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Note generali	Previously issued in print: 2010. <P>Spatial and Spectral Resolution of Semiconductor Detectors in Medical Imaging, <EM>B.J. Heismann </EM>Silicon Radiation Detectors with Three-Dimensional Electrodes (3D Detectors), <EM> G. Dalla Betta and A. Zoboli </EM>Cadmium Zinc Telluride Pixel Detectors for Hard X-Ray Astrophysics, <EM>F.A. Harrison, W.R. Cook, H. Miyasaka, and R. McLean </EM>Hydrogenated Amorphous Silicon Radiation Detectors, <EM>M. Despeisse </EM>Novel X- and Gamma-Ray Detectors Based on Metamaterials, <EM>P. Lecoq </EM>Multicell Geiger-Mode Avalanche Photodiodes: Silicon Photomultipliers, <EM>G. Llosa </EM>Hybrid Photodetectors (HPDs) for Single-Photon Detection, <EM>A. Fukasawa </EM>High-Resolution CdTe Detectors and Application to Gamma-Ray Imaging, <EM>T. Takahashi, S. Watanabe, and S. Ishikawa </EM>Caliste: Microcamera for Hard X-Ray Astronomy, <EM>O. Limousin, A. Meuris, O. Gevin, and F. Lugiez </EM>Hybrid Pixel Array Detectors for Photon Science, <EM>H. Graafsma </EM>XPAD, a Photon-Counting Imager for X-Ray Applications, <EM>P. Pangaud, P. Delpierre, and J.-F. Berar </EM>Ultrafast Electron Beam Tomography, <EM>U. Hampel </EM>Compton Imaging: Principles and Practice, <EM>C. E. Seifert </EM>Multimodality Imaging with MR/PET and MR/SPECT, <EM>T. Farncombe </EM>Hard X-Ray Imaging

	Detectors Onboard the Balloon-Borne High-Energy Focusing Telescope, <EM>C.M. Hubert Chen, F.E. Christensen, J.C. Chonko, W.R. Cook, W.W. Craig, F.A. Harrison, C.J. Hailey, C.P. Jensen, J.E. Koglin, K. Kruse Madsen, and K. Ziock </EM>Index</P>
Nota di bibliografia	Includes bibliographical references and index.
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Sommario/riassunto	Semiconductor Radiation Detection Systems addresses the state-of-the-art in the design of semiconductor detectors and integrated circuit design, in the context of medical imaging using ionizing radiation. It addresses exciting new opportunities in X-ray detection, Computer Tomography (CT), bone dosimetry, and nuclear medicine (PET, SPECT). In addition to medical imaging, the book explores other applications of semiconductor radiation detection systems in security applications such as luggage scanning, dirty bomb detection, and border control. Features a ch