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Title:Generation of terahertz radiation from two cavity modes of a GaAs/AlAs coupled multilayer cavity

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Abstract:We observed terahertz (THz) radiation using difference frequency generation (DFG) of two cavity modes in a (113)B GaAs/AlAs coupled multilayer cavity. 100 fs laser pulses were used to simultaneously excite two cavity modes, and oscillations with a period of 0.45 ps were clearly observed in the temporal waveform of THz time-domain measurements. The oscillation period agrees well with the difference frequency of the two cavity modes (2.2 THz). This clearly indicates that the observed signal originates from THz radiation generated by DFG of the two cavity modes in the GaAs/AlAs coupled multilayer cavity.

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