is available, there was no single source devoted to a compilation of data on tritium in metals. This book will be a valuable resource to the scientist just getting into the arena of tritium technology. As the world's fusion programs move toward the introduction of deuterium-tritium fuels into the large tokamaks, more scientists and engineers will become involved in this aspect of technology.

Lasser has put together a very impressive compilation of data on metal tritides and additionally has presented some information on the effects of the tritium decay product ^{3}He in metals.

This book does not attempt to answer all questions about metal hydrides and tritides. Lasser uses a very impressive reference list to direct the reader to much more detailed information. He instead uses the 135 pages of text to deal specifically with tritium, metal tritides, and ^{3}He in metals. He covers a tremendous amount of information in so few pages. In fact, if there is one major flaw in his approach, it is in covering too much information in so few pages. He deals with so many topics, whets our appetite for the subject, then abruptly moves on to another area. This would be a fatal flaw were it not for the reference list mentioned above.

Chapter 1 is a brief introduction to the book. The really valuable information begins to appear in Chap. 2, "General Aspects of Tritium." This chapter provides a good, concise introduction to tritium, its production and availability, risks associated with tritium, and a few words on tritium handling. On p. 10, in the section on "Risks Associated with Tritium," Lasser presents a discussion on tritium uptake and excretion by the body. He states that "the biological half-life of tritium distributed as HTO in the body is about 8–12 days. These figures can be reduced to about 5–7 days by copious drinking. Beer is said to be the best fluid to clear the body of tritium." I sincerely doubt that the statement about beer is one that can be supported by fact, or even by reference to a published document. Other than this statement, I found Chap. 2 to be full of good information.

Chapters 3, 4, and 5 deal with the metal tritides. The treatment is quite good, covering many aspects of the technology of tritium in metals. Especially well done is the discussion in Chap. 5 of the isotope effect for hydrogen, deuterium, and tritium in metals. In these chapters there is a preponderance of information on the palladium-tritium system. This is not too surprising, as this has been an area of special interest to Lasser for many years.

Chapter 4 does contain one additional statement with which I do not agree. On p. 43, Lasser states that most metal tritides can be handled safely at room temperature in well-ventilated laboratories. This is true with some metal tritides, but many of the metal tritides should be handled only in an inert atmosphere. The risk of chemical reaction between the tritides and oxygen, nitrogen, or water vapor in the air, thus releasing tritium as elemental gas or as tritiated water, is sufficient to discourage working with these materials in air unless one is absolutely certain that no reaction will occur.

Chapter 6 is a summary of properties of ^{3}He in metals. Here again, a large number of areas are mentioned but cannot be treated in much depth. There are, however, many references to the original work, thus providing a guide to a more intensive study of the field.

In summary, this is a good book which will be of value to the experienced tritium scientist as well as to those scientists and engineers just starting in the field, or who need only a broad working knowledge of the general area. I consider the book to be a valuable addition to my collection and heartily recommend it to others interested in this area of science and technology.

J. L. Anderson (BS, 1961, and MS, 1963, chemistry, New Mexico State University; PhD, nuclear chemistry, Florida State University, 1966) joined Los Alamos National Laboratory (LANL) in 1966 where his first assignment was in the field of radiation damage to metal tritides. In 1977, he was named project leader for the Tritium Systems Test Assembly (TSTA) at LANL. In 1985, he became group leader of the tritium science and technology group.

Megagauss Fields and Pulsed Power Systems

Editors	V. M. Titov and G. A. Shvetsov
Publisher	Nova Science Publishers, Commack, New York (1990)
Pages	859
Price	$148
Reviewer	Won-Ho Choe

Since the emergence of magnetocumulative generators in the early 1950s, remarkable progress has been made in the field of ultrahigh magnetic field production. With the rapid expansion of the field in diverse directions, this field has now begun to enjoy fruits in each of its branch fields. No one doubts that this field represents an increasingly important element in today's science and engineering. This field has indeed generated and continues to maintain extraordinary excitement in the scientific community. Researchers in this field, therefore, eagerly seek to acquire a broad working knowledge by following current developments closely. In this regard, *Megagauss Fields and Pulsed Power Systems*, edited by V. M. Titov and G. A. Shvetsov, serves the needs of current researchers well, and for newcomers to this field it will be a useful introduction to a variety of experimental techniques and numerical algorithms.

The book begins with two review papers. The first paper (by A. I. Pavlovski) is an excellent review of the achievements made over the last decade in the area of ultrahigh magnetic field compression technology. It deals with the difficulties encountered during the course of experimental developments and with the solutions found at each stage of progress. The second review paper (by F. Herlach) presents an overview of the experimental techniques developed in each category for the production of high magnetic fields. The rest of the volume is devoted to specific technical details ranging from generic magnetocumulative generators to electromagnetic railgun launchers and from diagnostic techniques to various numerical models. It covers almost every major topic that is relevant to ultrahigh magnetic fields and pulsed power techniques.

The articles published in this book were placed under the following section headings:

1. Production of Very High Magnetic Fields
2. High Field Applications

3. Codes, Modelling and Related Topics
4. Diagnostics and Instrumentation
5. Explosive Driven Magnetic Flux Compression Generators
6. High Power Switching and Pulse Shaping
7. Pulse Power Applications—Electromagnetic Launchers
8. Pulse Power Applications—Liner Implosions.

Most articles contained in these eight chapters use modern terms, conventions, and data useful to those who are engaged in design, modeling, and instrumentation. Chapters 1 and 2 are clear presentations of high-field production techniques and their applications. Most numerical models being developed are well covered in Chap. 3. The largest portion of the volume is devoted to Chap. 6. In that chapter, a wide range of pulse-forming and switching experiments are discussed, along with the presentation of specific data.

The topical coverage of this book is quite impressive. As the editors claim in the preface, this book reflects a wide range of up-to-date experimental techniques and concepts for achieving breakthroughs in a number of scientific areas involving ultrahigh magnetic fields and high-power pulse technologies. The papers were presented by the leading scientists involved with research in megagauss physics and technology.

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