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摘要: We report THz polarized reflectivity measurements on a doped GaAs grating made of thin walls with subwavelength dimensions and periodicity. A clear dip appears in the TM-polarized reflectivity spectrum, due to the excitation of a localized surface plasmon-phonon mode along the grating walls. The theoretical model used to describe the electromagnetic response of the grating shows the importance of the depletion layer at the GaAs surface and indicates a high sensitivity of the reflectivity dip frequency to the surface potential. (C) 2012 American Institute of Physics. [http://dx.doi.org/10.1063/1.3689747]
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