

Abstract Submitted
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Band structure of photons in layered DPS/DNG materials

JOSEPH SHAHBAZIAN, UML, ARAM KARAKASHIAN — In this project the main goal is to study the band gaps of a one dimensional photonic crystal composed of alternating layers of DNG and DPS materials. The material's optical parameters (electric permittivity and magnetic permeability) are complex and frequency dependent to account for both dispersion and absorption. Here we present the non-Bragg band gaps in a one dimensional 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 and the transmission and reflection of photons.

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