

# Accepted Manuscript

Effect of sequence built on photonic band gap properties of one-dimensional quasi-periodic photonic crystals: Application to Thue-Morse and Double-period structures

S. Sahel, R. Amri, D. Gamra, M. Lejeune, M. Benlahsen, K. Zellama, H. Bouchriha



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## Highlights

- . Elaboration of photonic Thue-Morse and the Double-period quasi-periodic one dimensional crystal by depositing silicon and silica Si/SiO<sub>2</sub> layers by radiofrequency magnetron sputtering with cold plasma.
- . Exhibition of wide photonic band gap covering telecommunication wavelengths, 1.33μm and 1.55μm.
- . Existence of permit modes in the photonic band gap depending on the nature and characteristics of the built system.
- . Photonic Thue-Morse and the Double-period quasi-periodic structure is a good alternative for the design of monochromatic, bichromatic and polychromatic flexible filters.

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