

Open Waveguide Based on Low Frequency Spoof Surface Plasmon Polaritons

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Abstract

A kind of plasmonic open waveguide, which is a periodic subwavelength metallic Domino array, is investigated both theoretically and experimentally in this paper. Based on the guiding mechanism of spoof surface plasmon polaritons (spoof SPPs), the transmission properties of this waveguide are controllable by altering the geometric parameters of the periodic structure. Microwave experimental results verify the high efficiency of wave guiding in such open waveguide, as predicted in theoretic analysis.

Keyword : Surface Plasmon Polaritons