

403. Title:Phase dependence of the generation of terahertz waves from two-color laser-induced gas plasma

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Abstract:A transient photocurrent model is used to explain terahertz emission from gas plasma irradiated by two-color laser pulses, with one the second harmonic of the other. In this optical process, the relative phase between the two fields is very critical to the terahertz generation efficiency. In order to find out the optimal phase, many cases with relative phase from $-\pi/2$ to $\pi/2$ are studied. Results show that the case at $\pi/4$ can obtain the largest intensity. © 2011 IOP Publishing Ltd.