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标题: Two-Dimensional Terahertz Photonic Crystals Fabricated by Wet Chemical Etching of Silicon
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摘要: The fabrication of two-dimensional terahertz photonic crystals using wet chemical etching of high-resistivity silicon is described. Wet-etched photonic crystals with a sloped sidewall were fabricated in 16x10 square lattices with a period of 1430 mu m and a height of 150 mu m, and were bonded between two parallel Au-coated silicon wafers for tight confinement in the vertical direction. The formation of a photonic band gap at a frequency of about 0.1 THz with a width of 14 GHz is demonstrated by the experimental results and the numerical simulations of the transmission frequency spectrum for the transverse magnetic mode.
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