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标题: THz Lasing in InAs/GaSb Broken-Gap Heterostructure Devices & Quantum-Dot Pillar Arrays
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摘要: A novel approach for the generation of THz radiation that utilizes "interband" transitions and tunneling processes occurring simultaneously within double-barrier (DB) GaSb/InAs/GaSb broken-gap (BG) resonant-tunneling-diodes (RTDs) is discussed. This paper focuses on the architectural and cavity designs for realizing TE polarized emission from single DB-BG-RTD devices and quantum-dot pillar arrays. Design techniques useful for mitigating CB drive current (& the associated thermal heating) while at the same time optimizing output power and power efficiency are discussed.
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