

Radiation at home, outdoors and in the workplace. Edited by Dag Brune, Ragnar Hellborg, Bertil R.R. Persson & Rauno Pääkkönen. Oslo: Scandinavian Science Publishers, 2001: 536 p. ISBN 82-91833-02-8. Price: EUR 110.

The publication of this comprehensive book on ionizing and nonionizing radiation is "timely", as Kai Siegbahn writes in the Foreword, which states also that "It is of the uttermost importance that the general public, including mass media and political decision makers, are correctly and well informed [p V]". All sincere scientists working with these issues agree and urge that this goal be fulfilled. Unfortunately, this book does not provide fully objective and up-to-date information, at least for a lay reader. The first hints of unbalanced data are introduced in the Preface by the editors, who tell us, for example, that "RF-electromagnetic fields increase the permeability of the blood-brain barrier to blood proteins that may cause neurological diseases." And "Increased tumor incidence have been observed by populations exposed to ELF magnetic fields from power lines . . .". The scientific community within electromagnetic field research regards both arguments as anecdotal and disputable. Luckily, as readers move into the text, they should feel more relaxed in that the book contains plenty of important data on biological and physical basics and mechanisms. The book consists of the following nine parts: "Fundamentals", "Natural and Man-made Radiation", "The Plant World", "Residential Areas", "Health Care", "The Workplace", "Wireless Communication", "Leisure and Outdoors", and "Rules and Regulations".

In order to lead the reader through the basic concepts and principles of ionizing and nonionizing radiation, the book begins with the fundamentals. A surprising chapter has been added to the otherwise appropriate text. It is called "Sound and Noise" and deals with acoustic rather than electromagnetic energy. No hint is given as to why this chapter has been included in this book!

There are also several other surprises. In Part 2 on natural and man-made radiation, there is a chapter entitled "Ultraviolet Part of the Spectrum" (p 157) without any word on ultraviolet radiation! On the other hand, the chapter "Can Radiofrequency Fields Cause Malfor-

mations? — a Case Study" offers the following evident conclusion: "Sufficient support for the suggested hypothesis . . . could so far not be found." It remains unclear what the aim and value of the 10 pages of discussing this special hypothesis was.

The best output of the book are the 30 boxes on fundamental or topical issues, which have been written more recently (at least with fresher references) than the main text of the book. Important advice for decision-makers is also provided throughout the strictly technical parts of the book, for instance, in chapters 16 (Nuclear Technology) and 20 (Radon in Buildings), as well as in Part 5 "Health Care".

In spite of the certainly hard effort on the part of the authors to give adequate information, time has elapsed faster than the authors have expected. Therefore, the text is out-of-date for the most part concerning health guidelines and standards. Several examples of real mistakes are easy to find [eg, a list of CENELEC standards, on p 539, as well as all the sentences concerning the IEC standard mentioned in chapter 35 (Lasers)].

The fact that most of the 24 authors come from universities, or university hospitals from Norway (11) and Sweden (10) with two Finnish and one Danish contributors may explain the lack of real knowledge presented on radiation exposure in current living and working environments, as well as the knowledge on the fast-moving processes of reviewing health guidelines and recommendations by relevant international agencies.

Overall, I judge the book to be helpful for a reader looking for basic principles or controversial "hot spots" in radiation issues, whereas, for a person with a hunger for sound new data, this book cannot be recommended as a source of factual contributions. The scientifically unbalanced and old data on important topics may actually confuse the reader, unfortunately, and hence not serve "a very useful purpose".

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