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Nota di contenuto	THz Advanced Medical Imaging -- Design and Development of Wide Band Gap Semiconductor Based THz Solid State Source -- Terahertz Optical Asymmetric Demultiplexer (TOAD) Based Switch in Computing, Communication and Control -- Pattern Recognition and Tomographic Reconstruction for THz Biomedical Imaging by Machine Learning and Artificial Intelligence -- Wearable Devices and IoT -- THz in Biotechnological Advances -- Novel materials and engineered structures in THz photonics -- Emerging trends in THz modeling -- Innovative fabrication technologies for novel THz devices -- Photonics for futuristic applications: THz sources, optical communications, imaging, detectors and sensors, optical data storage and displays,

medical optics and biophotonics.

Sommario/riassunto

This book highlights emerging trends in terahertz engineering and system technologies, mainly, devices, advanced materials, and various applications in THz technology. It includes advanced topics such as terahertz biomedical imaging, pattern recognition and tomographic reconstruction for THz biomedical imaging by use of machine learning and artificial intelligence, THz imaging radars for autonomous vehicle applications, THZ imaging system for security and surveillance. It also discusses theoretical, experimental, established and validated empirical work on these topics and the intended audience is both academic and professional.