Abstracts

Scattering from an Infinite Cylinder of Small Radius Embedded Into a Dielectric One

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In this paper the scattering from an infinite metallic or dielectric cylinder of electrically small radius, embedded into a dielectric cylinder, is considered. The problem is solved by the method of separation of variables, in conjunction with translational addition theorems. Analytical expressions are obtained for the scattered field and the various scattering cross-sections, when the radius of the inner cylinder is electrically small. Both polarizations are considered for normal incidence. Numerical results are given for various values of the parameters and for metallic or dielectric inner cylinder.

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