Abstracts

Scattering from an Arbitrarily Located Off-Axis Inhomogeneity in a Step-Index Optical Fiber (Jan. 1980 [T-MTT])

A. Safaai-Jazi and G.L. Yip. "Scattering from an Arbitrarily Located Off-Axis Inhomogeneity in a Step-Index Optical Fiber (Jan. 1980 [T-MTT])." 1980 Transactions on Microwave Theory and Techniques 28.1 (Jan. 1980 [T-MTT]): 24-32.

An exact analysis using the Green's function formulation of an arbitrarily oriented off-axis dipole radiating into a dielectric rod waveguide is carried out. The method of analysis involves expressing the fields and the current source in a Fourier integral in the zeta-direction and a Fourier series in the phi-direction in a cylindrical coordinate system (rho, phi, zeta). The practical significance of this analysis, in particular with regard to its applications to the problem of scattering from an arbitrarily located inhomogeneity in a step-index optical fiber, is presented.

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