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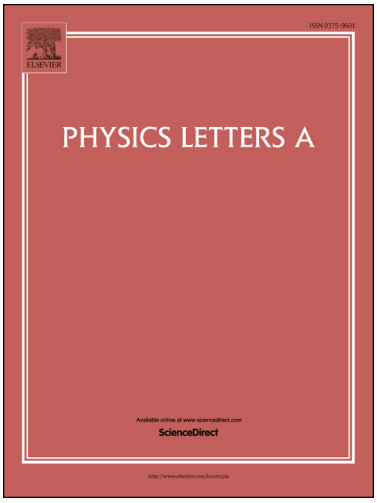

Effect of shape of scatterers and plasma frequency on the complete photonic band gap properties of two-dimensional dielectric-plasma photonic crystals

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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.