Abstracts

A New Approach to the Design of Graded-Index Guided Wave Devices

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An inverse scattering approach to modeling single mode gradient-index planar guided wave devices is presented. The method involves solving the Gelfand-Levitan -Marchenko integral equation to obtain a refractive index profile which is infinite in extent. The theory is developed to account for truncations of this refractive index profile, illustrating the effects of a finite core width upon the propagation constant. Refractive index profiles with symmetric and asymmetric cladding indexes are discussed.

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