the lecturers in this symposium, will provide the reader with a survey of respected scientific studies in the area of radiation protection.

While on the staff of the University of Missouri Research Reactor, Dr. Schlapper was involved with the Operational Health Physics Program. He also served as a research fellow in the Nuclear Medicine Department of the Harry S Truman Veterans Administration Hospital. In January 1981, Dr. Schlapper joined the faculty of the Radiological Health Engineering Program of the Nuclear Engineering Department at Texas A&M University. He also serves on the consulting faculty of the Nuclear, Biological and Chemical Protection Branch of the U.S. Army Academy of Health Sciences. Dr. Schlapper has several publications to his credit that include articles on the development of neutron beam computed tomography.

Handling Radioactivity (A Practical Approach for Scientists and Engineers)

Author	Donald C. Stewart
Publisher	John Wiley & Sons, Inc., Somerset, New Jersey (1981)
Pages	282
Price	$39.50
Reviewer	Stephen T. Slack

The author's stated intention is to give an overall view of "the practicalities of handling radioactivity," and scattered throughout are phrases like "bench scale operations," claims that he is "not concerned with kilogram-quantities," and "many of the techniques are those of microchemistry." The actual contents, however, have a very different emphasis. In some places the book seems more like a refresher for architects and engineers engaged in designing new radioisotope facilities than an introduction for those who would use them. Indeed, even its title is something of a misnomer, since far more attention is given to the means of avoiding the handling of radionuclides, such as mechanical manipulators and transfer devices, than to the details of how to conduct operations with due respect for the radioactivity involved.

This does not mean that the book is valueless, but rather that it is apt to be purchased by people looking for something entirely different. Donald Stewart was, until his retirement, associate director of the Chemistry Division at Argonne National Laboratory. He seems here to have distilled this experience and put it in an easily accessible form. After two brief introductory chapters, he presents the focus of the book and almost half of its contents--two chapters on laboratory design. Specific consideration is given to layout, heating, ventilating and air conditioning systems, utilities, shielding, viewing and lighting, remote manipulation and materials transfer. The number of references brought together here is staggering. Chapter 4 alone lists 143 references, some with multiple publication. If budgets ever again permit construction of the sort of facility he has in mind, the designers will be well advised to have a copy of this book at hand. One would wish, however, that more attention had been paid to the problems of renovation.

The chapter on operations deals chiefly with monitoring and decontamination; some attention is paid to protective clothing. The chapter on radiation effects is short but comprehensive. Having a chapter on nuclear criticality seems to once again belie the stated purpose of the book, but it is certainly both informative and entertaining. Another chapter summarizes the various regulations concerning the transportation of radioactive material, chiefly those for high specific activity.

The final chapter on radioactive wastes is better left unread. This topic has been of prime concern to radionuclide users for several years. Regulations, attitudes, and practices have changed several times for some types of waste. The material presented is good in principle, but contains enough misinformation to get the uninformed reader into trouble--with the burial site if he tries to bury free-standing liquids, or with the Environmental Protection Agency if he tries to evaporate them.

The book contains the usual number of typographical errors and several gross errors of fact. [Perhaps the most glaring is the statement that many semiconductors can be transmuted into new elements by the (n,γ) "capture reaction" on p. 207.] It should, however, be purchased by the libraries of most institutions dealing with radionuclides, if only for its value in bringing together the references on so many facets of design and protection. It might even be considered as required reading for members of radiation safety committees and some of the administrators of institutions involved with moderate to high activity radionuclides.

Stephen T. Slack (PhD, physics, The Pennsylvania State University, 1974) did graduate work in nuclear physics, has worked in medical physics, and currently is chief of the Medical Physics and Radiation Safety Division and radiation safety officer for West Virginia University. He regularly teaches a course on radiation safety and radionuclide use.

Heat and Mass Transfer in Metallurgical Systems

Authors	D. Brian Spalding and N. H. Afgan
Publisher	Hemisphere Publishing Corporation Washington, D.C. (1981)
Pages	610
Price	$85.50
Reviewer	Ozer A. Arnas

This book is a compendium of papers presented at the 1979 Seminar of the International Centre for Heat and Mass Transfer, Dubrovnik, Yugoslavia. As in the publications of previous seminars, the papers are grouped together to give greater coherence to the various topics covered.

The groups and the number of papers in each are: