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Title:High-speed terahertz spectroscopic imaging using noncollinear electro-optic sampling and a multistep mirror
Authors:Maruyama, Kazunori (1); Itani, Norihiko (1); Hasegawa, Shin-Ya (1); Wakana, Shinichi (1)
Author affiliation:(1) Fujitsu Laboratories Ltd., Morinosato Wakamiya 10-1, Atsugi, Kanagawa, 243-0197, Japan
Corresponding author:Maruyama, K.(maruyama.kaz@jp.fujitsu.com)
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Abstract:We propose a method for high-speed terahertz spectroscopic imaging that is based on electro-optic sampling with a noncollinear geometry of the THz beam and probe laser beam and has a multistep mirror in the path of the probe beam. We made an imaging system that operates in the over 2.0-THz range and enables the sample region corresponding to a (28 × 28)-pixel area on the sensor to be imaged with a spatial resolution of 1.07 mm and a frequency resolution of 0.079 THz. We also show how the proposed method might be extended for faster THz spectroscopic imaging.
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