

lic and make them understand what is "good and bad science".) If I were to recommend a book to a lay reader on the subject of "good and bad science", I doubt if I would recommend Martin Gardner's book. There is too much in it. The average lay reader would have a hard time reading through it.

It is, however, an excellent book in the hands of a prepared reader, somebody who has already sufficient basic training to bring an understanding mind to its contents. I think its greatest value would be in the hands of the devoted people who are willing to go out and preach to the lay public. I would recommend it highly to science teachers in high schools and to college instructors who are faced with the task of going out and talking to people and trying to make them understand "what is good science and what is bad science". In the hands of such devoted people, this book can be of enormous value as a source book.

The review copy came accompanied by a circular written by the president of Dover Publications. He states, "the book was first published in 1952 and of the original 3000 copy press run about a 1000 were remaindered. During the same period of time it is estimated that the aggregate sale of pseudo-scientific books on flying saucers, reincarnation, health fads, eccentric theories, etc. is over two million." I am afraid that it is the nature of things that a book of this type does not sell too well. I would not expect that the present edition in spite of its excellent presentation and its low price, being a paperback, will have the same sales as the corresponding book on flying saucers. Nevertheless, the publishing house has made a very valorous effort and has to be complimented on its presentation of this book.

An Introduction to Reactor Physics (2nd Revised Edition). By D. J. Littler and J. F. Raffle. 208 pp. Pergamon Press, London & New York, 1957. \$5.50. *Reviewed by E. R. Rae, Columbia University (on leave from Atomic Energy Research Establishment, Harwell, England).*

This little book is a revised edition of a text which appeared in 1955 and was reviewed in these pages in July, 1956. It is based on a set of lectures given by the authors to the students attending the Reactor School of the United Kingdom Atomic Energy Authority. It is intended as a text for the graduate engineer or physicist who wishes to understand the basic principles of reactor design. The style is simple and direct; only present-day ideas are discussed and no attempt is made to describe the historical development of the subject. Since the book is aimed at the relatively unsophisticated reader, the style is probably very suitable. General references and suggestions for further study are given at the end of each chapter.

The second edition is 12 pages longer than the first, but has one less chapter, the material formerly presented in the final chapter on "Diffusion Length Measurements and Exponential Experiments" being now in-

corporated in earlier sections of the book. Several other chapters have been modified, enlarged slightly, and brought more nearly up-to-date by the inclusion of data released at the Geneva Conference of 1955. The general layout, however, has been preserved and the first six chapters lead the student, through a discussion of atomic and nuclear physics, to the subject of the chain reaction. The next six chapters deal with the problems of calculating the behavior of a reactor, the discussion being concerned mainly with thermal reactors, while the last three chapters deal with the allied subjects of shielding, radiation detectors, and irradiation damage in bulk matter.

There can be little doubt that this book is useful to the student who is making his first acquaintance with reactor physics.

On Nuclear Energy: Its Potential for Peacetime Uses. By Donald J. Hughes. 263 pp. Harvard U. Press, Cambridge, Mass., 1957. \$4.75. *Reviewed by H. Mendlowitz, National Bureau of Standards.*

It is usually difficult to express the knowledge acquired in a technical field in terms that would make it intelligible to the layman. D. J. Hughes in his book *On Nuclear Energy* has done just this. In giving us a clear treatment of a highly specialized field, he has made intelligible to the layman important aspects of our present-day technology. There are very few instances when the author lapses into a style of writing suitable only for a technical journal. This book is valuable also to those whose background in nuclear physics or nuclear engineering is very meager. He ably recreates great moments in the history of the subject so that the reader finds himself living through the disappointments and triumphs of the scientists and engineers.

The author first introduces the reader to the fundamentals of atomic and nuclear physics and then leads the reader through a series of steps to reactor physics and engineering. He also treats some of the problems involved in the nonmilitary applications of fusion. There is also a discussion of the economic and political aspects involved in the peacetime applications of nuclear physics.

This then is a book that will be useful not only to the scientist and engineer because of its treatment of the political and economic aspects of nuclear physics but especially important to those whose interest lies in the nonscientific fields, thanks to the author's able and thorough handling of this important subject.

Solid State Physics: Advances in Research and Applications. Vol. 4. Edited by Frederick Seitz and David Turnbull. 540 pp. Academic Press Inc., New York, 1957. \$12.00. *Reviewed by Robert T. Beyer, Brown University.*

The amazing mushrooming of that growth known as solid-state physics requires the annual publication of more than a single review volume. As a result, the edi-