Accession Number 12122375 Author Rao Zhi-Ming. Wang Xin-Bing. Lu Yan-Zhao. Zuo Du-Luo. Wu Tao. Author/Editor Affiliation Rao Zhi-Ming. Wang Xin-Bing. Lu Yan-Zhao. Zuo Du-Luo. Wu Tao. : School of Optoelectronic Science and Engineering, Huazhong University of Science and Technology, Wuhan 430074, China Title Two Schemes for Generating Efficient Terahertz Waves in Nonlinear Optical Crystals with a Mid-infrared CO2 Laser Source Chinese Physics Letters, vol.28, no.7, July 2011, 074215 (4 pp.). Publisher: Chinese Physical Society, China.

Abstract

Terahertz wave generation is explored on the basis of difference frequency generation in nonlinear optical crystals with a mid-infrared CO2 laser. The phase-matching angle and the grating period of periodically inverted GaAs in the 100-1000 m (0.3-3 THz) range are also investigated on the basis of the surface-emitted difference frequency generation. It is found that two schemes of phase-matching-applied collinear phase matching and phase-matching-applied non-collinear phase matching are efficient to obtain THz waves. (20 References).

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