

Abstract Submitted  
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**Reflection of Electromagnetic waves on DPS/ DNG layers**  
JOSEPH SHAHBAZIAN, ARAM KARAKASHIAN, UML, UML TEAM — We discuss the optical wave propagation in a one dimensional photonic crystal composed of alternating layers of anisotropic DNG and isotropic DPS materials. Here we have studied theoretically the transmission and reflection, the non Bragg band gaps, which are not based on interference, in a photonic crystal composed of alternating layers of DNG and DPS materials. Our center of attention is the study of the zero permittivity, zero permeability and zero average refractive index gaps. We find that this type of photonic crystal in the visible wavelength range exhibits negative refraction in a wide frequency range and has interesting properties to control propagation of electromagnetic waves.

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