

# PERFECT ABSORBER METAMATERIALS: PEAK, MULTI-PEAK AND BROADBAND ABSORPTION

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## TÓM TẮT:

We investigated the absorption in a sandwich model of absorber metamaterial (MM) which consists of periodic metallic dishes at the front and metallic plane at the back, separated by dielectric substrate. First, single perfect-absorption (PA) peaks were achieved by studying the influence of parameters in the unit cell of the MM. The electromagnetic properties were presented to understand the mechanism of the PA at resonance frequency. In order to yield a multi-peak absorption, the dishes were designed in different sizes and appropriately arranged on the front side of MM. For the furthermost purpose of our work, customizing broadband absorption was performed by adjusting the dishes sizes. Utilizing the symmetrical geometry of dishes, polarization-insensitivity of the broadband absorption was gained. Finally, the influence of the angle of incidence wave on the broadband absorption was examined.