

Abstracts

Finite-Element Analysis of Optical and Microwave Waveguide Problems

B.M.A. Rahman and J.B. Davies. "Finite-Element Analysis of Optical and Microwave Waveguide Problems." 1984 Transactions on Microwave Theory and Techniques 32.1 (Jan. 1984 [T-MTT]): 20-28.

A vector H-field formulation is developed for electromagnetic wave propagation for a wide range of guided-wave problems. It is capable of solving microwave or optical waveguide problems with arbitrarily anisotropic materials. We have introduced infinite elements to extend the region of explicit field representation to infinity, to consider open-type waveguides more accurately. Computed results are given for a variety of optical planar guides, image lines, and waveguides containing skew anisotropic dielectric.

 [Return to main document.](#)