

Research Publications

National/International Journals

1. “Comparative Study of Fundamental Properties of Honey Comb Photonic Crystal Fiber at 1.55 μm Wavelength”, S. S. Mishra and Vinod Kumar Singh, accepted in Journal of Microwaves, Optoelectronics and Electromagnetic Applications (JMOe), 2011.
2. “Designing of Endlessly Single-Mode Highly Polarization Maintaining Birefringent Photonic Crystal Fiber with Low Confinement Loss at Wavelength 1.55 μm , Vinod K. Singh and S. S. Mishra, IEEE 978-1-4244-6554-5/11, 2011.
3. “Study of non-linear properties of hollow core photonic crystal fiber” S S Mishra and Vinod K. Singh, Optik-International Journal of Light and Electron Optics, Vol. 122, no. 8, pp 687-690, 2011.
4. “Polarization Maintaining Highly Birefringent Small Mode Photonic Crystal Fiber at Telecommunication Window” S S Mishra and Vinod K. Singh, Journal of Microwaves, Optoelectronics and Electromagnetic Applications (JMOe), Vol. 10, no. 1, 33-41, 2011.
5. “Highly Birefringent Photonic Crystal Fiber with Low Confinement Loss at Wavelength 1.55 μm ” S S Mishra and Vinod K. Singh, Optik- International Journal of Light and Electron Optics, Vol. 122, no. 22, pp 1975-1977, 2011.
6. “Designing of Index-Guiding Photonic Crystal Fiber by Finite Element Method Simulation”, S. S. Mishra and Vinod K. Singh, International Journal of Advanced Networking and Applications, vol. 2, no.3, 666-670, 2010.
7. “Endlessly Single-mode Highly Polarization Maintaining Birefringent PCF with Zero Dispersion at wavelength 1.55 μm ”, S. S. Mishra and Vinod K. Singh, International Journal of Engineering Science and Technology, vol. 2, no.9, pp. 4520-4525, 2010.
8. “Study of Fundamental Propagation Properties of Solid Core Holey Photonic Crystal Fiber in Telecommunication window” S. Mishra and Vinod K. Singh, Chinese Journal of Physics, vol. 48, no. 5, pp. 592-606, 2010.
9. “Study of Dispersion properties of Hollow-core Photonic Crystal Fiber by Finite Element Method” S Mishra and Vinod K. Singh, Journal of Optoelectronics and Advance Materials-Rapid Communication, vol.3, no.9, pp. 874-878, 2009.

10. "Bonding parameter, Phase parameter and Ni K-Edge position studies of some Ni systems", Vinod Kumar Singh, Indian Journal of Pure and Applied Physics, New Delhi Vol. 44, pp. 25-30, January 2006.
11. "Determination of Nearest Neighbour distance of some Mn compounds by XANES", Vinod Kumar Singh, Aryabatt Journal of Physical Science, vol. 7 no. 1-2, pp. 45, 2004.
12. "Correlation of nearest neighbour distance and bonding parameters of EXAFS of some Mn and Co systems" V K Singh, and A R Chetal, Acta Physica Polonica A vol 93 no. 3, 1998.
13. "Chemical shift of X-ray K-absorption edge studies of some nickel systems and its correlation with effective charge", V K Singh, P R Sarode and A R Chetal, Acta Physica Polonica A 6, 87, 1995.
14. "Determination of Nearest Neighbour Distance of some nickel systems from XANES" V K Singh and A R Chetal, X-ray spectrometry, vol. 22, 86-88, 1993.

Seminar/Conference

1. "Designing of High Birefringence Hollow Core Photonic Crystal Fiber at 1.55 μ m Wavelength" S S Mishra and Vinod Kumar Singh, accepted for Oral presentation in National Conference "FACIT 2011" at ISM Dhanbad, Nov. 3-4, 2011.
2. "Numerical Investigation of Phase Birefringence and Group Birefringence of Square size Photonic Crystal Fiber using FV-FEM" S S Mishra and Vinod K. Singh, Proceeding of International Conference on Light (OPTICS'11), National Institute of Technology Calicut, Kerala, 23-25 May, 2011.
3. "Designing of Endlessly Single-Mode Highly Polarization Maintaining Birefringent Photonic Crystal Fiber with Low Confinement Loss at Wavelength 1.55 μ m" Vinod K. Singh and S S Mishra, Proceeding of International Symposium on Photonics and Optoelectronics (SOPO 2011) Wuhan China, 16-18 May, 2011.
4. "Study of Birefringence and Nonlinear Property of Square Lattice Based Photonic Crystal Fiber" S Mishra and Vinod K. Singh, Proceedings of National Seminar on Nanomaterials and Their Applications, ISM Dhanbad, 10-11 Feb., 2011

5. "Study of Fundamental Properties of Honey Comb Photonic Crystal Fiber at Telecommunication window" S Mishra and Vinod K. Singh, Proceedings of National Seminar on Photonics and Materials, ISM Dhanbad, 25-27 March. pp 12, 2010.
6. "Designing of Hollow core Photonic Crystal Fiber as gas sensor", S Mishra, Vinod K Singh and V Priye, Proceeding of Ninth International mines ventilation congress, New Delhi, 10-13 Nov. 2009.
7. "Non-lossy propagation of e. m. wave in Index-guided Photonic Crystal Fiber", S. Mishra, Vinod K. Singh and V Priye, Proceeding of National Seminar on Recent Advances in Theoretical and Applied Seismology at Department of Applied Mathematics, ISM University Dhanbad, March 24-25, 2009.
8. "Analysis of Hollow-Core Photonic Crystal Fiber by Finite Element Method", S. Mishra, Vinod K. Singh and A Basu, Proceeding of International Conference on Trend on Optics and Photonics at Department of Optics and Photonics, University of Calcutta, 1-4 March, 2009.
9. "Study of Photonic Crystal Fiber by using Finite Element Method", S. Mishra & Vinod K. Singh, Proceeding of International Conference Photonics'08 at IIT Delhi 15-18, Dec. 2008.
10. "Single-mode property of Photonic Crystal Fiber analysis by Finite Element Method" S Mishra, Vinod K. Singh & V Priye, Proceeding of National conference at Department of E & I, I S M Dhanbad 13-15 Oct. 2008.
11. "Modeling of Photonic Crystal Fiber by Finite element method" S Mishra, V K singh and V Priye, Proceeding of National seminar on Recent advances on material science at I S M, Dhanbad, Feb. 15-17, 2008.
12. "Propagation of light in Fiber other than total internal reflection" A Prasad and V K Singh, Proceeding of National seminar on Recent Advances on Material Science at I S M, Dhanbad, Feb. 15-17, 2008.
13. "A Coupled Mode Analysis of Propagation of Hybrid Modes in Multilayered Gyroscopic Waveguide at Optical frequency" Proceeding of National Seminar on Recent Advances in the Theoretical and Applied Seismology at I S M Dhanbad, March 20-21, 2006.
14. "Guided wave optical modulator" Proceedings of International conference (ICOL-2006) on Optics and Optoelectronics at Instruments Research & development Establishments Dehradun, Uttaranchal, India, Dec12-15, p. 70, 2005.

15. "Bright and Dark Solitons in Nonlinear Yttrium Iron Garnet Films-Simulation and Experimental Realisation", Proceedings of SAP seminar on recent advances in theoretical and applied seismology, I S M Dhanbad, Mar 3-4, 2005.
16. "EXAFS parameter studies of some Ni systems", Proceedings of National Conference on emerging areas on Applied Physics, I S M Dhanbad, Feb 21-23, 2004.
17. "X-ray studies of some Ni systems" Proceedings of National Seminar on X-ray, Laser, Optico-acoustic and electrical studies of solids including Minerals and Coal, I S M Dhanbad, Mar 25-26, 1998.