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Abstract:A technique of enhancing and broadening terahertz (THz) wave radiation from large aperture photoconductive (PC) antenna is presented in this paper. In this technique, the PC antenna is excited by both the optical and previously generated THz pulses by a laser-induced air plasma created in front of PC antenna and an enhanced and broadened THz wave signal is obtained. The theoretical and experimental investigation shows that the superposition is the main mechanism for this enhancement. The technique shown in this paper can be very useful for THz imaging and spectroscopy. © Springer-Verlag 2012.
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