331. Title:A polizer using thin metallic-film subwavelength grating for infred to terahertz region
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Abstract:A polizer using a sinusoidal or triangul thin metallic-film subwavelength grating is proposed. The dependence of polizer transmission chacteristics on structural pameters of the grating was obtained numerically, and its potential for high performance was confirmed experimentally. The measured transmission loss for the TE-waves with a 25 nm-thick gold-film grating with a triangul profile was higher than 50 dB while the corresponding transmission loss for the TM-waves was lower than 1 dB in the frequency range of 1.02.5 THz. The metallic subwavelength grating structure has demonstrated its potential as a low-loss, high-extinction ratio, wide-aperture, and robust polizer for the infred and terahertz regions.