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标题: Polarization shaping of few-cycle terahertz waves

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摘要: We present a polarization shaping technique for few-cycle terahertz (THz) waves. For this, N femtosecond laser pulses are generated from a devised diffractive optical system made of as-many glass wedges, which then simultaneously illuminate on various angular positions of a sub-wavelength circular pattern of an indium arsenide thin film, to produce a THz wave of tailor-made polarization state given as a superposition of N linearly-polarized THz pulses. By properly arranging the orientation and thickness of the glass wedges, which determine the polarization and its timing of the constituent THz pulses, we successfully generate THz waves of various unconventional polarization states, such as polarization rotation and alternation between circular polarization states. (C) 2012 Optical Society of America

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