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标题: Terahertz field enhancement to the MV/cm regime in a tapered parallel plate waveguide
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摘要: We investigate field enhancement properties of a tapered parallel plate waveguide for ultrashort terahertz (THz) pulses. We use two independent methods, air biased coherent detection inside the waveguide and free-space electro-optic sampling, respectively, which enables a calibrated, quantitative measurement of the field strength at the output of the waveguide. Field enhancement factors greater than 20 are demonstrated and record-high field strengths of > 1.4 MV/cm are reached. We find an excellent agreement between the two independent methods of field measurement and a numerical 3D full-vectorial time-domain simulations. (C) 2012 Optical Society of America
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