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标题: High transmission of annular aperture arrays caused by symmetry breaking
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摘要: The terahertz transmission properties of symmetrical and asymmetrical annular apertures arrays (AAAs) are investigated both experimentally and numerically. It is found that only odd-order resonant modes are observed for the symmetrical structures but both odd-and even-order resonances can be shown for the asymmetrical structures. Breaking the symmetry of AAAs by gradually displacing the H-shaped AAAs with U-shaped AAAs allows an intensity modulation depth of 98.7% of the second-order resonance. Simulation results verify the experimental conclusions well. This result provides a tremendous opportunity for terahertz-wavelength tunable filtering, sensing, and near-field imaging.
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