Article Abstract

Title:	Computing modal dispersion characteristics of radially asymmetric Bragg fiber
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Abstract:	We developed a matrix theory that applies to with non-circular/circular but concentric layers fibers. And we compute the dispersion characteristics of radially unconventional fiber, known as Asymmetric Bragg fiber. An attempt has been made to determine how the modal characteristics change as circular Bragg fiber is changed to asymmetric Bragg fiber. The key to this transfer matrix method (TMM) is the accurate calculation of the propagation constants of modes. And validity of this method is verified by FDTD method. We compare these results with obtained from finite difference time domain and find excellent agreement between the two approaches.
Keywords:	Periodic structure, Weak guidance; Dispersion curves; Unconventional waveguides, Algorithms, Perfect matching layer (PML).