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Title:High-precise spectrometry of the terahertz frequency range: The methods, approaches and applications
Authors:Vaks, V. (1)
Author affiliation:(1) Inst. for Phys. of Microstructures, Niznhy Novgorod, Russia
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Abstract:In the paper we present a high precise THz technique (frequency synthesizers and spectrometer) and its applications for noninvasive medical diagnostics and security systems. The cornerstone of the presented devices is multipliers and mixers based on quantum superlattice structures. The multipliers based on superlattice structures are shown to be more effective than Schottky diodes and provide THz radiation up to 8.1 THz.
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Inspec controlled terms:frequency synthesizers - multiplying circuits - submillimetre wave mixers - superlattices - terahertz wave devices - terahertz wave spectra
Uncontrolled terms:high-precise spectrometry - terahertz frequency range - frequency synthesizer - spectrometer - noninvasive medical diagnostic - security system - multiplier - mixer - quantum superlattice structure - Schottky diode - THz radiation
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