Abstract

In this paper the dispersion property of index guided photonic crystal fibers (PCFs) of silica material has been investigated. The modal analysis is done to obtain the complex effective refractive index for: (i) Hexagonal lattice with circular air holes and first ring having elliptical cells (ii) Rectangular lattice with circular air holes and first ring having elliptical cells. The dispersion
Comparison of Dispersion Properties for Different Lattice of Photonic Crystal Fiber

generated by both the configurations is finally compared in (iii) hexagonal and rectangular lattice with first ring elliptical air holes. A full-vector FDTD method with TE polarization is used to simulate and analyze the dispersion property.

Reference


Index Terms

Computer Science
Information

Technology

Key words

Photonic Crystal Fibers (PCFs)
Total internal reflection (TIR)
Effectiveness
Refractive index (neff)
Effective
Chromatic Dispersion (D)
Finite Difference Time Domain (FDTD)