Abstracts

FDTD-analysis of 3D-optical and optoelectronic waveguide-based devices

F. Zepparelli, F. Alimenti, P. Bassi, P. Mezzanotte, L. Roselli and R. Sorrentino. "FDTD-analysis of 3D-optical and optoelectronic waveguide-based devices." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1257-1260 vol.3.

In this paper we propose a special 2D version of the FDTD method for the rigorous analysis of 3D-optical and optoelectronic waveguide-based devices. By exploiting the characteristics of guiding structures, this technique allows a substantial reduction of the CPU-time and memory storage requirements. The method presented is then used to characterize the optical properties of a waveguide electro-absorption modulator.

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