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Title:Research progress in terahertz quantum cascade lasers

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Abstract:The terahertz (THz) quantum cascade laser (QCL) is a coherent THz source based on intersubband transitions of unipolar carriers. As semiconductor lasers, THz QCLs are solid-state, electrically pumped, tunable, and can be easily integrated. This paper reviews the state of the art for the design, operation temperature, and output power of THz QCLs. Their applications in THz communication and imaging are also discussed.

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