157. Title: The design of a quasi-omnidirectional tabulate metamaterial absorber

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Abstract: We report the design of a quasi-omnidirectional tabulate metamaterial absorber, which is substantiated on the double-faced absorbing, polarization-insensitive and wide-angle property of the metamaterial cell. Both theoretical and simulated results reveal that our absorber surely has a distinct absorption point with double-faced absorbing property near 6. 18 GHz, which is not influenced significantly by the polarization angle and the angle of incidence. The retrieved impedance indicates the electromagnetic resonance of the metamaterial could be tuned to match approximatively the impedance of the free space to suppress the reflectance at the absorption frequency. The distributions of the power loss indicates the strong absorption is mainly due to dielectric loss of the substrates and the design of adopting two different substrates could make the coupling of the front absorber and the back absorber depressed, which effectively suppresses the transmission caused by the coupling. This metamaterial absorber may have applications in many scientific and technological areas.