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Title:Strong terahertz radiation by beating of spatial-triangular lasers in a plasma
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Abstract: Resonant excitation of terahertz (THz) radiation by beating of two spatial-triangular laser beams having different frequencies and wave numbers but the same electric fields is proposed, where the ponderomotive force in the transverse direction is realized due to the beating and spatial variation of the lasers' fields. This gives rise to a stronger transient transverse current due to a sharp gradient in the laser field, and subsequently THz radiation is excited resonantly in the presence of a periodic density structure. The present scheme yields the THz field ~105 kV/cm and the efficiency ~10-2 for the laser intensity ~1014 W/cm2.
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