

Allison, Band Waggon, Saturday Night Music Hall, and the Sunday Night Services from St. Martin-in-the-Field's, Stephen King-Hall on Children's Hour, outstanding broadcasts to schools, and many, many others.

Although television was well established by 1939, its range was still limited to the London area and viewers were comparatively few. For those, this book will bring memories of studio plays and pantomimes, the Boat Race and the Coronation, Jasmine Bligh and Elizabeth Cowell and other well-known personalities. Among the half-forgotten facts which will occasion surprise is that, up to the outbreak of the Second World War, no broadcasting of any kind took place before the daily service at 10.15 a.m. and no regional variations were permitted before the start of Children's Hour.

The value of *The Golden Age of Wireless*, however, lies less in programme remembrances and more in the revelations behind them. The scientific and technological developments required for the transmission of radio waves over long distances are accurately portrayed and are only excelled by Briggs's fascinating account of how Baird's intrepid struggle to establish a successful means of television ended in tragic failure. The political warfare with successive Governments about ultimate control of broadcasting, the cheese-paring attitude of Ministers and senior Civil Servants, and the ineptitude of a prominent Postmaster-General, help to explain at least some of the reasons which led to apparently slow progress in the development of regional broadcasting and programmes designed especially for overseas listeners. Students of management, too, will find much that is familiar in the way in which Reith built up a large organization on functional lines with constant adaptation to meet changing need, and where the span of control and the matching up of authority and responsibility were well conceived and executed.

The vastness of the book and the detail of its record, however, may account for its greatest imperfection. Many students of social history and sociology would wish to have read more of Briggs's views on the impact of wireless on public taste and opinion. Has the broadcasting of 'good' music led to a real improvement in standards? Among the more intelligent only? What of the effect of 'poor' music and variety on the less intelligent? Were the B.B.C. right to establish such a marked middle-class image? What effect has there been on politics, and on the practice of religion? Has individuality suffered and the creative spark been dimmed? Should not much more have been done to use the radio as a deliberate means of adult education? Has the B.B.C. played its part in the evolution of an industrial society the continuance of which depends on the success of its manufacturing industries? Could knowledge of developments in science and technology have been more widespread? What Briggs has successfully done is to provide the necessary information which others could use to dig even deeper in unearthing the answers to some of the questions posed. What he has done even better is to pay public tribute to the man who so built the B.B.C. that its reputation for integrity stands unrivalled in broadcasting systems throughout the world.

T. H. HAWKINS

TECHNOLOGY AND APPLICATION OF RADIOACTIVITY

Die Technischen Anwendungen der Radioaktivität

Band 1. Von Dr. Engelbert Broda und Dr. Thomas Schönfeld. 3, verbesserte und stark erweiterte Auflage. Pp. 372. (Leipzig: Veb Deutscher Verlag für Grundstoffindustrie, 1962.) 32.50 D.M.

DRS. Broda and Schönfeld's well-known book on the technological applications of radioactivity has now reached its third edition. There has been so much

progress in the subject that it has become necessary to redistribute the material into two volumes, the first of which has now been published. The second volume is promised for the near future.

The basic plan of the previous editions has remained unaltered; but the chapters in the second edition on "Absorption and Scatter of Radioactive Radiation in the Technique of Measurements" and "The Technological Applications of the Effects of Radioactive Radiation on Matter" will appear in Volume 2. The chapter on protection against radiation remains at the end of Volume 1. Examples of stable isotopes used as markers, mainly in cases where radioactive isotopes of elements are too short-lived, have been given in this volume, though without any description of working methods and measurements, since these are not the main topic.

The initial chapter contains a concise summary of the basic facts of radioactivity necessary for a full understanding of the technological applications, followed by a survey of methods of measurement. There is also a review of the various applications of radioactivity to the wide field of chemical analysis and a discussion of the methods of analysis by activation, by indicators, by isotope dilution, etc. The remainder of this volume deals with more specific technological applications in the mining and oil industries, in general and specific problems of the chemical industry, and finally in agriculture and forestry. The treatment of all these items is not exhaustive with regard to detail; the reader who requires detail can look it up in the bibliography attached to each separate section.

The book is very clear and readable, and the text benefits from the avoidance of detail and from the occasional judicious use of examples. For anyone who requires information about the existing technological applications of radioactivity this book will prove a suitable and reliable source.

W. M. DALE

III-V COMPOUND SEMICONDUCTORS

Physics of III-V Compounds

(Wiley Series on the Science and Technology of Materials.) By Prof. O. Madelung translated by Dr. D. Meyerhofer. Pp. xiv+409. (London, New York and Sydney: John Wiley and Sons, Inc., 1964.) 98s.

THE discovery by Welker of the III-V compound semiconductors had the effect of enormously widening the field of semiconductor research not only by the inclusion of the III-V compounds themselves but also by suggesting that there might exist other classes of binary, ternary and even more complex semiconducting systems. The resulting comparative investigations of different semiconductors have been extremely valuable in elucidating the underlying principles governing their behaviour. This applies particularly to the problem of band structure, as is made clear in the second and final chapters of Prof. Madelung's book, *Physics of III-V Compounds*.

One question that must be answered before discussing the book in detail is whether its appearance is timely. There is a contradiction to overcome here since if one waits for a topic to become quiescent before writing a book on it, one may find that readers are no longer interested. The author, I think, justifies himself in the preface where he correctly states that the main features of the phenomena observed in III-V compounds were correctly understood by about 1962 and that present-day research is largely directed towards the solving of technological problems. To this one might add the investigation of phenomena, in themselves interesting, for which some III-V compound provides a particularly suitable medium. It certainly seems unlikely that the picture of the III-V compounds presented in this book will undergo any considerable modification in the near future, though a comparison with Hilsun's slightly later review at the