

exposure and absorbed dose. The points regarding the integration of the entire series and cross referencing should be addressed by the publisher and editor. A fractionated handbook can readily resolve itself into its component parts without such an approach.

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THERMOLUMINESCENCE DOSIMETRY. (*Medical Physics Handbook 5*). A. F. McKinlay. London/Philadelphia/Rheine, Heyden & Son Inc. (Adam Hilger Ltd.), 1981, 170 pp, illustrated, \$28.00

The purpose of this handbook, as stated by the author in the preface, is to provide an introduction to the use of thermoluminescence dosage meters (TLDs) for determination of ionizing radiation dose measurements with particular emphasis on clinical dosimetry. There are three main themes covering some basic theoretical aspects of thermoluminescence and characteristics of TL phosphors, applications, and instrumentation in the seven chapters of the book. A rather superficial treatment of the theoretical aspects of the phenomena of luminescence and thermoluminescence is provided in the first two chapters. Chapter 3, one of two important chapters in the book, adequately examines the important characteristics of commonly used TL phosphors. In Chapters 4 and 5 the use of TLDs for specific measurement applications is discussed, and the principles of design and operation of TLD readers are well described in Chapter 6. The final chapter, which is the other important chapter in the book, identifies practical problems, pitfalls, and solutions in the routine use of TLDs.

This well-written, easily read, small book meets the intended goal of providing an introduction to the subject with current updated information. Also, the selected references to publications in the scientific literature are well chosen and should allow the interested research scientist to pursue the subject to greater depth. The book, however, does not adequately present the use of TLDs with particular emphasis on clinical dosimetry. The material covering clinical dosimetry, both in terms of concepts and application, is rather elementary and weak, reflecting in part the author's noninvolvement in the clinical area. The usefulness of thermoluminescence dosimetry as a methodology for clinical dose measurements has now been well established. Numerous papers in clinical journals have presented data on various applications, and these should have been researched and included in this book if the main emphasis was intended to be on clinical applications. Also, some of the subtle, but important, factors that must be considered when calculating absorbed dose from exposure measurements or absorbed dose for high-energy photons and electrons have been overlooked. This omission is significant particularly when modern day radiation therapy practices require an accuracy of $\pm 5\%$ in establishing the delivered dose.

Overall, the young physicist, new to the field of radiation dose measurements, may find this handbook valuable, especially since a monograph on this same subject was last published back in 1968. The experienced medical physicist, however, will find little new in this handbook, since he will have easy access to the proceedings of the international conferences held at three-year intervals.

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BOOKS RECEIVED

Nuclear Medicine Technology. Continuing Education Review. Second Edition. E.V. Dubovsky, Ed. Garden City, NY, Medical Examination Publishing Co. Inc., an Exerpta Medica Company, 1981, 210 pp, \$16.50

Bone and Bone Seeking Radionuclides: Physiology, Dosimetry and Effects. (EULEP Symposium. Rotterdam, The Netherlands, August 29, 1980.) V. Volf, Ed. Oxford, England, Harwood Academic Publishers (for the Commission of the European Communities), 1981, 153 pp, \$32.00 (80 DFL)

Functional Mapping of Organ Systems and Other Computer Topics. P.D. Esser, Ed. New York, Society of Nuclear Medicine, 1981, 272 pp, illustrated, \$28.00

Physics and the Circulation. Medical Physics Handbook 9. J.O. Rowan. London, Adam Hilger Ltd. (Heyden & Son Inc.), 1981, 125 pp, illustrated, \$28.00, Members, \$19.00