

ADVANCES IN INFORMATION SYSTEMS SCIENCE*

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CONTRIBUTORS: Allen D. Breck • Wolfgang Yourgrau • Sir Karl Popper • André Mercier • Herman Tennesen • Håkan Törnebohm • Willard Van Orman Quine • Dmitriy D. Ivanenko • Julian Victor Langmead Casserley • Arne Naess • Jaakko Hintikka • Czesław Lejewski • Jean-Pierre Vigié • George Gamow • Richard H. Popkin • Robert S. Cohen • Hans-Jürgen Treder • Hermann Bondi • David Kaplan • Alfred Landé • György Ránki.

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is practically always the case in French texts, the writing is clear and graceful. There is an abundance of beautifully drawn figures, and the composition shows a very high order of excellence. I am happy to note that the treatment of wave motion begins with acoustic radiation, an obvious mode of departure.

The student using this book is expected to have a substantial background in elementary calculus and differential equations, both ordinary and partial. However, the authors have felt it wise to include a 40-page appendix on mathematical methods, which should make the book more valuable for self-study. The volume contains no exercises for the student to work out. For both class and home use, it is intended to be accompanied by a separate volume with problems and review summaries.

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Semiconductors and Semimetals, Vol. 4: Physics of III-V Compounds

R. K. Willardson, Albert C. Beer, eds.
511 pp. Academic, New York, 1968.
\$22.00

This book represents the fourth volume of physics of III-V compounds. Three of the eight chapters are written by Russian authors; none by the two editors. However, all the chapters are written by authorities in the respective fields, and they are made even more valuable by the extensive literature cited in the many footnotes. Certain chapters, therefore, can well be used by graduate students.

It summarizes the advances and the results of measurements made with various III-V compounds and uses literature data starting with 1891. However, the most frequent references are from 1950 to 1963. The literature of the later years (up to 1967) is seldom mentioned, except in the chapter on diffusion by Don L. Kendall.

The book discusses the following properties of semiconductors, including the methods of determination and measurement: hardness, including microhardness of semiconductors and solid solutions; heats of formation and fusion (in the extensive chapter by N. N. Sirota); diffusion, including self-

diffusion and impurity diffusion; the effects of pressure, of nuclear radiation, of electric fields and of radiation generally; impurity effects in solid solutions, and electrical properties of nonuniform crystals. All the chapters contain additional information on phase diagrams and transitions, lattice parameters, lattice defects, electrical and thermal conductivities, bonding, light emission, ionization rates, vapor pressures and other thermodynamic data and so on. In short, the book contains a wealth of useful information and many hints for further work. It is well written and contains many illustrations.

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NEW BOOKS

CONFERENCE PROCEEDINGS

Supernovae and Their Remnants. (Conf. Proc. on Supernovae, Goddard Institute for Space Studies, NASA, 1967). P. J. Brancazio, A. G. W. Cameron, eds. 240 pp. Gordon and Breach, New York, 1969. \$17.50

Cargèse Lectures in Physics, Vol. 3. (Summer School at Institut d'Etudes Scientifiques de Cargèse, 2-28 Sept. 1968). M. Jean, ed. 678 pp. Gordon and Breach, New York, 1969. Cloth \$37.00, paper \$24.50

Astrophysics and General Relativity, Vol. 1. (Brandeis Univ. Summer Institute in Theoretical Physics, 1969). M. Chrétien, S. Deser, J. Goldstein, eds. 300 pp. Gordon and Breach, New York, 1969. Cloth \$17.50, paper \$9.75

Proceedings of the 1969 CERN School of Physics. (Conf. Proc. of the 1969 CERN School of Physics, Leysin, 31 Aug.-13 Sept., 1969). 208 pp. CERN, Geneva, 1969.

Strahlenschutzprobleme Bei Der Freisetzung Und Inkorporation Radioaktiver Stoffe. (Conf. Proc. of 4th Annual Meeting of Fachverbandes Für Strahlenschutz E. V., Berlin, 28-30 May 1969). 638 pp. Tagungsbericht, Berlin.

Quantum Chemistry: Part 2. (Conf. Proc. of the International Symposium on Atomic, Molecular and Solid-State Theory and Quantum Biology at Sanibel Island, Florida, 13-18 Jan., 1969). Per-Olov Löwdin, ed. 910 pp. Interscience, New York, 1970. \$32.50

ATOMS, MOLECULES, CHEMICAL PHYSICS

Case Studies in Atomic Collision Physics 1. E. W. McDaniel, M. R. C. McDowell, eds. 593 pp. American Elsevier, New York, 1969. \$35.00

Electron Spectroscopy for Chemical Analysis Applied to Free Molecules. By K.