**Dispersion study in 1D Magnetized Ferrite Photonic Crystals in TE Modes for Transverse Magnetization as tunable switchable band gap filtering device application**

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**Abstract**: In this present article we study the dispersion behavior in 1D Magnetized Ferrite Photonic crystals in TE Modes for Transverse Magnetization. The theoretical investigation, calculation and behavior are derived by using transfer matrix method. The structural parameters such as filling factor, incident parallel wave vector β with external magnetic field are discussed and investigated and found that with increasing in filling factor *f* & *β* *with* keeping length of the period constant, observed that allowed and forbidden band gap appears and shift towards higher Wavelength region At the value for *β*=3 and above, no band is allowed and appears completely band gap. So, it can be used as tunable switchable band gap filtering device application.

With warm regards

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