

Investigation on metamaterial absorber with appropriate absorption bandwidth

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Many previous studies in the field of metamaterial absorbers have showed either wide or narrow absorption bandwidth. In this study, we propose a new electromagnetic metamaterial absorber with an appropriate bandwidth. In addition, the absorption turns out to be insensitive to the polarization of incident electromagnetic wave, and maintains a greatly high absorption even at a large incident angle such as 45 degrees. The absorption band can be adjusted easily with the parameters of structure, and the absorber itself is also flexible, which is good for the practical applications. We believe that the design concept provides a new candidate for some fields where the absorption bandwidth is required specifically, and this suggested absorber can be applied in many practical fields, additionally because of the low cost and superior performance.

Keywords: metamaterial absorber, appropriate absorption bandwidth, incident-angle independence