

chemist's struggle to keep abreast with the literature and reconcile the many contradictory claims.

The original literature has been consulted in the majority of cases. As this includes a great number of Japanese papers the author was particularly favoured by the opportunities provided by a Fulbright lectureship at the University of Osaka. This enabled him to obtain assistance from the staff with the translation and with criticism of many of the chapters.

The principal authorities throughout the world have co-operated in providing reprints and overall résumés of their work. Merewether is the only author of a complete chapter, which is that on "The Linkage of Lignin in the Plant", of which he has made a special study.

Excellent author and subject indexes are provided and the twenty-seven chapters are selected and subdivided in a most convenient logical form, similar to that in the original book, to permit a rapid selection of relevant information. In the preface the author expresses his realization that such a work can neither be complete nor infallible; certainly on first reading no omissions could be found and every effort has undoubtedly been made to make it as comprehensive and accurate as possible.

Brauns and his wife have produced a most pleasing work, and it was a joy to read in such comprehensive detail about one of the remaining major mysteries, as little progress has been made towards the elucidation of the lignin structure in the past decade. It is a pity that so little interest is taken in the United Kingdom in what, after all, is the second most abundant naturally recurring material on this planet. It is to be hoped that this work will provoke more scientists into entering this field, particularly as there is an increasing possibility of workable sources of raw material becoming available in Great Britain, based on the extensive pulping feasibility studies now in progress in Government and industrial laboratories.

J. LUCKINS

PHYSICS FOR THE NON-PHYSICIST

Physics for the Inquiring Mind

The Methods, Nature and Philosophy of Physical Science. By Prof. Eric M. Rogers. Pp. x + 778. (Princeton, N.J.: Princeton University Press; London: Oxford University Press, 1960.) 48s. net.

AT first sight it might seem paradoxical to suggest a course of physics for the non-physicist, but the use of this book will indicate what a wealth of common sense and intelligent understanding lies at the back of the conception of such a course of study. The book is definitely written for the non-scientist, in the hope that he will be brought to appreciate the value of physics as part of a liberal education, and to understand the subject so that he can enjoy the contacts with science and scientists which are part of our modern civilization.

This is surely a very commendable objective, since scientific thought and method are so much a part of our daily lives. I myself think that the book could also be used by bona fide students of physics, since if they pursue the course here prescribed they will certainly get a greater fundamental knowledge of the subject than many of them get by following the more usual courses.

The book is so different from the usual text-book, and it is the author's intention that it should be so.

He deals intensively with a series of topics—not so many that learning becomes superficial and hurried, and not so few that he misses the connected nature of scientific work and thinking—to form a co-ordinated structure of knowledge. He does not merely describe experiments and give facts; he aims rather to encourage and stress the value of critical reading, good and sound reasoning and clear thinking, qualities, one would think, sorely needed in our world to-day by men and women whether they are scientists or not.

The mathematics used in the book involves only the simpler parts of algebra and geometry, but a special feature is the unusual type of problem found in copious numbers at the end of each chapter and which are designed to get the student to discuss and reason.

In this particular book the subjects covered are matter, motion and force, astronomy, molecules and energy, relativity, electricity and magnetism and atomic and nuclear physics, but, as the author points out, any other selection of subjects could be made and treated in a similar way.

If one is expected to make one word of criticism it is perhaps that certain parts suffer from over-simplification, but this remark must not be taken too seriously, for the course has been brilliantly conceived and worked out by the author, who deserves congratulations and every encouragement.

I am pleased to have had the opportunity of inspecting this book and of mentioning a few of its many virtues.

T. M. YARWOOD

A CONCISE COURSE OF PHYSICS

A Textbook of Physics

By Dr. R. C. Brown. Pp. xxi + 1424 + xxxvi. (London: Longmans Green and Co., Ltd., 1961.) 60s.

THIS voluminous work of more than 1,400 pages incorporates all the material published in separate volumes in the author's *Mechanics and the Properties of Matter, Heat, Light, Sound and Electricity and Magnetism* and is, of course, eminently suitable for all students preparing for the Advanced Level of the General Certificate of Education.

Throughout the book Dr. Brown has made use of his experience as an examiner to take special care in presenting certain topics which he has found to be only partially understood by students. This is a good thing, for there is no doubt that quite a number of candidates enter for the examination with an inadequate knowledge of fundamentals, and these are strongly emphasized in this book.

An appreciable amount of the book deals with work suitable for the Ordinary Level of the General Certificate of Education, and one wonders whether it might not have been better to have had two smaller volumes, one for each level. This is in no sense any criticism of the contents of the book, for Dr. Brown develops his advanced work from the elementary principles quite successfully and thoroughly.

While recognizing the value of m.k.s. units in applied electrical theory and engineering where they are used extensively, the author does not appear to advocate their use in the rather different intellectual climate of advanced physics, though he has an open mind about the use of any particular system of units. He suggests that students who have passed their General Certificate of Education examinations and have to use m.k.s. units afterwards will understand their work