A Modified Anisotropic Perfectly Matched Layer Absorbing Boundary Condition for the Time Domain Analysis of Nonlinear and Dispersion Media

We have developed a modified anisotropic perfectly matched layer (APML) absorbing boundary condition (ABC) for the finite-difference time-domain (FDTD) analysis of nonlinear and dispersive media. The formulation is a simple modification to the original non-split APML, and retains the robustness and the simple implementation in the FDTD and the higher-order schemes. The proposed ABC has a broad area of application, and is especially suitable for the analysis of nonlinear optical waveguide problems.