

data and the attempts to fit these in terms of a static, nonrelativistic potential.

(2) *The Three-Body Problem in Nuclear Physics*, by M. Verde, a summary of methods and progress in the simplest nuclear many-body problem; the difficulties in making the step from two to three bodies illustrate the essential hopelessness of attempting to solve the problems of nuclear structure by a direct solution of the many-body problem in terms of two-body forces (assuming they were known).

(3) *Matter and Charge Distribution within Atomic Nuclei*, by D. L. Hill. Mainly a critical survey of the information on nuclear size and shape as deduced from observations on electromagnetic and nuclear interactions.

(4) *The Nuclear Shell Model*, by J. P. Elliott and A. M. Lane. A summary of methods and results in applying the independent particle model to the study of nuclear structure, starting from the simplest shell models and increasing in complexity by the successive introduction of interactions between individual nucleons and with the collective motions of the "core".

(5) *Models of Nuclear Structure*, by S. A. Moszkowski. A comparison of models starting from the two extremes of independent particle motions and strongly coupled motions, with a lengthy summary of some recent promising attempts at a unification of the two points of view.

The authors are all authorities in their fields and these articles, with respect both to content and clarity, reflect the depth of their understanding of their respective subjects.

Chemisorption: Proceedings of Symp. (U. College of N. Staffordshire, Keele, Staffordshire, England, July 1956). Edited by W. E. Garner. 277 pp. (Butterworths, England) Academic Press Inc., New York, 1957. \$9.00. *Reviewed by Henry Wise, Stanford Research Institute.*

The proceedings of the symposium on "Chemisorption" held at the University College of North Staffordshire in 1956 are a continuation of those on "The Adsorption of Gases" at Oxford in 1932 and on "Heterogeneous Catalysis" at Liverpool in 1950. The twenty-three papers presented at this meeting are divided among five main topics: (1) Theory of Chemisorption; (2) Chemisorption on Insulators; (3) Chemisorption on Metals; (4) Chemisorption on Semiconductors; and (5) Chemisorption on Carbon. Primarily the articles are concerned with the more fundamental aspects of catalysis, both theoretical and experimental, as viewed by some of the leading European workers in this field. It is rather noteworthy that in this volume one does not find a single contribution from the USA.

Some of the formal presentations give up-to-date reviews of certain aspects of heterogeneous catalysis such as the fine paper by Dowden on chemisorption and valency, that by Trapnell on mechanisms of chemisorption, and that by Stone on chemisorption on semicon-

ductors. Of special interest is the growing evidence for the presence of states of chemisorption intermediate between physical adsorption and strong chemisorption as further brought out in the discussions following the theoretical section on chemisorption. Also, the increasing importance of electronic factors in heterogeneous catalysis becomes particularly evident in the sections dealing with chemisorption on metals and semiconductors. Application of the electron resonance technique to studies on the interaction of various adsorbents with the unpaired electrons present in the carbon surface is described in an interesting paper by Ingram.

In conclusion, the proceedings of this symposium are of particular significance to the specialist engaged in research on catalysis. This rapidly advancing field is well served by discussions of the type held at Staffordshire.

Fads and Fallacies in the Name of Science (2nd Revised Edition). By Martin Gardner. 363 pp. Dover Publications, Inc., New York, 1957. Paperbound \$1.50. *Reviewed by L. Marton, National Bureau of Standards.*

In a time when the popular mind is reawakening to the importance of science, it is useful to have books on hand which help distinguish between "good science" and "bad science". Many may ask, "What is good science and what is bad science?" Not all good scientists make good science, so you can't define good science on the basis of its perpetrator alone. Generally a good scientist knows what constitutes good science and just by instinctive feeling he can pursue a line of thought which will lead to new and important results. It is much harder, however, to make the general public understand what constitutes good science. Many sins are committed in the name of science, and the general public which is unable to distinguish between the two types of sciences will, generally, follow more "bad sciences" because its practitioners are better salesmen than those of "good science".

The book of Mr. Gardner under its revised title (the first edition titled: *In the Name of Science*) attempts to do precisely this educational task for the general public. This is a very difficult task and there is no simple answer to the question whether Mr. Gardner succeeded in doing it or not.

Fads and Fallacies covers an enormous amount of ground. Its 26 chapters range from Physics to Flying Saucers, from Dowsing Rods to Lysenkoism, across all kinds of Medical Cults including Dianetics, Parapsychology, and Extrasensory Perception. It is a book written by a man devoted to his task who has accumulated a tremendous amount of material and presents it very clearly and convincingly. It is very well documented and I have nothing but praise for the way its subject matter is presented. Nonetheless I do have reservations about its usefulness. The reason is stated in my beginning sentence. (At present we need good material to combat anti-intellectualism of the lay pub-