

# EDITOR'S BOOK REVIEWS

*Editor's Book Reviews* are addressed to books that are primarily compilations of data and statistical information.



## **A Guide to Radiation Protection**

*Author* J. Craig Robertson  
*Publisher* Halsted Press (1976)  
*Pages* 86  
*Price* \$9.95

This book is predominantly meant for those who have very little scientific background and, therefore, is written generally in a rather introductory manner; however, it covers the subject quite well. It stresses, primarily, the rules and regulations presently in use in the United Kingdom; however, it does make reference to those in other countries. As the author states in the preface, the book would be an excellent book for those teaching the lay public the problems and properties of radiation and radiation protection. *MEW*

## **Radiation Protection by Shielding**

*Author* Paul Friedrich Saueremann  
*Publisher* Karl Thiemig Press, Munich (1976)  
*Pages* 183  
*Price* \$19.80

This book consists primarily of a discussion on how to do shielding calculations for various types of shielding materials in accordance with the rules and regulations of the West German Government, which are quite similar to those of the U.S. Nuclear Regulatory Commission. The majority of the book deals with tables of attenuation factors for various materials as a function of en-

ergy to permit quick calculations of shielding thickness for a given radiation source. The book is in both German and English and is handy for those who want a quick way to do radiation shielding calculations and do not want to bother with detailed mathematics and the theory of shielding and buildup. *MEW*

## **The Nuclear Air Cleaning Handbook**

*Authors* C. A. Burchsted, A. B. Fuller, and J. E. Kahn  
*Publisher* U.S. Energy Research and Development Administration (1976)  
*Pages* 290  
*Price* \$9.75; microfiche \$2.25

This handbook is a revision of ORNL/MSIC-65, *Design, Construction and Testing of High Efficiency Air Filtration Systems for Nuclear Applications*, which was issued in January 1970. However, the title has been shortened to *Nuclear Air Cleaning Handbook* and is now published as ERDA 76-21. The purpose of the handbook is to help ensure safe operation in nuclear facilities with regard to gaseous effluence and is part of the ERDA program aimed at the effective control of gaseous effluence. This handbook digests the background data available in this area, evaluates them, and provides guidance to the engineer and technologist in the design of facilities. It is a very detailed overview of the area of air cleaning and nuclear facilities and is a valuable manual for those involved in design in this

area of nuclear facilities, reprocessing plants, power plants, etc. *MEW*

## **World Survey of Major Facilities in Controlled Fusion Research**

*Compiler* International Atomic Energy Agency  
*Publisher* Unipub, Inc. (1976)  
*Pages* 866  
*Price* \$48.00

This compilation is put out by the International Atomic Energy Agency and is a survey of the major facilities used in fusion research around the world. Part A lists detailed information by country and location, activity, and category; Part B gives summarized information on types of systems; and Part C is a personnel index listing country, instruments, and references of people working in the field of controlled fusion research. This is an interesting book for those working in fusion research, listing what is being done in other laboratories. *MEW*

## **Annual Review of Energy, Volume 1**

*Editor* Jack M. Hollander  
*Publisher* Annual Reviews, Inc. (1976)  
*Pages* 793  
*Price* \$17.00

This is a new review series dedicated to the awakening interest in energy and the problems of energy supply and generation. The Series

Editors state that they dedicate this series to a continuing review and discussion of the significant issues relating to energy: the technologies of energy generation and use; regional and global energy systems; environmental and societal impact of energy systems; and the economics and politics of energy and scientific and research frontiers in energy. This first volume of the series covers energy supply and distribution, resources and technologies, energy in the economy, energy conservation, impacts of energy in an environment, health and safety, energy policy and politics, as well as international aspects of energy. This is a concise, well-proportioned review of the energy problems of today and represents a good start in a series that will see a lot of use in this period of energy crises. *MEW*

**Annual Review of Materials Science, Volume 6**

*Editor* Robert A. Huggins  
*Publisher* Annual Reviews, Inc. (1976)  
*Pages* 435  
*Price* \$17.00

This is the sixth volume of the *Annual Reviews of Materials Science*, a series that critically assesses the state of science in the field of materials. This volume covers such materials and areas as polymers, use of materials by people, electron-microscopy of inorganic materials, and glassy metals. Other subjects covered are soft modes on the structure and properties of materials, intercalation compounds of graphite, chemical properties of bone mineral, corrosion of implant materials, polymer-resistant systems for photo and electron lithography, materials for solar photovoltaic energy conversion, mechanical spectroscopy, metal joining methods, and the structure of noncrystalline materials. This volume, along with the previous volumes in the series, is a useful addition for those working in materials science. *MEW*

**Advances in Nuclear Science and Technology, Volume 9**

*Editor* Ernest J. Henley  
*Publisher* Academic Press, Inc. (1976)  
*Pages* 359  
*Price* \$36.50

This is the ninth in a series of *Advances in Nuclear Science and Technology*, the purpose of which is the presentation of specific new material as well as reflective use of major segments of the fields of nuclear science and technology.

The present volume covers such areas as nuclear power reactors and the evaluation of population hazards, the solution of criticality problems by Monte Carlo methods, and high-temperature chemistry of ceramic nuclear fuels, with emphasis on non-stoichiometry as well as on developments in perturbation theory and computer technology program interchange and standards. This volume stresses safety and materials as well as computation methods and is a valuable addition to libraries. *MEW*

**Methods in Computational Physics, Volume 15**

*Editor* Gideon Gilat  
*Publisher* Academic Press, Inc. (1976)  
*Pages* 429  
*Price* \$43.50

Volume 15, recently published by Academic Press, Inc., is another in the series of *Methods in Computational Physics*, which has been regularly published to present the latest in advances in research and applications in a wide variety of scientific fields. This volume, devoted to *Vibrational Properties of Solids*, covers these specific topics: The Calculation of Phonon Frequencies; The Use of Computers in Scattering Experiments with Slow Neutrons;

Group Theory of Lattice Dynamics by Computer; Lattice Dynamics and Related Properties of Point Defects; Lattice Dynamics of Surface Solids; Vibrational Properties of Amorphous Solids; Lattice Dynamics of Quantum Crystals; Methods of Brillouin Zone Intergration; and Computer Studies of Transport Properties in Simple Models of Solids. This volume will serve as a useful reference for those concerned with properties of solids. *RP*

**Methods in Computational Physics, Volume 16**

*Editor* John Killeen  
*Publisher* Academic Press, Inc. (1976)  
*Pages* 450  
*Price* \$47.00

Academic Press has recently published the latest volume in the series *Methods in Computational Physics*, a series that is devoted to presenting the latest advancements in both research and application in a number of scientific areas.

Volume 16 covers a wide range of subject material in the area of controlled fusion. The specific topics covered are: Numerical Magnetohydrodynamics for High-Beta Plasma; Waterbag Methods in Magnetohydrodynamics; Solution of Continuity Equations by the Method of Flux-Corrected Transport; Multifluid Tokamak Transport Models; ICARUS—A One-Dimensional Plasma Diffusion Code; Equilibria of Magnetically Confined Plasmas; Computation of the Magnetohydrodynamic Spectrum in Axisymmetric Toroidal Confinement Systems; Collective Transport in Plasmas; Electromagnetic and Relativistic Plasma Simulation Models; Particle-Code Models in the Nonradiative Limit; and the Solution of the Kinetic Equations for a Multispecies Plasma.

This volume would serve as a useful reference for those directly concerned with the field of controlled fusion as well as for others in related fields. *RP*