

Accepted Manuscript

Effect of shape of scatterers and plasma frequency on the complete photonic band gap properties of two-dimensional dielectric-plasma photonic crystals

T. Fathollahi Khalkhali, A. Bananej

PII: S0375-9601(16)31282-8
DOI: <http://dx.doi.org/10.1016/j.physleta.2016.10.012>
Reference: PLA 24121

To appear in: *Physics Letters A*

Received date: 9 June 2016
Revised date: 3 October 2016
Accepted date: 11 October 2016

Please cite this article in press as: T. Fathollahi Khalkhali, A. Bananej, Effect of shape of scatterers and plasma frequency on the complete photonic band gap properties of two-dimensional dielectric-plasma photonic crystals, *Phys. Lett. A* (2016), <http://dx.doi.org/10.1016/j.physleta.2016.10.012>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Highlights

- In this paper, we have investigated plasma photonic crystals consist of plasma rods with different geometrical shapes in anisotropic background.
- Plasma is a kind of dispersive medium with its equivalent refractive index related to the frequency of an incident EM wave.
- In this work, our simulations are performed using the Meep implementation of the finite-difference time-domain (FDTD) method.
- For this study, the lattice structures investigated are triangular and square.
- Extensive calculations reveal that almost all of these structures represent complete PBG with noticeable width and gap-midgap ratio for optimum values of structural parameters and plasma frequency.

Download English Version:

<https://daneshyari.com/en/article/8204559>

Download Persian Version:

<https://daneshyari.com/article/8204559>

[Daneshyari.com](https://daneshyari.com)