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riers that one finds in basic quantum mechanics texts and Duke uses this as the starting point for the understanding of a variety of experiments involving elastic tunneling with non-superconducting electrode materials. Various modifications of barrier potentials and density of states are discussed and the relation to experiment is analyzed. This area comes under Duke's heading of the independent electron theory of tunneling. The other major area treated involves the more complex aspects of tunneling, which include superconductivity, inelastic effects, magnetic interactions and self-energy effects. The treatment is quite extensive and contains detailed discussions of the more advanced theoretical approaches. Duke's own contribution to the advanced theoretical structure is quite well known so that it is appropriate that this area be emphasized.

This volume is a supplement to the Solid State Physics series that is so well known to solid-state physicists and it is a timely and valuable addition to the series. Those wishing to know more about the field will find it to be an excellent central source. Research workers in the field of electron tunneling should have this book at hand.

JOHN LAMBE
*Ford Motor Company
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Laser Interaction and Related Plasma Phenomena, Vol. 2

H. J. Schwarz, H. Hora, eds.
583 pp. Plenum Press, New York, 1972. \$27.50

This volume represents the proceedings of the Second Workshop, held at Rensselaer Polytechnic Institute during the early autumn of 1971. It is composed of the unedited papers given at that colloquium covering such subjects as high-density lasers, laser-induced gas breakdown, plasma diagnostics and special interaction processes, laser-produced plasmas interacting with gases in magnetic fields, the theories of high-intensity laser interaction with plasmas and fusion neutrons from laser-irradiated high-density plasmas. In all there are 43 papers reproduced in their original typescript form with a brief summary of the discussions after each major section of the workshop.

The First Workshop, held under the same auspices in 1969 and also edited by Helmut Schwarz, who is a professor of physics, and Heinrich Hora, adjunct associate professor of physics, at Rensselaer Polytechnic Institute, provides

the material for Volume 1 under the same title.

The editing of symposia of this nature serves a very useful function in drawing together in a single place the state-of-the-art thinking in specific narrow areas, and although the cost of the book is high, it is certainly much cheaper than attending the conference in person.

However, as published proceedings of conferences become more and more common, we should look for a greater sophistication on the part of editors in reducing the volume of extraneous material and the elimination of redundancy. Accepting everything the author himself includes in his paper does not serve the reader well, and editors should accept the responsibility of really editing rather than merely compiling. This present volume gives us a number of cases in point. For example, every paper starts with a footnote "Presented at the Second Workshop on 'Laser Interaction and Related Plasma Phenomena' at Rensselaer Polytechnic Institute, Hartford Graduate Center, August 30-September 3, 1971." Yet the whole book is announced as being this and a good many inches of space could be saved if this was not repeated automatically for every paper in the book. Five of the papers are given in abstract only; these abstracts are so brief as to be useless and they should have been eliminated. The reader is not interested in archival records of the workshop but in the substance presented.

The editors have produced both an author index and a subject index, and this adds considerably to the use of the text. However, a greater cohesiveness would have been achieved if the editors had compiled an index not only of cited names in the text, but also an index to the references following each paper. Considerably more value would have been gained if this had been undertaken.

Finally, in an edited volume of this sort, such statements as "The authors gratefully acknowledge the encouragement and stimulating remarks of..." add nothing to the usefulness of the material and in some cases take up as much as a quarter of a page—the elimination of which could have reduced the length and hence the expense of the published volume.

The edited proceedings of conferences and workshops are fast becoming a standard method of publication. These books are very useful and serve an important function, but in general the editing of them has not yet developed the criteria and standards that need to be enforced as rigidly as in journal editing or authored books. It is hoped that such criteria will soon evolve, so that these volumes may present their material in a tighter format

to save both the time of the reader and space on the library shelves.

SANBORN C. BROWN
Massachusetts Institute of Technology
Cambridge, Mass.

new books

Electricity and Magnetism

Electricité Magnétisme Cours. P. Baruch, M. Hubin, J. F. Petroff. 319 pp. Hermann, Paris, 1973. 46 F.

Materials Science

Cooperative Phenomena Near Phase Transitions: A Bibliography with Selected Readings. H. Eugene Stanley, ed. 308 pp. MIT Press, Cambridge, Mass, 1973. \$14.95.

Defects in Crystalline Solids. B. Hender-son. 203 pp. Crane, Russak, New York, 1973. \$19.50 cloth, \$9.75 paper.

L'Effet Mössbauer et ses Applications. Christian Janet. 234 pp. Masson, Paris, 1972. 110 F.

Magnetic Properties of Rare Earth Metals. R. J. Elliott, ed. 425 pp. Plenum, New York, 1972. \$28.00.

Optical Properties of Solids. F. Abelès, ed. 1026 pp. Elsevier, New York, 1972. \$69.00.

Point Defects in Solids, Vol. 1, General and Ionic Crystals. J. H. Crawford, L. M. Slifkin, eds. 556 pp. Plenum, New York, 1972. \$37.50.

Radiation Damage and Defects in Semiconductors. (Conf. Proc. Institute of Physics 19-21 July 1972). 458 pp. American Institute of Physics, New York, 1973.

Sintering and Related Phenomena. (Conf. Proc. Third International Conference on Sintering and Related Phenomena, Notre Dame, Indiana, 5-7 June, 1972). G. C. Kuczynski, ed. 451 pp. Plenum, New York, 1973. \$25.00.

Low Temperature

Critical Currents in Superconductors. A. M. Campbell, J. E. Evetts. 243 pp. Barnes & Noble, New York, 1973. \$17.75.

Cryoelectronics. W. P. Jolly. 88 pp. Halsted, New York, 1972.

Astronomy, Space Physics

Atoms and Molecules in Astrophysics. (Conf. Proc. 12th Scottish Universities Summer School in Physics. University of Stirling, August 1971). T. R. Carson, M. J. Roberts, eds. 367 pp. Academic, New York, 1973. £7.50.

Le Ciel et Deux Ecrits. Jean-Claude Pecker. 157 pp. Hermann, Paris, 1972. 12 F.

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