Abstracts

Extension of Berenger's absorbing boundary conditions to match dielectric anisotropic media

I. Villo Perez, S. Gonzalez Garcia, R. Gomez Martin and B. Garcia Olmedo. "Extension of Berenger's absorbing boundary conditions to match dielectric anisotropic media." 1997 Microwave and Guided Wave Letters 7.9 (Sep. 1997 [MGWL]): 302-304.

The authors propose an extension of Berenger's perfectly matched layer (PML) absorbing boundary conditions (ABCs) to achieve a perfect matching of waves propagating in anisotropic media. Although the procedure to obtain the matching conditions is valid for any kind of anisotropic material, it has been validated with a lossless two-dimensional uniaxial medium, in which the optical axis is not contained in its plane section. The finite difference time domain method, with an alternative scheme for anisotropic media, is used to simulate the problem and to obtain the numerical reflection coefficient.

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