Study transmission properties of one-dimensional graded photonic crystal   
as low pass filter

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**Abstract**: In the present paper, we study transmission properties of thickness graded one-dimensional photonic crystal structure of silicon and air. The transmission spectrum is obtained using transfer matrix method (TMM) and studied the effects of graded index and refractive index variation on the transmission spectra. The transmission values of proposed structure decreases with frequency and falls to zero more rapidly as graded index increases. The frequency corresponding to half transmission value i.e., cut off frequency of proposed structure can be tuned with the graded index parameter. So, it can be used as tunable optical low pass filter device application.