Abstracts

Extension of Berenger's PML absorbing boundary conditions to arbitrary anisotropic magnetic media

A.P. Zhao and A.V. Raisanen. "Extension of Berenger's PML absorbing boundary conditions to arbitrary anisotropic magnetic media." 1998 Microwave and Guided Wave Letters 8.1 (Jan. 1998 [MGWL]): 15-17.

To simply and effectively absorb waves propagating in arbitrary anisotropic magnetic media, a material independent perfectly matched layer (MIPML) absorber is proposed. Within this MIPML absorber, conductivities /spl sigma//sup E/ and /spl sigma//sup B/ (instead of /spl sigma//sup E/ and /spl sigma//sup H/) are used. This results in that electric field E and magnetic flux density B are directly absorbed by the proposed absorber, whereas magnetic field H is simultaneously absorbed through the relation of B and H. It is shown that, with the help of this MIPML absorber, Berenger's PML can be simply and successfully extended to arbitrary anisotropic magnetic media.

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