Abstracts

Modified Berenger PML Absorbing Boundary Condition for FD-TD Meshes

B. Chen, D.G. Fang and B.H. Zhou. "Modified Berenger PML Absorbing Boundary Condition for FD-TD Meshes." 1995 Microwave and Guided Wave Letters 5.11 (Nov. 1995 [MGWL]): 399-401.

A new modified, perfectly matched layer absorbing boundary condition (MPML ABC) is presented. In the MPML, the introducing of extra degrees of freedom provides the possibility of adjusting the parameters of nonphysical material absorber (PML) for the purpose of enhancing the attenuation rate of the evanescent modes. Compared to Berenger PML, the MPML is more efficient in absorbing the evanescent energy and keeps the same performance for propagation modes. The sophisticated properties of MPML ABC result in the reduction of the thickness of the matched layers and their closer allocation, leading to better accuracy simulations and less computer burdens in FD-TD modeling.

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