Bandpass filter based on low frequency spoof surface plasmon polaritons

吳家和,侯大鈞,楊宗哲,謝熙家,高曜煌,林鴻兒
Ph.D. Program in Engineering Science
Engineering
yangtj@chu.edu.tw

Abstract

Based on the mechanism of spoof surface plasmon polaritions (spoof SPPs), a kind of microwave bandpass filter is presented in both theory and experiment, which is realised by a periodic subwavelength metallic Domino array. The transmission bandwidth of spoof SPPs is controllable by designing the geometric parameters of the periodic structure. Simulation and experimental results of the spoof SPPs agree well with each other and verify the feasibility in bandpass filter applications.

Keyword：spoof surface plasmon polaritions,microwave bandpass filter,periodic subwavelength