

## Abstract Details

**Title:** Omnidirectional reflection band in multilayered porous silicon (p-si) based photonic crystal structure nanostructures

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**Abstract:** It is well known that under certain conditions, one dimensional photonic crystal (1d-pc) displays total omnidirectional reflection (odr) band gaps. The enhancement of total omnidirectional reflection band gap in 1d-pc is calculated theoretically using transfer matrix method (tmm) and Bloch theorem, the reflectivity of one dimensional periodic structure for TE and TM mode at different angles of incidence has been calculated. We have observed an enhanced omnidirectional reflection (odr) in the visible range from (576 nm-811 nm) in multilayered structures of nano porous silicon (p-si) and tellurium (te). The proposed structure can be used as wavelength filters for image sensing applications and other optoelectronic devices.