which should be useful to both research workers in the field and to those who are attempting for the first time to use this technique. The authors present first a discussion of the general principles of track etching, including considerable practical information. The ideas about track techniques are applied to the earth and space sciences, and then to the more general fields of nuclear science and technology. Some indications are presented about how track techniques might be used to "discover" magnetic monopols (p. 312 *et seq.*): portents of things to come! In this type of book the authors always have to choose between greater details on the technique itself versus extensive discussions on the applications. In this book a reasonable compromise has been achieved, perhaps erring toward applications. But such applications do tend to make the technique clearer and its possible uses more apparent to the reader. In presenting the applications of track etching the authors did, in this reviewer's mind, discuss too much about the field of application in contrast to emphasis on the details of track formation and the methods for revealing and observing the tracks in the particular field of application.

The level of presentation is sometimes uneven. This is not, of course, unusual in reviews of an experimental technique where the types of applications are diversified, some much more complicated than others. The thorough and extensive list of references at the end of each chapter more than compensates for this deficiency. The abundance of practical information (e.g., on p. 76, the details of types of etch) is extremely important to the uninitiated in the field. The summaries at the end of some chapters are also helpful, as is the indication of needs for future work in the field. Occasionally, the text figures could be improved by schematic diagrams of the charged-particle trajectories to help understand the hole formation (as in Fig. 5-10, for example). Occasionally the authors, in an attempt to simplify and to cover a great deal of material, make unsupported statements and do not simplify details on the particular instrumentation. Some of the simplifications did not always appear necessary.

Overall, this is an excellent book on nuclear tracks in solids, containing, in addition, interesting material on subjects only peripherally related to radiation damage in solids. It is free of errors and is printed in clear, legible type with outstanding photographs. The numerous and diversified applications given of nuclear tracks clearly indicate the accomplishments in that field, and the authors are to be commended for the thoroughness of their compendium, understandable to scientists in many disciplines, as well as advanced undergraduates and graduate students.

John A. Lockwood, professor of physics and associate director of research at the University of New Hampshire, has done extensive research in the solar-controlled modulation of cosmic rays and made measurements of atmospheric neutrons and gamma rays from balloons, rockets, and satellites. His current research interests are directed toward measurements of energetic neutrons and gamma rays using directional time-of-flight detectors. Other investigations are directed toward physical models of transient decreases in the cosmic radiation near earth.

A Guide to Laboratory Design

Authors	K. Everett and D. Hughes
Publisher	The Butterworth Group, London, 1975
Pages	154
Price	$10.00
Reviewer	J.W. McKlveen

For diligent architects, engineers, and other planners involved in designing a laboratory that is functional as well as safe, *A Guide to Laboratory Design* should prove beneficial. Drawing from almost a half-century of combined practical experience, the British authors elucidate many common problems and pitfalls which may be neglected or forgotten by the designers. Though much of the content is common sense, it behooves one to check the book's contents as a means to jog his memory and to enable him to construct a facility based on foresight—rather than hindsight. Information and suggestions are available for construction of facilities for routine work or for handling the most hazardous materials. In an easy-to-reference format, the book is divided into sections on basic laboratory design and materials, fire precautions, detection and fighting fires, ventilation, fume extraction and dispersal, and storage areas. Whereas an excess of information is provided on fume hoods, a catalog item with models and prices to satisfy most requirements, the remainder of the section on ventilation is particularly valuable. One short chapter is devoted to radioactive substances. It is superficial for those with nuclear experience, but worthwhile for others. If the chapter had been read by the architect who designed my radiation laboratories, for example, he probably would not have located the study area and low-level counting room adjacent to the radioactive materials storage.

The book contains an abundance of references, but many describe British regulations or information pertinent to those on the continent. U.S. readers, already swamped with Occupational Safety and Health Administration, Environmental Protection Agency, U.S. Nuclear Regulatory Commission, state, local, and in-house regulations, may read the book for its practical suggestions.

John W. McKlveen has a BS from the U.S. Naval Academy and an ME and PhD in nuclear engineering from the University of Virginia. He is a faculty member and radiation safety officer and, in addition, is responsible for the Radiation Research Laboratories at Arizona State University. His previous work included service in the Naval nuclear-powered submarine program and research in low-level radiation detection. His present interests include applying nuclear methods to environmental research, fast-neutron activation analysis, and low-level dosimetry techniques.

Plasmas and Laser Light

Author	T. P. Hughes
Publisher	Halsted Press