265
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Title:Role of incident polarization in THz transmission through the hole array
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Abstract:The theoretical and experimental study of the role of incident polarization in THz transmission through the hole array is presented in this paper. First, the detailed theoretical investigation and numerical calculations are carried out and the mode expansion theory is applied to analyse the physical process. Therefore, the homogeneous coupled equations governing the transmission are obtained. Second, the experimental study by using terahertz time-domain spectroscopy has shown that not only the p-polarization but also other polarization angles can support the strong transmission, and the high-order modes can be excited in the holes.
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