468.
Title: Tunable enhanced transmission of terahertz radiation through an array of subwavelength holes perforated on a semiconductor film by applying external static magnetic fields
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Abstract: We numerically investigated the tunability of resonance terahertz frequencies of enhanced transmission through a two-dimensional array of holes perforated on a semiconductor film by external static magnetic fields using FDTD methods. We found that the in-plane surface-plasmon polaritons-induced transmission peaks shifted appreciably to longer wavelengths when a moderate magnetic field is applied parallel to the patterned semiconductor film and perpendicular to the electric fields of the incident electromagnetic waves. In particular, there is another transmission peak on which the tuning effect is neglectable, indicating that different mechanism accounts for it. 47.