

relishes and presents his material but also from his skill in weaving the principles and concepts of science into a pattern which is both meaningful and strikingly his own.

Gamow has repeatedly proved to be readable, and his latest book is no exception; it is a gay and exciting excursion into the physical sciences. The approach is a refreshing one. The book is written in the form of a trilogy, dealing first with things of our own size, second with the microcosmic world, and finally with the macrocosm. This departure from the usual historical approach allows a more continuous presentation of physics, chemistry, astronomy, and geology and will be appreciated by the general reader. It is evident that considerable effort and thought have been given to the problems of conjoining the contents of each section into a whole (this is most successfully accomplished in the macrocosmic section) and of keying the more difficult concepts of modern science to the simple level of presentation used in the first section. As an aid to the assimilation of the material, the author has included many entertaining illustrations and photographs.

The volume appears to be written for the general reader, but the addition of questions and answers and the publisher's advertisement, as well, suggest that it may be intended as an introductory text for nonscience students. For this purpose the book is probably oversimplified, and the amusing style tends to obscure the drama of science. However, the general reader will be handsomely rewarded, for he will find the author to be an illuminating writer on scientific matters as well as a provocative prophet. Says Gamow, "To sum up, we can say that the state of physical sciences today can be compared with the state of geography a few centuries ago: there are no Americas to be discovered any more."

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The Measurement of Colour. W. D. Wright. Macmillan, New York, ed. 2, 1958. ix + 263 pp. Illus. \$10.75.

Since 1931, when the Commission Internationale de l'Eclairage (CIE) adopted the Standard Observer System for Colorimetry, color measurement and specification have grown tremendously. Wright's efforts in the development of this system eminently qualify him to write a book on the measurement of color. Although the book treats this specialized field from the psychophysicist's viewpoint, it is written in language that nonspecialists can fully comprehend.

Wright develops the story of tristimu-

lus colorimetry in a logical and informative manner. The first two chapters treat the physical and physiological concepts of visible radiation. The next two chapters present the principles underlying photometry and colorimetry, culminating in the definition of the 1931 CIE standard observer. Chapters 6 and 7 describe the means by which color may be measured (colorimeters and spectrophotometers) and by which colors may be specified and represented (color spacings and color atlases). The final two chapters discuss such important applications of the system as color photography, color printing, and color television and give a behind-the-scenes view of the reasons forcing consideration of revision of the system, ending with the open-minded statement that only the future will show whether the data currently being gathered will "justify a revision of the standard observer data."

There are, regrettably, several prominent inadequacies: nonphysical use of the term *power* to describe "capability"; incomplete captioning of figures for the spectral distribution curves of sources, so that the tyro may draw erroneous conclusions regarding the energy in these sources; and reversal on plate 4 of the bottom and top colors printed to represent effects of decreasing saturation on the spectral reflectance curves of pigments. On the whole, however, Wright has prepared an excellent revision of his earlier work (1944). He does not presume to be an oracle who answers all color-measurement problems, but rather presents the reader a clear insight into the CIE Standard Observer System.

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Proceedings of the Second International Congress of Surface Activity. vol. I, *Gas/Liquid and Liquid/Liquid Interface*, 521 pp., \$15; vol. II, *Solid/Gas Interface*, 348 pp., \$12.60; vol. III, *Electron Phenomena and Solid/Liquid Interface*, 621 pp., \$16.80; vol. IV, *Solid/Liquid Interface (Washings, Etc.) and Cell/Water Interface*, 352 pp., \$12.60. J. H. Schulman, Ed. Academic Press, New York; Butterworths, London, 1957. \$50 per set.

These four volumes contain the papers presented at the second International Congress of Surface Activity, held in London in the spring of 1957. The amount of material contained in the four volumes is very great and reflects the outstanding success with which the efforts of the organizers (Schulman and his school) have been so justly crowned. The speed with which the work has been published reflects credit on publisher

and authors alike, for this is no small achievement.

Since the list of contributors and titles is so long, I feel that to select just a few names would be unjust, but the truly international character of the meeting may be briefly indicated by such names as Ekwall (Finland), Derjaguin and Trapeznikov (U.S.S.R.), de Boer and Overbeek (Holland), Nilsen (Sweden), Sata and Sasaki (Japan), and Alexander (Australia).

The topics of the four main activities of the meeting are conveniently grouped in individual volumes. Volume I deals with general adsorption problems at the gas-liquid and liquid-liquid interfaces, as well as with applications of these studies to typical systems of practical interest—for example, evaporation from water reservoirs, solubilization in detergent solutions, and emulsification. Volume II deals exclusively with adsorption on solid surfaces, one section comprising physical adsorption—particularly with reference to heat of adsorption—and the other section dealing with an interesting variety of problems in chemisorption. Volume III deals with electrical phenomena at the mercury-water and other interfaces, and with such aspects of the solid-liquid interface as flotation and adsorption, while volume IV is concerned with other aspects of the solid-liquid interface, such as problems in detergency, as well as with the surface chemistry of cell and tissue interfaces. The last two volumes illustrate very well the increase which has occurred in recent years in the state of knowledge relating to such apparently diverse phenomena as the flotation of minerals and biological surface chemistry.

These books represent more than simply a collection of (for the most part) admirably brief but well-documented papers dealing with specific items in surface chemistry. Following the excellent precedent set by the Faraday Society, the organizers of the congress allowed time for discussion of the papers, and the keen discussions are reproduced along with the papers. The discussions seem to me to be a valuable feature; they aid the reader in evaluating the occasionally rather strongly worded claims in certain of the papers, and they contribute towards bringing the material into a more coherent whole. Would that more meetings were run along these lines!

Although, to be sure, the many contributions deal with individual items, even the general reader can gain sight of a good cross section of current activity in surface chemistry from these four volumes, and it is heartening to see such breadth of study represented here. Specialists will be more concerned with individual volumes; thus, solution-chemists will find more in volume I than elsewhere, and workers in the field of cata-