Abstract Submitted
for the NES09 Meeting of
The American Physical Society

Effect of external fields on DPS-DNG layered structure JOSEPH SHAHBAZIAN, ARAM KARAKASHIAN, UML, UML TEAM — We have studied theoretically the influence of an applied static field on a periodic heterostructure composed of alternating layers of isotropic DPS (Double Positive index of refraction, SiO_2) and anisotropic DNG (Double Negative index of refraction). We present theoretical and numerical results of our investigation of the reflection spectra of the visible waves on this structure. This structure works as a bandpass filter, and our evaluation with an applied static magnetic field indicates this structure functions as a tunable optical bandpass filter. The band-gap effect varies with the periodic parameters of the DPS-DNG structure, applied magnetic field, incidence angle and frequency.

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Date submitted: 13 Apr 2009 Electronic form version 1.4