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标题: Ultra-narrow linewidth CW sub-THz generation using GS based OFCG and n-i-pn-i-p superlattice photomixers
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摘要: A report is presented on the photonic synthesis of ultra-narrow line-width continuous-wave (CW) sub-THz signals using a gain-switching (GS) based optical frequency comb generator (OFCG), selective optical filtering and a n-i-pn-i-p superlattice photomixer. This setup provides continuous tunability with a tuning resolution in the range of 0.1 Hz at 120 GHz and full width at half maximum of the generated signals below the limits of the measurement setup (< 10 Hz). The advantages of this system make it a very good candidate for applications requiring extremely low phase noise and continuous tunability, such as high resolution spectroscopy in the sub-THz and THz range.
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