Abstracts

High-performance absorbing boundary conditions for photonic crystal waveguide simulations

M. Koshiba, Y. Tsuji and S. Sasaki. "High-performance absorbing boundary conditions for photonic crystal waveguide simulations." 2001 Microwave and Wireless Components Letters 11.4 (Apr. 2001 [MWCL]): 152-154.

A high-performance absorbing boundary condition is newly developed for the reduction of spurious reflections in photonic crystal (PC) waveguide simulations. The PC waveguide is terminated with a perfectly matched layer (PML) in which the original PC structure remains as is. This PC-based PML works well, compared to a conventional PML, which acts as a homogeneous absorbing medium, simulating a semi-infinite free space and to a distributed-Bragg-reflector waveguide, which was recently developed to reduce reflections from PC waveguide ends, improving a wavenumber matching condition for PC waveguide modes.

❑ Return to main document.