315. Title:Prism-like behavior at terahertz frequencies of a 2D metallic grid with a varying periodicity

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Abstract:A study was conducted to demonstrate prism-like behavior at terahertz frequencies of a 2D metallic grid with a varying periodicity. The deviation properties of the structure was characterized by THz time-domain spectroscopy. A classical set up with 2 photoconductive antennas were used to conduct the investigations. The receiver excited by 100-fs laser pulses, delivered through a dispersion-compensated fibered arrangement and was located on a rotating arm while the device is fixed at the rotation center. The set up allowed the researchers to measure the THz signal against the the angle of deviation θ. The THz waveform was measured and the corresponding spectrum was obtained by a numerical Fourier transform for each angular position θ of the receiver.