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## **【185】 Comb Operation In Terahertz Quantum Cascade Ring Lasers**

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We present ring-shaped THz Quantum Cascade lasers operating in four different emission regimes, including single-mode, harmonic state, dense comb, and chaotic multimode emission. The dense comb regime exhibits over 30 equidistant modes covering a bandwidth of 622 GHz. A single and narrow beat note at the roundtrip frequency is indicating comb formation. Our experimental results are explained accurately by a numerical model based on the Maxwell-Bloch formalism including the concept of the so-called linewidth enhancement factor, which describes the change of the refractive index induced by the modulations of the optical gain.

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