Abstracts

General closed-form PML constitutive tensors to match arbitrary bianisotropic and dispersive linear media

F.L. Teixeira and W.C. Chew. "General closed-form PML constitutive tensors to match arbitrary bianisotropic and dispersive linear media." 1998 Microwave and Guided Wave Letters 8.6 (Jun. 1998 [MGWL]): 223-225.

The perfectly matched layer (PML) constitutive tensors that match more general linear media presenting bianisotropic and dispersive behavior are obtained for single interface problems and for two-dimensional (2-D) and three-dimensional (3-D) corner regions. The derivation is based on the analytic continuation of Maxwell's equations to a complex variables domain. The formulation is Maxwellian so that it is equally applicable to the finite-difference time-domain (FDTD) or finite-element (FEM) methods. It recovers, as special cases, previous anisotropic media formulations, and dispersive media formulations.

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