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标题: Terahertz Radiation from a (113)B GaAs/AlAs Coupled Multilayer Cavity Generated by Ultrashort Laser Pulse Excitation
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摘要: Terahertz (THz) radiation was demonstrated using a GaAs/AlAs coupled multilayer cavity grown on a (113)B GaAs substrate. Two cavity modes realized in the high-reflection band were simultaneously excited using ultrashort laser pulses for the difference frequency generation (DFG). Oscillations with a period of 0.3 ps were clearly observed in the temporal waveforms of time-resolved THz measurements. The oscillation period well agreed with the difference frequency between the two cavity modes (3.3 THz). We also measured the THz waveforms depending on the polarization direction of the excitation laser pulses, and the anisotropic signal amplitudes also agreed with the calculated anisotropy of the second-order nonlinear polarization on the (113)B GaAs substrate. (C) 2012 The Japan Society of Applied Physics
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