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标题: Optically controlled terahertz beam steering and imaging
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摘要: We propose a spatial modulator for terahertz waves based on light induced electron plasma in photo-active semiconductors. A two-dimensional array of computer controlled light is used to create free carries in bulk silicon, which results in a spatial modulation of the transmission at terahertz frequencies. This method not only exhibits a remarkable modulation depth over a broad frequency range but also allows for an optically controlled beam steering of terahertz waves by inducing virtual grating structures. In addition, we analyze the possibility of all-optically controlled terahertz imaging. (C) 2012 Optical Society of America
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