1. Record Nr. UNINA9910451047303321

Titolo	Advanced materials and techniques for radiation dosimetry / / Khalil Arshak, Olga Korostynska, editors
Pubbl/distr/stampa	Boston : , : Artech House, , ©2006 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2006]
ISBN	1-5231-1694-3 1-58053-375-2
Descrizione fisica	1 online resource (219 p.)
Collana	Artech House sensors library
Altri autori (Persone)	ArshakKhalil KorostynskaOlga
Disciplina	539.7/7
Soggetti	Radiation - Measurement Radiation dosimetry Gamma rays Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Advanced Materials and Techniques for Radiation Dosimetry; Contents; Preface xi; 1 Introduction 1; 2 Radiation Dosimetry: Background and Principles 11; 3 Effect of Radiation on Optical and Electrical Properties of Materials 91; 4 Gamma Radiation Dosimetry Using Metal Oxides and Metal Phthalocyanines 115; 5 Sensor Arrays, Radiation Nose Concept, and Pattern Recognition 159; 6 Conclusions and Future Trends 189; Acronyms 193; Appendix 199; About the Authors 201; Index 203
Sommario/riassunto	The threat of nuclear "dirty" bombs, a growing shift to nuclear energy, and new medical therapies using radiation are just some of the current developments bringing new importance to dosimetry? the detection and measurement of radiation. This comprehensive volume is indispensable to engineers and scientists working in dosimetry to protect the health and safety of radiation workers and the general public. Ranging from basic theory to advance concepts, this complete reference covers the physics of radiation, the biological effects of radiation, and the technology of radiation sensing and measurement. It provides a useful guide to commercially available dosimetry equipment and explains

their applications. Surveying current and cutting-edge methods and materials used to detect radiation and record dosages, the book also explores novel approaches for designing new low-cost radiation sensors and furthering dosimetry research.