Abstracts

Reflection from Fractal Cantor Layers in a Rectangular Waveguide

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The multilayered medium modeled by a Cantor bar is a type of fractal structure that has found wide applications in some optical and quantum areas. The reflection properties of wave in a rectangular waveguide filled with fractal Cantor bar layers are investigated. By introducing a concept of self-similarity of networks, a novel exact self-similar algorithm for reflection and transmission coefficients is derived. Numerical examples show that the reflection from the fractal layer in a waveguide has some special properties.

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