

Research Publications

National and International Journals:

1. TiO₂ coated optical fiber SPR sensor for alcohol sensing application, Maya Chauhan and Vinod Kumar Singh, *Journal of Optics* (Accepted) March 2023.
2. Growth of well arrayed ZnO nanorods over no-core fiber for the measurement of glucose solution concentration, Maya Chauhan and Vinod Kumar Singh, *Journal of Material Science: Material in Electronics*, Vol. 34, pp. 5, February 2023.
3. Tapered MMF sensor fabrication using SnO₂-NPs for alcohol sensing application, Maya Chauhan and Vinod Kumar Singh, *Optical Fiber Technology*, Vol. 76, pp. 103167, January 2023.
4. Hydrothermally grown ZnO nanorods based optical fiber sensor for salinity detection, Maya Chauhan and Vinod Kumar Singh, *Measurement*, Vol. 203, pp. 111913, September 2022
5. Highly sensitive PCF based plasmonic sensor for hemoglobin concentration detection, Sugandha Das and Vinod Kumar Singh, *Photonics and Nanostructures - Fundamentals and Applications*, Vol. 51, pp. 101040, September 2022
6. ZnO nanostructures coated no-core fiber refractive index sensors, Maya Chauhan and Vinod Kumar Singh, *Materials Science in Semiconductor Processing*, Vol.47, 106757, 15 August 2022
7. Sensitive enhancement of Ta₂O₅ coated PCF based plasmonic sensor for glucose sensing application, Sugandha Das and Vinod Kumar Singh, *IEEE Photonics Technology letters*, Vol.34, No. 13 pp. 691-694, July 2022
8. “PDMS coated fiber optic sensor for efficient detection of fuel adulteration”, Maya Chauhan, Tulika Khanikar, Vinod Kumar Singh, *Applied Physics B: Laser and Optics*, Vol. 128, pp. 89 April, 2022
9. “A review on infiltrated or liquid core fiber optic SPR sensors” Tulika Khanikar, M. De and Vinod Kumar Singh, *Photonics and Nanostructures - Fundamentals and Applications*, Vol. 46, pp. 10945, July, 2021
10. “Fiber Optic Plasmonic Sensors Based on Theoretical Analysis: a review”, Tulika Khanikar, Moutusi De and Vinod Kumar Singh, accepted in *Optical and Quantum Electronics*, June, 2021
11. “V groove fiber plasmonic sensor with facile resonance tunability”, Tulika Khanikar and Vinod Kumar Singh, accepted in *Optik*, vol., no., pp., June 2021
12. “Review on recent experimental SPR/LSPR based fiber optic analyte sensors”, Maya Chauhan and Vinod Kumar Singh, *Optical Fiber Technology*, Vol. 64 pp. 102580, July, 2021
13. “The role of Ta₂O₅ thin film on a plasmonic refractive index sensor based on photonic crystal fiber”, Sugandha Das and Vinod Kumar Singh, *Photonics and Nanostructures - Fundamentals and Applications*, Vol.44, 100904, May 2021

14. "Wide range refractive index sensor using a birefringent optical fiber", Moutusi De and Vinod Kumar Singh, *Optical and Quantum Electronics*, vol. 53, pp. 198, April, 2021
15. "A Highly Sensitive SPR Refractive Index Sensor Based on Microfluidic Channel Assisted with Graphene-Ag Composite Nanowire", A. K. Pathak, C. Vipavakit, B. M. A. Rahman, and V. K. Singh, *IEEE Photonics Journal*, Vol. 2, no. 13, pp. 1-8, March, 2021
16. "Design and analysis of a tunable refractive index sensor by using a Ta₂O₅ coated photonic crystal fiber", Sugandha Das and Vinod Kumar Singh, *Journal of Nanophotonics*, pp. 016006, Vol. 15 no. 1, January, 2021
17. "Numerical analysis of LSPR based fiber sensor for low refractive index detection", P. K. Singh, Vinod Kumar Singh and S. K. Chaulya, *Optik*, 224, pp.165704, December, 2020
18. "Analysis of a single solid core flat fiber plasmonic refractive index sensor" Moutusi De, C. Markides, Vinod Kumar Singh, C. Thermistos and B M A Rahman, *Plasmonics*, vol. 15, no. 5 pp. 1429-37, October, 2020
19. "Investigation of rectangular solid-core photonic crystal fiber as temperature sensor", Papiya Dhara and Vinod Kumar Singh, *Microsystem Technologies*, doi 10.1007/s00542-020-04927-1, 16 June 2020
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21. "Theoretical assessment of D-shaped optical fiber chemical sensor associated with nanoscale silver strip operating in near infra-red region" A. K. Pathak, and Vinod Kumar Singh, *Optical and Quantum Electronics*, vol. 52, no.4, article 199, April, 2020
22. "SPR Based Optical Fiber Refractive Index Sensor Using Silver Nanowire Assisted CSMFC" A. K. Pathak and Vinod Kumar Singh, accepted in *IEEE Photonics Technology Letters*, vol. 32, no.8, pp. 465-468, 2020
23. "Analysis of highly sensitive plasmonic refractive index sensor", Moutusi De and Vinod Kumar Singh, *Applied Optics*, vol. 59, no. 2, pp. 380-388, 2020
24. "Analysis of a highly sensitive side polished hollow fiber plasmonic sensor and its application as a magnetometer", Tulika Khanikar and Vinod Kumar Singh, *Applied Optics*, vol. 59, no. 1, pp. 171-179, 2020.
25. "Refractive index sensor based on selectively liquid infiltrated birefringent photonic crystal fiber", Sugandha Das and Vinod Kumar Singh, *Optik*, vol. 201, pp 163489, 2020
26. "Prospects of photonics crystal fiber for analyte sensing applications: An overview", M. De, T. K. Gangopadhyay and Vinod Kumar Singh, *Measurement science and technology*, vol. 31, pp. 042001, 2020.
27. "Investigation of a SPR based refractive index sensor using single mode fiber with large D shaped microfluidic channel" A. K. Pathak, Vinod Kumar Singh, S. Ghosh, and B. M. A. Rahman, *OSA Continuum*, vol.2, no. 11, pp. 3008-3018, 2019 .
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31. Multi-purpose photonic crystal fiber having advanced optical properties and long sensing_range, Moutusi De and Vinod Kumar Singh, *Photonics and Nanostructures- Fundamentals and Applications*, vol. 36, pp. 100722, September, 2019
32. "Metal nanowire assisted hollow core fiber sensor for an efficient detection of small refractive index change of measurand liquid", A. K. Pathak, A. Ghose, R. K. Gangwar, B. M. A. Rahman and Vinod Kumar Singh, *Plasmonics*, June 2019 <https://doi.org/10.1007/s11468-019-00969-y>
33. "Single Channel Photonic Crystal Fiber Based High Sensitive Petrol Adulteration Detection Sensor" Moutusi De and Vinod Kumar Singh, *Optik*, vol. 183, pp 539-546, 2019
34. "Fiber optic refractive index sensor with high index refractive index overlay" Tulika Khanikar and Vinod Kumar Singh, *Laser Physics*, vol. 29, no.4, pp 045103, 2019
35. "PANI-PVA composite film coated optical fiber probe as a stable and highly sensitive pH sensor" Tulika Khanikar and Vinod Kumar Singh, *Optical Materials*, vol.88, pp244–251, Feb, 2019
36. "Prospects of Photonic Crystal Fiber as Physical Sensor: An Overview" Moutusi De, Tarun Kumar Gangopadhyay and Vinod Kumar Singh, *Sensors*, vol. 19, no. 3, pp. 464, January, 2019
37. "Broad range and highly sensitive optical pH sensor based on Hierarchical ZnO microflowers over tapered silica fiber" Akhilesh Kumar Pathak, Dharendra K. Chaudhary and Vinod Kumar Singh, *Sensor and Actuator A*, vol. 280, pp. 399-405, Sept, 2018
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52. "Fabrication and characterization of TiO₂ coated cone shaped nano-fiber pH sensor", A. K. Pathak, V. Bhardwaj, R. K. Gangwar, M. De and Vinod Kumar Singh, *Optics Communications* 386, pp. 43-48 2017.
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