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Nota di contenuto	Chapter 1. Toward Perovskite-related Scintillators with Necessary Stokes Shift and Thickness for Hard X-ray Radiography and Gamma Spectroscopy -- Perovskite thin film growth techniques -- Chapter 3. Introduction to the physical properties of perovskite semiconductor -- Chapter 4. Perovskite light-emitting diodes -- Chapter 5. Excitons in CsPbBr <sub>3</sub> halide perovskites -- Chapter 6. Charge Carrier Mobility of Metal Halide Perovskites: From Fundamentals to Ionizing Radiation Detection -- Chapter 7. Metal Halide Perovskites for High Energy Radiation Detection -- Chapter 8. Solution Processable Metal Halide Perovskites for Printable and Flexible Ionizing Radiation Detectors -- Chapter 9. Two-dimensional Halide Perovskites for Radiation Detection. Chapter 10 -- Nonlinear optical properties in oxide perovskites and their applications -- Chapter 11. Ammonia as a carrier for hydrogen production by using lanthanum-based perovskite -- Chapter 12. Defect Origin of the Light-Soaking Effects in Hybrid Perovskite Solar Cells -- Chapter 13. Single-Crystal Halide Perovskites for Transistor Application -- Chapter 14. Metal Halide Perovskite Solar Modules – The Challenge of upscaling and commercializing this technology -- Chapter 15. Perovskite polycrystalline film for X-ray imaging. .
Sommario/riassunto	This book will provide readers with a good overview of some of most recent advances in the field of technology for perovskite materials. There will be a good mixture of general chapters in both technology

and applications in opto-electronics, X-ray detection and emerging transistor structures. The book will have an in-depth review of the research topics from world-leading specialists in the field. The authors build connections between the materials' physical properties to the main applications such as photovoltaics, LED, FETs and X-ray sensors. They also discuss the similarities and main differences when using perovskites for those devices. Introduces novel properties and applications of perovskite materials; Includes a broad range of topics, with in-depth analysis on how to develop and use these materials; Links material properties with device functionalities, with applications in opto-electronics and X-ray detection.

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