

Calculation of the spatial optical waveguide modes with inhomogeneous cross-sections using the sinusoidal mode matching method

V.V. Kotlyar^{1,2}, Y.O. Shuyupova²

¹ Image Processing Systems Institute of RAS

² Samara State Aerospace University

Abstract

This paper proposes some improvement of the method of matched sinusoidal modes, based on the application of the matrix form of the characteristic equation. The method was implemented using the Matlab 6.0 software package and applied to the scalar theory analysis of eigenmodes of a waveguide produced in the form of a photonic crystal.

Keywords: optical waveguide, cross-section, sinusoidal matching method, matrix, Matlab 6.0, scalar theory, photonic crystal.

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