Realization of a Photonic Switch in a Photonic Crystal Fiber using Kerr Nonlinearities

IJCA Proceedings on International Conference on Advances in Science and Technology
© 2015 by IJCA Journal
ICAST 2014 - Number 3
Year of Publication: 2015

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Abstract

{bibtex}icast5032.bib{/bibtex}
The realization of a novel concept of photonic switching using photonic crystal fiber is presented in this paper. With the introduction of Kerr nonlinearity into a photonic crystal fiber, the phenomenon of optical switching has got redefined. The proposed scheme involves that the transmission intensity applied to the fiber can be switched from maximum to minimum with the application of suitable phase difference in between the input and the control signal. All the simulations are implemented by Finite Difference Time Domain method.

References

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Index Terms

Computer Science
Communication

Keywords

Finite Difference Time Domain Method; Kerr Nonlinearity; Photonic Crystal Fiber; Photonic Switching.