

标题: Elliptically polarized THz-wave generation from GaP-THz planar waveguide via collinear phase-matched difference frequency mixing

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摘要: We carried out terahertz (THz)-wave generation from the GaP planar waveguides under collinear phase-matched difference-frequency mixing of two near-infrared sources. TE- and TM-mode of THz-waves were generated simultaneously by adjusting the polarization direction of two incident infrared sources. The phase shift between TE- and TM-mode of THz-wave in the waveguide was dependent on the waveguide length and contributed to the generation of the elliptical polarized THz-wave. The ellipticity of generated THz-wave increased as waveguide length increased. We indicated the possibility of control of rotational direction of elliptical polarization of emitted THz wave. (C)2012 Optical Society of America

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