German editions (1956, 1957) relied heavily on the papers from the 1955 Geneva Conference. The third German edition, essentially rewritten, appeared in 1962, and included material from the 1958 Geneva Conference along with work from the Paris (1957) and Copenhagen (1960) Conferences. It is perhaps unfortunate that the English translation has been delayed (copyright 1966). In many fields, this delay would have meant that the work was hopelessly outdated. In this case, there have been no major breakthroughs in technology or applications, and the usefulness of the work does not necessarily suffer from this delay.

The first 70 pages are devoted to a survey of fundamentals and measurement. This offers only the advantage of having this material included in the same volume as the applications themselves since the approach is conventional. This is followed by about 40 pages of laboratory-oriented techniques in chemical analysis. The remaining 220 pages sketch in a hurried fashion a very broad spectrum of applications to industry. Chapter headings include mining and oil production, metallurgical, engineering and electrical industries, chemical industry (70 pages), agriculture and forestry, and hydrology. Appendixes include a list of important isotopes and a page of conversion units.

The striking feature of the book is the reference list containing over 2500 papers. Since many references are papers presented to conferences held in Europe, or were included in their bibliographies, the book contains multitudinous references to Russian and other European literature. This offers the advantage of having references to applications which are not often seen in US bibliographies. However, the unavailability of these papers in the US means that there is little to be gained except the statement that a given technique was used to attack a particular problem.

The other salient feature of the book is the brevity with which each of the applications is mentioned. It has such a wide coverage that several techniques, each with its references, are included in a single paragraph. The effect produced is that of an annotated catalog of uses. Little description of the methodology of the technique is included except in the general sections of the first few chapters. A comparison with the standard US reference by Kohl, Zentner, and Lukens (*Radioisotope Applications Engineering*) shows considerably more emphasis on methodology by the latter authors.

The book is very useful for cross-fertilization purposes since it does list such a wide variety of applications. It belongs in the library of any radioisotope worker in industry or one who has interests in industrial isotope uses. Although not a book that he would use regularly in his ordinary practice, it will be a useful addition to the

reference volumes of any serious worker who wants a broad-band treatment of the field.

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*About the Reviewer: An early worker in the radioisotope and radiation field, Ralph Overman has been active in a variety of research and educational activities in the nuclear field. He was associated with the thermal-diffusion uranium-isotope separation project and the Oak Ridge National Laboratories during and after World War II, and in 1948 established the Training Division of the Oak Ridge Institute of Nuclear Studies. Dr. Overman now heads his own consulting firm in Oak Ridge. He is a Fellow of the American Nuclear Society and a member of the Editorial Advisory Committee of Nuclear Science and Engineering, and has published two books in the field of radioactivity and experimental radiochemistry.*

**Proceedings of a Symposium on Neutron Monitoring for Radiological Protection.** Sponsored by the International Atomic Energy Agency and convened in Vienna, August 29-September 2, 1966. Printed by the IAEA in Austria (January 1967). Available thru the National Agency for International Publications, Inc., 317 East 34th Street, New York. 702 pp. \$14.50.

The text is timely and important, particularly to individuals concerned with radiological protection, because it focuses on a highly specialized area where certain difficulties exist both from the standpoint of theory as well as instrumentation and measurement techniques. The reviewers feel that the book would be useful to the application specialist as well as to the erudite researcher who is desirous of finding answers to uncertainties existing in neutron dose assessment.

The very broad range of papers categorically fall under the following topic headings:

- 1) Physical Aspects of Neutron Dosimetry
- 2) Liquid Dielectric and Scintillation Detectors
- 3) Semi-Conductor Detectors, Single Sphere and Multi-sphere Systems
- 4) Dosimetry Experience and Problems in Various Installations
- 5) Developments in Personnel Monitoring
- 6) Dosimetry Studies for Accidents
- 7) Standardization and Calibration.

The major portion of the text is devoted to work presented by representatives of the Soviet Union, United Kingdom, Norway, Sweden, France, Federal Republic of Germany, Czechoslovakia, Canada, Italy, Poland, Yugoslavia, and the United States. About 25% of the total work reported in the text represents a fair approximation of what one may consider as "new developments." However, the chief advantage of the text is that it embodies within a single document the status of the art and descriptions of available