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Abstract:We propose two super-Gaussian laser beams with frequency difference for obtaining more collimated terahertz (THz) radiation at a desired position based on their order/index and for enhancing the efficiency of the scheme by realizing stronger transient transverse current due to the spatial variation of their fields. For the laser intensity of ~10^{14} W/cm^2 and along with the application of a periodic density structure, a resonant excitation of the THz radiation is achieved together with the efficiency of scheme as ~0.006.
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