Record Nr. UNINA9910760260703321 Autore Hansson Conny Titolo X-ray Photon Processing Detectors [[electronic resource]]: Space, Industrial, and Medical applications / / edited by Conny Hansson, Krzysztof (Kris) Iniewski Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2024 3-031-35241-6 **ISBN** Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (297 pages) Altri autori (Persone) IniewskiKrzysztof (Kris) Disciplina 539.7222 Soggetti Electronic circuits Solid state physics Materials Detectors Electronic Circuits and Systems **Electronic Devices** Sensors and biosensors Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- Different types of detector and the use of solid state detectors -- Structured sensors -- Basic electronics -- ASIC examples for the different types -- Applications. This book provides readers a good overview of some of most recent Sommario/riassunto advances in the field of hybrid pixelated detectors for X-ray imaging. Coverage includes both technology and applications, with an in-depth review of the research topics conducted at leading research institutions in the world. The conversion of the X-ray signal into an analogue/digital value is discussed, as well as a review of CMOS chips used for X-ray image sensors. Applications of hybrid pixel detectors are discussed, such as medical imaging, high energy physics, space, non-destructive testing and security. Provides coverage of a broad range of topics, from international experts in academia and industry;

Includes in-depth analysis of how to optimize X-ray detection and electronics for X-ray detection; Covers both technology and

applications in a number of different domains.