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Title:Terahertz coherent transition radiation based on an ultrashort electron bunching beam
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Abstract:The experimental result of terahertz (THz) coherent transition radiation generated from an ultrashort electron bunching beam is reported. During this experiment, the window for THz transmission from ultrahigh vacuum to free air is tested. The compact measurement system which can simultaneously test the THz wave power and frequency is built and proofed. With the help of improved Martin-Puplett interferometer and Kramers-Krong transform, the longitudinal bunch length is measured. The results show that the peak power of THz radiation wave is more than 80 kW, and its radiation frequency is from 0.1 THz to 1.5 THz.
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