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# **YOUTUBE Channel Link** [**https://www.youtube.com/channel/UC3rdRYA605bdDdsJdEf0oJw**](https://www.youtube.com/channel/UC3rdRYA605bdDdsJdEf0oJw)

# **Experience**

**Working as Professor since April. 2007 (for 13 years and 04 months)**

**Research, Teaching, Laboratory and Administrative work at Doctorate, Post-Graduate and Under-Graduate levels for 29+ years**.

# **educational qualification**

|  |  |  |  |
| --- | --- | --- | --- |
| Examination Passed | Institution | Year | Division |
| Matriculation | Bihar Secondary School Examination Board, Patna | 1980 | I |
| Intermediate of Science | **St. Xavier’s College**Ranchi University, Ranchi | 1982 | I |
| Graduation | **B.Sc. Physics Honors** **St. Xavier’s College**Ranchi University, Ranchi | 1985 | I |
| Post Graduation  | **M. Sc. (Physics)****Indian Institute of Technology**, Delhi | 1987 | I |
| JRF/NET/GATE/SLET | GATEGATECSIR-UGC | 198719881987 | --- |
| Ph. D. | **Indian Institute of Technology**, Delhi | 1995 | --- |
| Title of the Thesis | *Studies on Fiber Optic Sensors for Monitoring Pressure, Temperature and Thermally Stimulated Discharge Current* | --- | --- |

### **a. academics**

# **Life Member of academic bodies**

* Materials Research Society of India.
* Indian Association of Physics Teachers.
* Laser and Spectroscopic Society of India.
* Indian National Science Congress.
* Bihar Brains Society, Patna.
* International Academy of Physical Sciences (CONIAPS).

# **Projects**

* UGC Major Research Project: Synthesis and Characterization of WO3 Nanomaterials and their Application for Humidity and Toxic Gas Sensing. (2008-2011) Completed
* UGC Major Research Project: Gas and Relative Humidity Sensing Applications of Nanocomposites. (2013-2017) Completed

# **Research Publications**

Google Scholar Citation Index: <https://scholar.google.co.in/citations?hl=en&user=WJ_ghUQAAAAJ&authuser=5&scilu=&scisig=AMD79ooAAAAAXYpBDvxTS537Renxgy25g74J5vKeHJLU&gmla=AJsN-F4xyF9pdW2Tjz3hP6_0qIQwfNewgArtNDJNDSTYuCmIGX8yRZyYzy-n8Rfcf7wFgNoR8FpYvXbGHDb-hTWO1Ep2aiWKnwJ9h1Kerk7mFeNLK7dVEtE&sciund=1623905462269366762>

1. Electrical and optical properties of ZnO-WO3Nanocomposite and its application as solid state humidity sensor, **Bulletin of Materials Science**, Vandna Shakya, N K Pandey, Suneet Kumar Misra, Akash Roy, Vol. 40, No. 2, pp. 253–262 April 2017.
2. Application of V2O5-ZnO Nanocomposite for Humidity Sensing Studies, Narendra Kumar Pandey, Abhishek Panwar, Suneet Kumar Misra **Int. Journal of Materials Science and Applications**, 6(3) 119-125 2017.
3. Moisture Sensing Studies of CuO-ZnONanocomposites, Vijaya Rajput, Narendra Kumar Pandey, **International Journal of Applied Ceramic Technology** Volume 14, Issue 1January/February **2017** pp 77–83.
4. [Analysis on activation energy and humidity sensing application of nanostructured SnO2-doped ZnO material](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&cstart=20&citation_for_view=WJ_ghUQAAAAJ:VL0QpB8kHFEC), Suneet Kumar Misra, Narendra Kumar Pandey, **Sensors and Actuators A: Physical** 249, **2016** pp 8-14.
5. Study of Activation Energy and Humidity Sensing Application of Nanostructured Cu-doped ZnO Thin Films, Suneet Kumar Misra, Narendra Kumar Pandey, **Journal of Materials Research**[Volume 31](https://www.cambridge.org/core/journals/journal-of-materials-research/volume/journal-jmr-volume-31/C75D62C2479B095254DBB6730E7AECCC), [Issue 20](https://www.cambridge.org/core/journals/journal-of-materials-research/issue/journal-jmr-volume-31-issue-20/96D0DA2E23F7F458016154CCACCD291B) October **2016**, pp. 3214-3222.
6. [Characterization of Nanocomposites of WO3–SnO2 and its Application as a Moisture Sensors](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&cstart=20&citation_for_view=WJ_ghUQAAAAJ:olpn-zPbct0C), A Roy, Narendra Kumar Pandey, V Shakya, S Misra, S Singh, A Kumar, A Kumar, **Advanced Science Letters** 22 (1), **2016** pp 188-192.
7. [Application of Undoped and Al2O3-Doped ZnO Nanomaterials as Solid-State Humidity Sensor and its Characterization Studies](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:1qzjygNMrQYC), Suneet Kumar Misra, Narendra Kumar Pandey, V Shakya, A Roy, **IEEE Sensors Journal** 15 (6), **2015** pp 3582-3589.
8. [Ag Loaded WO3 Ceramic Nanomaterials: Characterization and Moisture Sensing Studies](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:LkGwnXOMwfcC), Narendra Kumar Pandey, K Tiwari, A Roy, A Mishra, A Govindan, **International Journal of Applied Ceramic Technology** 10 (1), 150-159 (2013).
9. [Characterization and Humidity Sensing Application of ZnO-TiO2 Nanocomposite](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:M3ejUd6NZC8C), Narendra Kumar Pandey, K Tiwari, A Roy, **Advanced Materials Research** 304, 48-52 (2013).
10. [Humidity Sensor Based on Synthesized WO3–SnO2 Nanocomposites](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:vRqMK49ujn8C), A Roy, Narendra Kumar Pandey, V Shakya, A Kumar, **Energy and Environment Focus** 2 (2), 126-132 (2013).
11. [Characterization and humidity sensing application of WO3-SnO2 nanocomposite](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:LPZeul_q3PIC), Narendra Kumar Pandey, V Shakya, S Mishra, **IOSR Journal of Applied Physics**, 4 (3) 10-17 2013.
12. [ZnO–TiO2 Nanocomposite: Characterization and Moisture Sensing Studies](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:IjCSPb-OGe4C), Narendra Kumar Pandey, K Tiwari, A Roy, **Bulletin of Materials Science** 35 (3), 347-352 2012.
13. [Moisture Sensing Application of Cu2O Doped ZnONanocomposites](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:qjMakFHDy7sC), Narendra Kumar Pandey, K Tiwari, A Roy, **IEEE Sensors Journal** 11 (9), 2142-2148 (2011).
14. [Ag Doped Nanomaterials as Relative Humidity Sensor](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:Y0pCki6q_DkC), Narendra Kumar Pandey, K Tiwari, A Roy, **IEEE Sensors Journal** 11 (11), 2911-2918 (2011).
15. [Resistive Type Moisture Sensor Based on WO3 Nanomaterial](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:nb7KW1ujOQ8C), A Tripathi, V Tripathi, Narendra Kumar Pandey, K Tiwari, **Sensors & Transducers** 143 (8), 152 (2012).
16. [A Resistive Humidity Sensor Based on Nanostructured WO3-ZnO Composites](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&citation_for_view=WJ_ghUQAAAAJ:3fE2CSJIrl8C), K Tiwari, A Tripathi, Narendra Kumar Pandey, **Sensors & Transducers** 134 (11), 65 (2011).
17. [Characterization of WO3-SnO2 Nanocomposites and Application in Humidity Sensing](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=WJ_ghUQAAAAJ&cstart=20&citation_for_view=WJ_ghUQAAAAJ:hqOjcs7Dif8C), Narendra Kumar Pandey, A Roy, A Kumar, **Sensors & Transducers** 125 (2), 89 (2011).
18. Humidity Sensor Based on Synthesized Pure WO3 and WO3-SnO2Nanocomposite, Narendra Kumar Pandey, Akash Roy, K. Tiwari, A. Mishra, A. Rai, S. Jayaswal, Rashmi, Madhvendra, A. Govindan, p.129-132, **IEEE Explore**, August, 2012.
19. NO2 sensing studies of WO3 and Ag doped WO3 prepared through sol-gel route, Narendra Kumar Pandey, Akash Roy, K. Tiwari, A. Mishra, A. Rai, S. Jayaswal, Rashmi, Madhvendra, A. Govindan, p.342-345, **IEEE Explore**, August, 2012.
20. **Resistive Type Moisture Sensor based on WO3 Nanomaterial, AnupamTripathi,  VidhuTripathi, Narendra Kumar Pandey, Karunesh Tiwari, Sensors & Transducers Vol. 143, No. 8, pp. 152-161 (2012).**
21. Characterization and Humidity Sensing Application of ZnO-TiO2Nanocomposite, Narendra Kumar Pandey, Tiwari Karunesh, Roy Akash, **J. Advance Materials Research**, Vol. 304, pp.45-48, (2011).
22. [Characterization of WO3-SnO2Nanocomposites and Application in Humidity Sensing](http://www.sensorsportal.com/HTML/DIGEST/february_2011/P_753.pdf), Narendra Kumar Pandey,RoyAkash, Kumar Alok, pp.89-99, Vol. 125, Issue 2, **Sensors and Transducers** (2011).
23. Synthesis and Characterization of WO3 Nanomaterials, Narendra Kumar Pandey, Tiwari Karunesh, Roy Akash, [**Journal of Biomedical Nanotechnology**](http://www.ingentaconnect.com/content/asp/jbn), [American Scientific Publishers](http://www.ingentaconnect.com/content/asp)7 (1) 156-157 January (2011).
24. Morphological and Relative Humidity Sensing Properties of Pure ZnO Nanomaterial, Narendra Kumar Pandey, Tiwari Karunesh, Vol. 122, Issue 11, pp. 9-19, **Sensors and Transducers**, November (2010).]
25. Humidity Sensing Studies of WO3-ZnO Nanocomposite, Narendra Kumar Pandey, AnupamTripathi, Karunesh Tiwari, Vol 105 Issue 5, pp 109-118, **Sensors and Transducers**, May (2009).
26. Relative Humidity Sensing Studies of WO3-ZnO nanocomposite, Narendra Kumar Pandey, TripathiAnupam, Tiwari Karunesh, Vol. 79-82 pp.365-368, **Advance Materials Research**, 2009.
27. Morphological and Humidity Sensing Studies Of WO3 Mixed With ZnO And TiO2 Powders, Narendra Kumar Pandey, TripathiAnupam, Tiwari Karunesh, Roy Akash, Rai Amit Rai, Awasthi Priyanka, Mishra Aradhana, Kumar Alokr, Vol 96, Issue 9, pp.42-46, **Sensors and Transducers**, Sept (2008).
28. Mathematical Formulation for Strain and Pressure Mapping Fiber Bragg Grating Sensors, Narendra Kumar Pandey, TripathiAnupam, **Sensors and Transducers** 77 (3) 1032-39 (2007).
29. Fiber Optic Pressure Sensor and Monitoring of Structural Defects, Narendra Kumar Pandey, Yadav B C, Vol.37, No. 1-2, p.57-63, **OpticaApplicata**, 2007.
30. Optical Humidity Sensors Based on Titania Films Fabricated By Sol-Gel and Thermal Evaporation, J. **Measurement Science and Technology**, B C Yadav, Narendra Kumar Pandey, Srivastava Amit K, Sharma Preeti, 18 260-264 (2007).
31. Study of Optical Humidity Sensing Properties of TiO2 and MgO Films, Yadav B C, Narendra Kumar Pandey, **Sensors & Transducers** 78 (4) 1127-1133 (April 2007).
32. Embedded Fiber Optic Microbend Sensor for Measurement of High Pressure and Crack Detection, Narendra Kumar Pandey, Yadav B C, **Sensors and Actuators A Physical** 128 (1) 33-36 (2006).
33. Monitoring of High **Pressure with Fiber Optic Sensors, Narendra Kumar Pandey, Yadav B C, TripathiAnupam,** Sensors and Transducers 74 (12) 834-838 (2006).
34. [MnO2-ZnO Hexagonal Nanomaterials: Characterization and High Performance Humidity Sensing Application](https://www.isroset.org/pdf_paper_view.php?paper_id=1017&8-IJSRPAS-01453.pdf), Vikas Kumar Verma, Narendra Kumar Pandey, Vol.6 , Issue.6 , pp.69-79, 2018.
35. Optical Fibre Sensor for the Study of Structural Defects, Narendra Kumar Pandey T.C. Goyal. P.K.C. Pillai, S.K. Nijhawan, International Journal of Optoelectronics, Vol.7 No.3 p.429-435 1992.
36. Optical Fibre Temperature Sensor with Polymer Ceramic Composite, Narendra Kumar Pandey T.C. Goyal. P.K.C. Pillai, Journal of Optics, Vol. 23 No.2 p.87-93, 1994.
37. Monitoring of High Pressure with Optical Fibre Sensor, using Microbends in the Embedded Fibre, Narendra Kumar Pandey T.C. Goyal. P.K.C. Pillai, Journal of Optics, Vol.27 No.2 p.77-82 1998.
38. Metal-oxide based ammonia gas sensors: A review, Priya Gupta, Savita Maurya, Narendra Kumar Pandey,Vernica Verma, Nanoscience and Nanotechnology-Asia (Accepted) 2020.
39. Characterization Studies of Cu-WO3 Nanocomposites and their application as Solid State Moisture Sensor, Saanchita Singh, Priya Gupta, Narendra Kumar Pandey, DRSR Journal, Vol-10 Issue-06 No. 8, Pqge no.426-439, 2020.
40. Cu-WO3 Nanocomposite Prepared Through Solid-State Reaction Route: Characterization and Moisture Sensing Studies, Sanchita Singh, Narendra Kumar Pandey, Priya Gupta, DRSR Journal, Vol-10 Issue-06 No.12, Pqge no.326-339, 2020.
41. Morphological and Humidity Sensing Studies of Pure WO₃, N.K. Pandey and Sanchita Singh, *IOSR Journal of Applied Physics (IOSR-JAP) Volume 11, Issue 4 Ser. II Page No. 60-70, (Jul. – Aug. 2019).*
42. Comparative Study of Structural, Morphological and HumiditySensing Properties of Pure WO3 and Cu2O-WO3 Nanocomposite, Narendra Kumar Pandey, Sanchita Singh, Priya Gupta, Asian Journal of Chemistry, volume 32, No. 9, 2020. (Accepted-Page number yet not allotted).

# **vi Research Papers in *national* conferences/seminars**

1. National e-conference on inter-disciplinary research in Science and Technology (NCIRST) 30-31 May 2020 Amiruddaula Islamia Degree College, Lucknow, Effect of crystallite size on electrical and humidity sensing characteristics of nanostructured NiO prepared through sol-gel route.
2. Structural and Moisture Sensing Properties of WO3-ZnO Nanocomposites Synthesized by a Soft Chemical Route, Vandna Shakya, Narendra Kumar Pandey, Materials Today Proceedings, [Volume 5, Issue 3, Part 1](https://www.sciencedirect.com/science/journal/22147853/5/3/part/P1), 2018, Pages 9082-9088.
3. Narendra Kumar Pandey, Akash Roy, Moisture Sensing Application of SnO2-WO3 Nanocomposite, p.53, UGC sponsored Seminar on Recent Advances in Physical Sciences, 19-20 January, 2018, Dhanbad, Jharkhand.
4. Narendra Kumar Pandey, Amit Rai, Akash Roy, Karunesh Tiwari, AnupamTripathi, p.22, Humidity Sensing Application of Cu2O mixed ZnO Composite, Proc. UGC Sponsored National Seminar on Applications of Nanoscience and Nanotechnology, Women’s College, Patna, 12 Sept, 2008.
5. Narendra Kumar Pandey, Amit Rai, Akash Roy, Karunesh Tiwari, AnupamTripathi, p.47, Study of ZnO Doped Al2O3 Material as a Humidity Sensor, Proc. UGC Sponsored National Seminar on Applications of Nanoscience and Nanotechnology, Women’s College, Patna, 12 Sept, 2008.
6. Narendra Kumar Pandey, Akash Roy, Amit Rai, Karunesh Tiwari, AnupamTripathi, Humidity Sensing Application of Al2O3-WO3 Composite Pellet, p.57, Proc. UGC Sponsored National Seminar on Applications of Nanoscience and Nanotechnology, Women’s College, Patna, 12 Sept, 2008.
7. Narendra Kumar Pandey, VandanaShakya, Akash Roy, Morphologicla and Moisture Sensing Studies of Synthesized SnO2 Loaded WO3 Nanomaterials, PP-49, Proc. 7th National Conf. on Thermophysical Properties (NCTP), Dept of Physics, Christ Church College, Kanpur, India, pp.134-35, 2013.
8. Narendra Kumar Pandey, Sunnet Kumar Misra, VandanaShakya, Alok Kumar, Aluminum Oxide Doped Zinc Oxide nanomaterials as Moisture Sensor, PP-50, Proc. 7th National Conf. on Thermophysical Properties (NCTP), Dept of Physics, Christ Church College, Kanpur, India, pp.138-39, 2013.
9. Narendra Kumar Pandey, SnO2 Doped WO3 as Relative Humidity Sensor,Proc. 7th National Conf. on Thermophysical Properties (NCTP), Dept of Physics, Christ Church College, Kanpur, India, pp.55, 2013.
10. Narendra Kumar Pandey, Karunesh Tiwari, Akash Roy, Ag-loaded WO3 Nanomaterials for Humidity Sensing Applications, National Conference on Sensors and Actuators,11-12 March, 2011, Central Glass and Ceramic Research Institute, Kolkata.
11. Narendra Kumar Pandey, Suneet Kumar Mishra, Application of Nanostructured Cu Doped ZnO Thin Film as Semiconductor Humidity Senstor, National conference on Recent Advances and Innovations in Chemical and Materials Science, JNPG College, Lucknow, 23-24 February, pp.16, 2017.
12. Narendra Kumar Pandey, AnupamTripathy, VidhuTripathy, Humidity sensing studies of Zinc Tungstate, p.57-60, Proc. National Seminar on Active and Smart Material, MMM Engineering College, Gorakhpur, Uttar Pradesh, India, 2010.
13. Karunesh Tiwari, Narendra Kumar Pandey, Electrical and Humidity Sensing Properties of ZnTiO3Nanocomposite, p.64-666, Proc. National Seminar on Active and Smart Material, MMM Engineering College, Gorakhpur, Uttar Pradesh, India.
14. Narendra Kumar Pandey, Karunesh Tiwari, AnupamTripathi, Akash Roy, Amit Rai, PriankaAwasthi, Humidity Sensing Apllication of Cu2O mixed ZnONanocomposite, CPP-25, pp.98, Conf. on Mesogenic and Ferroic Materials (CMFM09), 9-11 January, 2009, Banaras Hindu University, Varanasi.
15. Narendra Kumar Pandey, Karunesh Tiwari, AnupamTripathi, Akash Roy, Amit Rai, PriankaAwasthi, Relative Humidity Sensing Studies of ZnO:WO3 Composite Powder Pellet, National Conference on Relevance and Dimensions of Nanoscience and Nanotechnology, B.S. College, Patna, 19-21 April, 2008.
16. Narendra Kumar Pandey, AnupamTripathi, Karunesh Tiwari, Akash Roy, Amit Rai, Priyanka Awasthi, Humidity Sesnsing Studies of WO3-ZnO Composite Powder, National Conference on Relevance and Dimensions of Nanoscience and Nanotechnology, B.S. College, Patna, 19-21 April, 2008.
17. Narendra Kumar Pandey, Yadav B.C., Amit K. Srivastava &Shruti Shukla, in-situ Study of Polarization Current and Measurement of Thermally Stimulated Current in Electret Sample Made by Solvent Cast Technique; Proceedings of Material Research Society of India, 17th Annual General Meeting, Lucknow University, Lucknow, U.P., India, Pages 261-263, Feb.13-15, 2006.
18. Preeti Sharma, Amit K Srivastav, B.C.Yadav, Narendra Kumar Pandey, Antimony Doped Tin Oxide as Relative Humidity Sensor, Science congress, 2007.
19. Suneet Kumar Misra, Narendra Kumar Pandey, VandnaShakya, Akash Roy, Study of Characterization and Humidity Sensing Application of Al2O3 Doped ZnO Nanomaterials, Science Congress, 3-7 January, 2015.
20. Yadav B.C., Narendra Kumar Pandey, Amit K. Srivastava, Anil K. Yadav and Preeti Sharma, Comparative Study of Optical Humidity Sensors based on Titania Films Fabricated by Sol-gel and Thermal Evaporation Methods; Proceedings of Current Trends on Materials Characterization, IIT, Kanpur, U.P., India, Dec.5-7(2005). Proc. Current Trends on Materials Characterization, IIT, Kanpur, U.P., India, Dec.5-7(2005).
21. Narendra Kumar Pandey, TripathiAnupam, Tiwari Karunesh, Mathematical Formulation for Temperature Mapping, Fiber Bragg Grating Sensors, Roy Akash Proc. of XXXIII OSI Symposium on Optics and optoelectronics, Assam, 2007.
22. Amit K Srivasrav, Preeti Sharma, Yadav B.C., Narendra Kumar Pandey, Titania as Electrical Resistive Type Humidity Sensor, Proc. National Workshop on Nanomaterials and Nanotechnology, ECA-14, p.34, Univ. of Lucknow, 24-25 March, 2007.
23. Narendra Kumar Pandey, Karunesh Tiwari, Mahendra Kumar, AnupamTripathi, Akash Roy, Priyanka Awasthi, Structural And Electrical Properties Of CuO Doped Zinc Oxide (ZnO) Humidity Sensor, p.107, 1st National Conf. on Nanomaterials and Nanotechnology, 2007, Univ. of Lucknow.
24. Narendra Kumar Pandey, AnupamTripathi, Karunesh Tiwari, Akash Roy, Priyanka Awasthi, ZnO Doped WO3 as Humidity Sensors, p.107, Proc. 1st National Conf. on Nanomaterials and Nanotechnology, 2007, Univ. of Lucknow.
25. Narendra Kumar Pandey, Karunesh Tiwari, Mahendra Kumar, AnupamTripathi, Akash Roy, Priyanka Awasthi, Study of TiO2 Doped ZnO Material as a Humidity Sesnor, p.113, 1st National Conf. on Nanomaterials and Nanotechnology, 2007, Univ. of Lucknow.
26. Narendra Kumar Pandey, Karunesh Tiwari, AnupamTripathi, Akash Roy, Priyanka Awasthi, Humidity Sensing Properties Of Zinc Oxide (ZnO) Nanomaterial Prepared Through Hydroxide Route By Drop Wise Addition Method, p.115, Proc. 1st National Conf. on Nanomaterials and Nanotechnology, 2007, Univ. of Lucknow.
27. Narendra Kumar Pandey, A Roy, A Tripathi, K Tiwari, A Rai, P Awasthi, A Mishra, WO3 Doped ZnO as Moisture Sensor, 2nd National Conference on Nanomaterials and Nanotechnology, 21-23 December, 2009, Department of Physics, University of Lucknow, p.59-62.
28. Narendra Kumar Pandey, A Rai, K Tiwari, A Roy, A Mishra, P Awasthi, Studies on SnO2 Doped TiO2 as Humidity Sensor, 2nd National Conference on Nanomaterials and Nanotechnology, 21-23 December, 2009, Department of Physics, University of Lucknow, p.63-65.
29. Narendra Kumar Pandey, A Mishra, K Tiwari, A Rai, A Roy, P Awasthi, Moisture Sensor Based on Ag Doped WO3, 2nd National Conference on Nanomaterials and Nanotechnology, 21-23 December, 2009, Department of Physics, University of Lucknow, p.111-113.
30. Narendra Kumar Pandey, A Roy, A Tripathi, K Tiwari, A Rai, P Awasthi, A Mishra, Alok Kumar, SujataChakraborti, Study of Humidity Sensing Properties of WO3-SnO2 Nanocomposite, 2nd National Conference on Nanomaterials and Nanotechnology, 21-23 December, 2009, Department of Physics, University of Lucknow, p.119-121.
31. Narendra Kumar Pandey, P Awasthi, K Tiwari, A Roy, A Rai, A Mishra, Humidity Sensing Properties of Cu2O Doped SnO2, 2nd National Conference on Nanomaterials and Nanotechnology, 21-23 December, 2009, Department of Physics, University of Lucknow, p.183-185.
32. Narendra Kumar Pandey, A Roy, K. Tiwari, A. Kumar, S.S. Rasool, Moisture Sensing Properties of pure WO3 Nanomaterials and WO3-SnO2 Nanocomposites, p.80, Proc. 3rd National Conference on Nanomaterials and Nanotechnology, 21-23 December, 2010, Amity University, Lucknow Campus, Lucknow.
33. Narendra Kumar Pandey, K. Tiwari, A Roy, A. Shukla, A. Kumar, S.S. Rasool, p.78, Humidity Sensing Properties of Cu2+ doped WO3 Nanomaterials, 3rd National Conference on Nanomaterials and Nanotechnology, 21-23 December, 2010, Amity University, Lucknow Campus, Lucknow.
34. Aradhana Mishra, Narendrakumar Pandey, Karunesh Tiwari, Akash Roy, Amit Rai, Humidity Sesnsing Application of WO3-Cu2O Nanocomposite, 4th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.65, 21-23 December, 2011.
35. Amit Rai, Narendra Kumar Pandey, Karunesh Tiwari, Akash Roy, Aradhana Mishra, Study of SnO2 Doped TiO2 as a Humidity Sesnsor, 4th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.104, 21-23 December, 2011.
36. Akash Roy, Narendrakumar Pandey, Amit Rai, Karunesh Tiwari, Aradhana Mishra, Humidity Sesnsor based on Synthesized Tunston Oxide Nanomaterial, 4th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.126, 21-23 December, 2011.
37. Karunesh Tiwari, Narendrakumar Pandey, AnupamTripathi, Amit Rai, Aradhana Mishra, Nanostructured Mixed Oxide Compounds for Humidity Sensing Application, 4th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.199, 21-23 December, 2011.
38. Karunesh Tiwari, Narendra Kumar Pandey, AnupamTripathi, Amit Rai, Aradhana Mishra, Nanostructured Mixed Oxide Compounds for Humidity Sensing Application, 5th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.199, 21-23 December, 2011.
39. Akash Roy, Narendra Kumar Pandey, VandnaShakya, Suneet Kumar Mishra, Sanchita Singh, Anoop Kumar, Alok Kumar, Amit Rai, Karunesh Tiwari, Aradhana Mishra, Characterization of Synthesized and Unsynthesized WO3-SnO2 Nanocomposite, 5th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.51, 21-23 December, 2013.
40. Abhishek Panwar, Anoop Kumar Gautam, Sanchita Singh, VikasVerma, Suneet Misra, 5th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.64, 21-23 December, 2013.
41. Anoop Kumar Gautam, Sanchita Singh, Abhishek Panwar, Vijay Bharti rajput, VikasVerma, Vijay Bharti Rajput, Suneet Kumar Mishra, VandnaShakya, Akash Roy, Narendra Kumar Pandey, Humidity Sensing Investigation of nanostructured pure and Silver Doped Titanium Oxide, 5th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.76, 21-23 December, 2013.
42. Narendra Kumar Pandey, Aradhana Mishra, Karnwsh Tiwari, Amit Rai, Morphological and Humidity Sensing Properties of Ag Doped WO3, 5th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.97, 21-23 December, 2013.
43. Anupam K Tripathi, Narendra Kumar Pandey, VidhuTripathi, Karunesh Tiwari, Humidity Sensing Properties WO3-TiO2 nanocomposite, 5th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.148, 21-23 December, 2013.
44. Narendra Kumar Pandey, Karunesh Tiwari, Anupam K Tripathi, Aradhana Mishra, Amit Rai, Humidity Sensor based on ZnTiO3 Nanocomposite, 5th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.150, 21-23 December, 2013.
45. Sanchita Singh, Abhishek Panwar, VikasVerma, Vijay Bharti Rajput, Anoop Kumar Gautam, Suneet Kumar Mishra, VandnaShakya, Akash Roy, Narendra Kumar Pandey, Humidity Sensing Investigation of Nanocomposite Copper Doped Tungsten Oxide, 5th National Conference on Nanomaterials and Nanotechnology, Department of Physics, University of Lucknow, p.223, 21-23 December, 2013.
46. VandnaShakya, Narendra Kumar Pandey, Akash Roy, Structural and Moisture Sensing Properties of WO3-ZnO Nanocomposite synthesized by Soft Chemical Route, 6th National Conference on Nanomaterials and Nanotechnology, University of Lucknow, OP-38, p.66, 11-13 February, 2017.
47. Water : A unique matter; Review Paper, B.C. Yadav, Amit K. Srivastav and N.K. Pandey, Journal of Science, Vol.2, No.2, p.15-23, 2005.
48. Narendra Kumar Pandey, Srivastav Amit K., Mishra Puneet and Dubey G.C., Proceedings, Optical Humidity Sensors using TiO2 and MgO Films Fabricated by Sol-gel Technique: a Comparative Study; Yadav B. C., 11th National Seminar on Physics and Technology of Sensor, Pune University, Feb. 27th -March 1st, p.C3.1-3.6 (2006).
49. Narendra Kumar Pandey, Yadav B.C., AnupamTripathy, Amit K. Srivastav, Fiber Optic Pressure Sensor Using Transmitted Near Field Technique; Proceedings, 11th National Seminar on Physics and Technology of Sensors, Pune University, India, Feb. 27th -March 1st, p.C2.1-2.7, 2006.
50. Narendra Kumar Pandey, TripathiAnupam, Amit Rai, Structural Health Monitoring and Measurement of High Pressure with Embedded Microbend Fiber Optic Sensor, Proc. 12th National Seminar on Physics and Technology of Sensors, C-25, p.120-22, March 7-9, 2007, Mumbai.
51. Narendra Kumar Pandey, Yadav B.C., AnupamTripathi, Mahendra Kumar, J.J. Jyoti, Amit K Srivastav, Measurement of Thermally Stimulated Discharge Current and in-situ Study of Polarization in PMMA Electret using Optical Fiber Sensor, 12th National Seminar on Physics and Technology of Sensors, C-33, p.138-40, March 7-9, 2007, Mumbai.
52. Narendra Kumar Pandey, AnupamTripathi, Karunesh Tiwari, Akash Roy, Amit Rai, Priyanka Awasthi, Aradhana Mishra, Humidity Sensing Studies Of WO3 Mixed With ZnO And TiO2 Powders, Proc. 13th National Seminar on Physics and Technology of Sensors, C-25, p.120-22, March 7-9, 2008, Mumbai.
53. Narendra Kumar Pandey, Karunesh Tiwari, AnupamTripathi, Akash Roy, Amit Rai, Priyanka Awasthi, Aradhana Shukla, Relative Humidity Sensing Studies of WO3:ZnO Composite, Proc. 13th National Seminar on Physics and Technology of Sensors, C-25, p.120-22, March 7-9, 2008, Mumbai.
54. Narendra Kumar Pandey, Karunesh Tiwari, Akash Roy, Amit Rai, Priyanka Awasthi, Zinc Stannate Nanomaterial as Moisture Sensor, Proc. 14th National Seminar on Physics and Technology of Sensors, p.9, March, 1-3, 2009, Gwalior.
55. NarendraKumar.Pandey, AnupamTripathi, Karunesh Tiwari, Morphological and Humidity Sensing Studies of WO3-ZnO Composite, Proc. 14th National Seminar on Physics and Technology of Sensors, p.10, March, 1-3, 2009, Gwalior.
56. Narendra Kumar Pandey , Karunesh Tiwari, Amit Rai, Akash Roy, PriankaAwasthi, Aradhana Mishra, Zinc (II) Oxide-Titanium (II) Oxide Nanocomposite Humidity Sensor, Proc. 15th National Seminar on Physics and Technology of Sensors, C.21-1, March, 4-6, 2010, University of Pune, Pune.
57. Narendra Kumar Pandey, Akash Roy, Karunesh Tiwari, Amit Rai, Priyanka Awasthi, Aradhana Mishra, AlokKumar,S. Chakroborty, S. S. Rasool, Comparative Study of Resistive Type Humidity Sensors Based on WO3 and SnO2 Doped WO3, Proc. 15th National Seminar on Physics and Technology of Sensors, C.35-1, March, 4-6, 2010, University of Pune, Pune.
58. Narendra Kumar Pandey, Mishra Aradhana, Tiwari Karunesh, Rai Amit, Roy Akash, AwasthiPrianka, Srivastava Vachaspati, Humidity Sensing Studies of Silver Doped Tungsten Trioxide, Proc. 15th National Seminar on Physics and Technology of Sensors, C.36-1, March, 4-6, 2010, University of Pune, Pune.
59. Narendra Kumar Pandey., Rai Amit, Tiwari Karunesh, Roy Akash, Mishra Aradhana, AwasthiPrianka, Srivastava Vachaspati, Study of SnO2 doped TiO2 as a Humidity Sensor, Proc. 15th National Seminar on Physics and Technology of Sensors, C.33-1, March, 4-6, 2010, University of Pune, Pune.
60. Narendra Kumar Pandey, paper presented at National Symposium on advances in Chemical and Materials Aciences, 11-12 May, 2007, University of Lucknow.
61. XXI Symposium on Optocs, Optical Fibre Sensor for the Study of Polarization Cuttent in Polymer Ceramic Composites, Indian Institute of Technology, Madras, February,10-12 February, 1994.
62. Narendra Kumar Pandey, Akash Roy, Karunesh Tiwari, AlokKumar,S. S. Rasool, Humidity Sensing behavious of nanocrystalline WO3 pellets, Proc. 16th National Seminar on Physics and Technology of Sensors, 11-13 February, 2011, University of Lucknow.
63. Narendra Kumar Pandey, AradhanaMishra,Moisture Sensor based on Ag Doped WO3, Proc. 16th National Seminar on Physics and Technology of Sensors, 11-13 February, 2011, University of Lucknow.
64. Narendra Kumar Pandey,Karunesh Tiwari, Akash Roy, Amit Srivastava, Alok Kumar,Vachaspati Srivastava, Air Moisture Sensing Properties of pure WO3 and Cu2+ Doped WO3 nanomaterial, Proc. 16th National Seminar on Physics and Technology of Sensors, 11-13 February, 2011, University of Lucknow.

# **vii Research Papers in *INTERnational* conferences/seminars**

1. 3rd International BILTEK Symposium on Current Studies on Science, Technology and Social Sciences, Adana, Turkey, Oral (Presented by former Ph. D. Student Dr. Karunesh Tiwari), 19-20 June, 2020.
2. Narendra Kumar Pandey, Akash Roy, K. Tiwari, A. Mishra, A. Rai, S. Jayaswal, Rashmi, Madhvendra, A. Govindan, Humidity Sensor Based on Synthesized Pure WO3 and WO3-SnO2 Nanocomposite, Paper No.67, p. 185-186, Ist International Symposium on Physics and Technology of Sensors (ISPTS-1), 8-10 March, 2012, Pune, India.
3. K. Tiwari, Narendra Kumar Pandey, A Zinc Tungstate Nanocomposite based Relative Humidity Sensor, Paper No.029, p. 148, Ist International Symposium on Physics and Technology of Sensors (ISPTS-1), 8-10 March, 2012, Pune, India.
4. Narendra Kumar Pandey, Akash Roy, K. Tiwari, A. Mishra, A. Rai, S. Jayaswal, Rashmi, Madhvendra, A. Govindan, NO2 Sensing Studies of WO3 and Ag doped WO3 prepared through sol-gel route, Paper No.189, p. 305-307, Ist International Symposium on Physics and Technology of Sensors (ISPTS-1), 8-10 March, 2012, Pune, India.
5. Anupam Kumar Tripathi, Narendra Kumar Pandey, VidhuTripathi, Karunesh Tiwari, Humidity Sensing Studies of Nanoporous Zinc Tungstate Ceramic Sensor, P-42, p.140, 22nd International Conference of International Academy Of Physical Sciences (CONIAPS XXII) on Emerging Trends in Physical Sciences, April 13-15, 2018 Organized By Faculty Of Science, Dr. Ram Manohar LohiaAvadh University, Faizabad-224001, U.P., INDIA,
6. Karunesh Tiwari, Narendra Kumar Pandey, , Humidity Sensor Based on Zinc Oxide-Zinc Tungstate Nanocomposite,, P-20, p.129, 22nd International Conference of International Academy Of Physical Sciences (CONIAPS XXII) on Emerging Trends in Physical Sciences, April 13-15, 2018 Organized By Faculty Of Science, Dr. Ram Manohar LohiaAvadh University, Faizabad-224001, U.P., INDIA,
7. Narendra Kumar Pandey, Metal Oxide Nanomaterials for Humidity/Gas Sensing Studies, 22nd International Conference of International Academy Of Physical Sciences (CONIAPS XXII) on Emerging Trends in Physical Sciences, Dr. RML Avadh University, Faizabad-224001, U.P., April 13-15, 2018.
8. Akash Roy, Narendra Kumar Pandey, VandnaShakya, SuneeMisra, Sanchita Singh, Anoop Kumar, Alok Kumar, Proceedings of  The First International Conference on Emerging Materials: Characterization & Application "Characterization of Nanocomposites of WO3-SnO2 and its Application as a Moisture Sensor" organized by CGCRI, Kolkata, 4-6 Dec, 2014, page-87.
9. Suneet Kumar Misra, Narendra Kumar Pandey, Investigation of Electrical Properties, Activation Energy and Humidity/Gas Sensing Studies of Synthesized Al Doped ZnO Nanomaterials , Proc. 6th International Conference 2014 Nanocon, Nov 5-7, 2014, Tanger Ltd., The Czech Society for New Materials and Technologies, Brno, Czech Republic, EU, B-16, p.55.
10. Narendra Kumar Pandey, A Roy, A Tripathi, K Tiwari, A Rai, P Awasthi, A Mishra, Alok Kumar, Moisture Sensing Studies of WO3-SnO2Nanocomposites, Proc. International Conference on Nanotechnology and Biosensors, 20-21 January, 2010, Raghu Engineering College, Visakhapatnem, A.P., p.41.
11. Narendra Kumar Pandey, K Tiwari, A Rai, A Roy, A Mishra, P. Awasthi, Humidity Sensor based on Pure ZnO Nanomaterials, International Conference on Nanotechnology and Biosensors, 20-21 January, 2010, Raghu Engineering College, Visakhapatnem, A.P., p.161.
12. Narendra Kumar Pandey, K Tiwari, A Rai, A Roy, P Awasthi, Morphological and Humidity Sensing Studies of WO3 mixed with Silver Powder, International Conference on Nanotechnology and Biosensors, 20-21 January, 2010, Raghu Engineering College, Visakhapatnem, A.P., p.167.
13. Narendra Kumar Pandey, Comparative Study of Moisture Sensing Properties of WO3-SnO2 Nanocomposites, Akash Roy, Karunesh Tiwari, Alok Kumar, S.S.A Rasool p.181, Proceedings, International Conference on Nanoscience, Nanotechnology and Advanced Materials (NANOS 2010), 17-19 December, 2010, Gitam University, Rushikonda, Visakhapatnam, India.
14. Narendra Kumar Pandey, Akash Roy, K. Tiwari, Comparative Studies of Moisture Sensing Application of Ag- and SnO2 Doped WO3, OP-79, Proc. Int. Conf. on Nanoscience and Nanotechnology, BabasahebBhimraoAmbedkarUniv, Lucknow, India, pp.78, 2013.
15. Anoop Kumar Gautam, Abhishek Panwar, Sanchita Singh, N.K. Pandey, Humidity Sensing Investigations of Nanostructured Pure and Silver Doped Titanium Oxide, pp-30, Proc. Int. Conf. on Nanoscience and Nanotechnology, BabasahebBhimraoAmbedkarUniv, Lucknow, India, pp.119, 2013.
16. Narendra Kumar Pandey, Suneet Kumar Misra, VandanaShakya, Alok Kumar, Characterization and Humidity Sensing Studies of Al2O3 Doped ZnO nanomaterial, PP-172, Proc. Int. Conf. on Nanoscience and Nanotechnology, BabasahebBhimraoAmbedkarUniv, Lucknow, India, pp.197, 2013.
17. VandanaShakya, Narendra Kumar Pandey, Suneet Kumar Misra, Alok Kumar, A Study of Pure WO3 Ceramic nanomaterial as Relative Humidity Sensor, PP-195, Proc. Int. Conf. on Nanoscience and Nanotechnology, Babasaheb BhimraoAmbedkarUniv, Lucknow, India, pp.211, 2013.
18. Narendra Kumar Pandey, VandanaShakya, Suneet Kumar Misra, Akash Roy, Characteristics of SnO2 Doped WO3 nanomaterial as a Solid state Humidity Sensor, PP-196, Proc. Int. Conf. on Nanoscience and Nanotechnology, BabasahebBhimraoAmbedkarUniv, Lucknow, India, pp.211, 2013.
19. AnupamTripathi, Narendra Kumar Pandey, VidhuTripathi, Synthesis and Characterization of Zinc Tungstate Nanoparticles, PP-225, Proc. Int. Conf. on Nanoscience and Nanotechnology, BabasahebBhimraoAmbedkarUniv, Lucknow, India, pp.228, 2013.
20. Sanchita Singh, Anoop Kumar Gautam, Abhishek Panwar, Narendra Kumar Pandey, Humidity Sensing Investigations of nanocomposite Copper Doped Tungsten Oxide, PP-299, Proc. Int. Conf. on Nanoscience and Nanotechnology, BabasahebBhimraoAmbedkarUniv, Lucknow, India, pp.266, 2013.
21. Narendra Kumar Pandey, International Seminar on Advances in Bio- &Nano- Materials, Dept of Physics, University of Lucknow, 2013.
22. Narendra Kumar Pandey, Paper presented at International Symposium on advances in Biological and Materials Science (ISABMS-2014), Department of Physics, University of Lucknow.
23. Narendra Kumar Pandey, A Tripathi, K Tiwari, Relative Humidity Sensing Studies of WO3-ZnO Nanocomposite, 2nd International Conference on Multi-functional Materials, MF-373, 9-12 October, 2009, Quingdao, China.
24. Narendra Kumar Pandey, K Tiwari, A Tripathi, A Roy, A Rai, P Awasthi, Relative Humidity Sensing Properties of Cu2O doped ZnO Nanocomposite, 1147 Am. Inst. of Phys. Proc. July 2009; ISBN 978-0-7354-0684-1, Issue 1, p.463-466.
25. Narendra Kumar Pandey, A Roy, A Tripathi, K Tiwari, A Rai, P Awasthi, A Mishra, Humidity Sensing Studies of SnO2-WO3Nanocomposites, International Conference on Advanced Nanomaterials and Nanotechnology, 9-11 December, 2009, Centre for Nanotechnology, Indian Institute of Technology, Guwahati, E-126, p.351.
26. Yadav B.C., Amit K Srivastav, Narendra Kumar Pande, Bilas R., Synthesis of Antimony Doped Titania on Nano Scale and its use as Humidity Sensor, p.130. Proc. International Conference on Recent Trends in Nanoscience and Nanotechnology (ICRTNT), Science City, Jadavpur Univ., Kolkata, 2006.
27. Narendra Kumar Pandey, Karunesh Tiwari, AnupamTripathi, Akash Roy, Amit Rai, PriankaAwasthi, Relative Humidity Sensing Properties of Cu2O mixed ZnONanocomposite, PO-TU 59, pp.11, International Conf. on Transport and Optical Properties of Nanomaterials, January 5-8, 2009, Allahabad University, India.
28. Narendra Kumar Pandey, Karunesh Tiwari, AnupamTripathi, Priyanka Awasthi, Morphological and Humidity Sensing Properties Of ZnWO4 Nanocomposite, O-13, International Seminar on High Temperature Materials, 23-25 February, 2008, Institute of Technology, Banaras Hindu University, Department of Mechanical Engineering, Varanasi, India.
29. Narendra Kumar Pandey, Rai Amit, Tiwari Karunesh, Roy Akash, Mishra Aradhana, Awasthi Priyanka, Study of SnO2 doped TiO2 as Humidity Sensor, Proc. International Conference on Nanoscience and Nanotechnology (ICONN 2010) SRM University, Chennai, India, 24-26 February, 2010, pp.147-148.
30. Narendra Kumar Pandey, Roy Akash, Tiwari Karunesh, Rai Amit, Awasthi Priyanka, Mishra Aradhana, Humidity Sensor Based on WO3-SnO2Nanocomposite, Proc. International Conference on Nanoscience and Nanotechnology (ICONN 2010) SRM University, Chennai, India, 24-26 February, 2010, pp.228-229.
31. Narendra Kumar Pandey, Awasthi Priyanka, Tiwari Karunesh, Roy Akash, Rai Amit, Mishra Aradhana, Moisture Sensor based on TiO2 doped SnO2, International Conference on Electroceramics (ICE 2010), University of Delhi, India. 13-17 December, 2009, LC-194, pp.303.
32. Yadav B C, Amit K Srivastav, Preeti Sharma, Anil K Yadav, Narendra Kumar Pandey, Shukla S K, Dubey G C, Sol-Gel Processed MgO Films as Optical Humidity Sensor, Proc. 8th Int. Conf. on Optoelectronics, Fiber Optics and Photonics, Hyderabad, India, Sen 35, 2006.
33. Amit K Srivastav, Yadav B C, Preeti Sharma, Anil Yadav, Narendra Kumar Pandey, Study of Optical Humidity Sensing Properties of Sol-Gel Processed MgO, Proc. 8th Int. Conf. on Optoelectronics, Fiber Optics and Photonics, Hyderabad, India, PMD 69, 2006.
34. Narendra Kumar Pandey, Yadav B. C., Jeevan J Jyoti, Measurement Of Thermally Stimulated Discharge Current (TSDC) in Electrets Using Optical Fiber Sensor, Proc. Int. Conf. conf. on Optoelectronics, Fiber Optics and Photonics, Hyderabad, India, PPOE 2, 2006.
35. Narendra Kumar Pandey, K Tiwari, A Roy, Cu2O Doped ZnO as Moisture Sensor (paper number 5387), 8th, 25-28 October, 2009, Christ Church, New Zealand.
36. Narendra Kumar Pandey, A. Roy, Application of SnO2 Doped WO3 Nanocomposites for Humidity Sensing 4th International Conference on Sensor Technology (ICST), Itali, 03-05 June, 2010, Lecce, Italy.
37. Narendra Kumar Pandey, Yadav B. C., Shruti Shukla, S. P. Hemkar, J. J. Srivastava, Fiber Optic Sensor for Thermally Stimulated Current in Electrets and in-situ study of Polarization Current; International Conference on Advances in Physics, Feb 25-27, Meerut, U.P. 2006.
38. Narendra Kumar Pandey, International Symposium on advances in Biological and Materials Science (ISABMS-2014), Department of Physics, University of Lucknow.

# **viii Invited Talks Delivered**

1. Invited Talk in Webinar by Babu Banarsi Das University, Wave Function ψ Lucknow, 23 June, 2020.
2. Resource Person at Refresher Course in Physics, Faculty Training Program, 18 February, 2020, Two sessions of 03 hours each, HRDC, University of Lucknow.
3. Resource Person at Refresher Course in Physics, Faculty Training Program, 20 February, 2020, One session of 03 hours duration, HRDC, University of Lucknow.
4. Resource person in Short Term Course in Information and Communication Technology, 29 August, 2019, One session of 03 hour duration, HRDC, University of Lucknow.
5. Invited Talk on Generic Humidity Sensor with Metal Oxide Ceramic Nanomaterials, Natioanl Seminar on Recent Advances in Materials Science and Technology, Department of Physics and Electronics, Dr. Ram Manohar Lohia Avadh University, Ayodhya, Uttar Pradesh, 27-28 February, 2019.
6. Invited Talk on Ceramic Nanomaterials as Generic Humidity Sensor, International Conference on Materials for Energy Applications, 6-8 December, 2018, Jaipur, India.
7. Invited Talk at 22nd International Conference of International Academy Of Physical Sciences (CONIAPS XXII) on Emerging Trends in Physical Sciences, April 13-15, 2018 Organized By Faculty Of Science, Dr. Ram Manohar Lohia Avadh University, Faizabad-224001, U.P., INDIA, Topic: Metal Oxide Nanomaterials for Humidity/Gas Sensing Studies.
8. Invited Talk on Humidity Sensor Performance of Ag- and SnO2 Doped WO3 Nanomaterial, Proc. International Conf. on Nanoscience and Nanotechnology, Babasaheb Bhimrao Ambedkar Univ, Lucknow, India, 2013.
9. Invited Speaker at International Short term course on Synthesis, Characterization and Applications of Nanomaterials- ISTC-SCAN-2018; 06– 12th March 2018 Organized by Department of Chemistry, Sri Jai Narain P.G. College Charbagh, Lucknow.
10. Generic Humidity Sensor with Metal Oxide Ceramic Nanomaterials, National Seminar on Recent Advances in Materials Science and Electronics, 27-28 February, 2019, Dr. Ram Manohar Lohia University, Faizabad.
11. Invited Talk Delivered on Metal Oxide Generic Moisture Sensor, UGC sponsored Seminar on Recent Advances in Physical Sciences, 19-20 January, 2018, Dhanbad, Jharkhand.
12. Invited Talk on Wave Function ψ. UGC sponsored Seminar on Recent Advances in Physical Sciences, 19-20 January, 2018, Dhanbad, Jharkhand.
13. Invited Talk on metal oxides as generic humidity and gas sensor, National conference on Recent Advances and Innovations in Chemical and Materials Science, JNPG College, Lucknow, 23-24 February, 2017.
14. Invite Talk on Metal Oxide Humidity Sensor, 7th National Conf. on Thermophysical Properties (NCTP), Dept of Physics, Christ Church College, Kanpur, India, 2013.
15. Invited Talk Moisture Sensing Application of Ag Loaded WO3 Ceramic Nanomaterials, National Science Academies Workshop, Advances in bioinorganic and nano-chemistry, 12-13 November, 2011, D.A.V. Post Graduate College, Kanpur (U.P.).
16. Invited Talk Nanotechnology: The Revolution in the Making, N K Pandey, UGC Sponsored National Conference on Relevance and Dimensions of Nanoscience and Nanotechnology, B.S. College, Patna, 19-21 April, 2008.
17. Invited Talk Metal Oxide Humidity Sensors, 3rd Bihar Science Conference, 11-13 February, 2010, Gaya, Magadh University, Gaya.
18. Invited talk at 4th Bihar Science Conference, B.R. Ambedkar University, Muzaffarpur, Bihar, 13 November, 2013, Nanotechnology: Basics and Future Prospects.
19. Invited Talk on Nanotechnology and Applications in Drug Delivery System, FDC, IIT (ISM) Dhanbad, 10 June, 2017.
20. Invited Talk on Understanding Fundamentals of Sensors, FDC, Punjab University, Chandigarh, 19 May, 2017.
21. Invited Talk Nanotechnology- Current Trends and Future Prospects: Risks and Rewards: 25 August, 2010, Amity University, Lucknow Campus.
22. Invited Talk Symposium on current trends in materials science, Patna Womans’ College, Patna University, 27 September, 2011.
23. Invited Talk at National Conference on Nanomaterials and Nanotechnology, University of Lucknow 8-10 December, 2007.
24. Invited Talk at 2nd National Conference on Nanomaterials and Nanotechnology, University of Lucknow 8-10 December, 2009.
25. Invited Talk at 3rd National Conference on Nanomaterials and Nanotechnology, University of Lucknow 21-23 December, 2010.
26. Invited Talk at 4th National Conference on Nanomaterials and Nanotechnology, University of Lucknow 21-23 December, 2011.
27. Invited Talk at 5th National Conference on Nanomaterials and Nanotechnology, University of Lucknow 21-23 December, 2013.
28. Invited Talk at 6th National Conference on Nanomaterials and Nanotechnology, University of Lucknow 11-13 February, 2017.
29. Visualizing Waves, Invited Talk at National PG College, Lucknow, 04 April, 2019.
30. INSPIRE, DST Lecture delivered at Savitri Devi Mahila Mahavidyalaya, Allahabad on 27 October, 2018 on topic Understanding and Visualizing Waves.
31. Academic Staff College Lecture on waves and Schrodinger Equation.
32. Academic Staff College Lecture on Fiber Optics.
33. Lecture on Issues in Social Media, 14 September, 2018 at UGC Human Resource Development Centre, University of Lucknow.
34. Guest Speaker in CarePro Investor Summit on Empowerment through Self Employment, 18 March, 2018, Babian Hotel, Indira Nagar, Lucknow.
35. Academic Staff College Lecture on Issues in Social Media, December, 18, 2017, Academic Staff College, University of Lucknow.
36. Academic Staff College Lecture on Impact of Social Media, December, 12, 2016, Academic Staff College, University of Lucknow.
37. Academic Staff College Lecture on Scientific Temper.
38. Academic Staff College Lecture on Motivation.
39. Academic Staff College lecture on Education and Technology
40. Academic Staff College Lecture on Issues of Technology in Education
41. UGC Academic Lecture on Swami Vivekanand as Youth Icon and his relevance
42. Academic Staff College Lecture , Lack of Education in Lower rung of Society: reasons and remedies
43. A talk on Pt. Govind Ballabh Pant

# **ix Scholarships and awards**

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| **NAME** | **YEAR** |
| CSIR-UGC, JRF ScholarshipGraduate Aptitude Test in Engineering(GATE)Graduate Aptitude Test in Engineering(GATE)National Merit Scholarship, I.I.T. DelhiNational Merit Scholarship, St. Xavier’s College RanchiNational Merit Scholarship, St. Xavier’s College, RanchiAURO Award by Aurobindo Society, Sindri Best Poster Award in 2nd National ConferenceBest Poster Award in 4th National ConferenceBest Poster Award in 5th National ConferenceBest Poster Award in 6th National ConferenceBest Paper for Industry Oriented Research Work Award in NSPTS-14Vigyan Gaurav Award by Smart Foundation, LucknowSignificant Research Award, University of Lucknow | **1987-88****1987-88****1988-89****1985-87****1980-82****1982-84****1980****2009****2011****2013****2017****2011****2018****2017** |
| **ix rECENT TEAM VISITS****Leadership for Academicians Program (LEAP)**, Flagship Program of Ministry of Human Resource Development, New Delhi: 1. Indian Institute of Technology, Kharagpur, 11-22 November, 2019
2. College, Cambridge University, 06-10 January, 2020.

**NAAC Assessor Orientation Program**Indian Institute of Information Technology, Allahabad, 30 April, 2019.**Peer Team Member for NAAC Assessment of** Government Science College, Ahwa, Dang, Gujarat, 26-27 August, 2019.  |  |

### **B. ADMINISTRATIVE RESPONSIBILITIES**

# xi. **Conferences/seminars/Meets Organized**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No. | Conference/Seminar/Workshop | Position | Date/Year |
| 1 | 1st National Conference on Nanomaterials and Nanotechnology, University of Lucknow | Convener | 8-10 Dec. 2007 |
| 2 | 2nd National Conference on Nanomaterials and Nanotechnology, University of Lucknow | Convener | 21-23 Dec, 2009 |
| 3 | 3rd National Conference on Nanomaterials and Nanotechnology, Amity University, Lucknow | Organizing Secretary | 21-23 Dec, 2010 |
| 4 | 4th National Conference on Nanomaterials and Nanotechnology, Amity University, Lucknow | Organizing Secretary | 21-23 Dec, 2011 |
| 5 | 5th National Conference on Nanotechnology and Materials Science | Convener | 21-23 Dec, 2013 |
| 6 | Workshop on Advanced Communication Systems, Principle and Applications and MATLAB Programming | Coordinator | 11 February, 2017 |
| 7 | 6th National Conference on Nanomaterials and Nanotechnology, University of Lucknow | Organizing Secretary | 11-13 Feb, 2017 |
| 8 | Workshop on Embedded System of Robotics by SoftPro Innovations Ltd. | Coordinator | 28 March, 2017 |
| 9 | Workshops on Intellectual Property Rights in collaboration with IGNOU, Lucknow Branch | Convener | 21 July 2015 |
| 10 | Workshop on Make my Robot (PCB Designing) by SoftPro Innovations Ltd. | Coordinator | 05 February, 2018 |
| 11 | Workshop on Introduction to Matlab: Programming and Applications | Coordinator | 28, 31 March, 2018 |
| 12 | North Zone Inter-University Basketball(Men) Championship | Organizing Secretary | 1997 |
| 13 | 1stLiterary and Cultural Fests at University of Lucknow  | Director | 05-07 Sept 2013 |
| 14 | 2ndLiterary and Cultural Fests at University of Lucknow  | Director | 10-12 Nov 2014 |
| 15 | 3rdLiterary and Cultural Fests at University of Lucknow  | Director | 05-07 Sep, 2015 |
| 16 | 4thLiterary and Cultural Fests at University of Lucknow  | Director | 25-31 Jan, 2016 |
| 14 | 5thLiterary and Cultural Fests at University of Lucknow  | Director | 25-27 Oct 2017 |
| 17 | 6thLiterary and Cultural Fests at University of Lucknow  | Director | 06-09 Oct 2018 |
| 18 | 7thLiterary and Cultural Fests at University of Lucknow  | Director | 11-16 Sept 2019 |
| 19 | Inter University Debate Competition *in collaboration with Department of Higher Education, Government of Uttar Pradesh* | Coordinator | 16 Dec (Round 1)29 Dec (Round 2)2017 |
| 20 | Inter University Debate Competition *in collaboration with Hemwati Nandan Bahuguna Trust*  | Coordinator | 16 Sept (Round 1)22 Sept (Round 2)2018 |
| 21 | UGC Sponsored Deeksharambh, Training of Teachers for Students Induction Program | Coordinator | 22-24 October, 2019 |

# xii. **POSITIONS OF ResponsibilitY HELD**

1. National Assessment and Accreditation Council (**NAAC**) **ASSESSOR**
2. Spokesperson of the University
3. Director, Center for Information, Publication and Public Relations (IPPR)
4. Director, Cultural Activity Board (Sanskritiki)
5. Coordinator, Lucknow University Students Union (LUSU)
6. Coordinator, Meritorious Students Council
7. Member, Board of Studies
8. Ex-officio Member of Important Bodies
9. **Member, Executive Council, University of Lucknow 2011**
10. **Member: Departmental Research Committee, Physics Department, University of Lucknow**
11. **Member: Academic Council, University of Lucknow**
12. **Member, Faculty Board**
13. **Coordinator, Electronics Program, Department of Physics** 2015-19
14. Member: National Steering Committee, UGC Sponsored National Conference on Relevance and Dimensions of Nanoscience and Nanotechnology, B.S. College, Patna, 19-21 April, 2008.
15. Member: National Steering Committee, UGC Sponsored National Conference on Relevance and Dimensions of Nanoscience and Nanotechnology, B.S. College, Patna, 11 September, 2008.
16. Member, National Advisory Committee, 11th Asia Pacific Conference on Sustainable Energy and Environmental Technologies.
17. **Additional Chief Provost** of Hostels 2010-2015
18. **Coordinator**, Nanotechnology Programme 2006-08
19. **Director, UG Admissions**, College of Fine Arts 2006
20. Superintendent, UGC-NET Examination Dec. 2006
21. Superintendent, UGC-NET Examination Dec., 2005
22. Superintendent, UGC-NET Examination June, 2006
23. **Provost**, Balrampur Management Hostel 2001-08
24. **Provost**, Management Boys’ Hostel, New Campus 2006-08
25. **Provost**, Balrampur Management Hostel 2010
26. Assistant Proctor 2006
27. Assistant Proctor 2000
28. **Director, Games, Athletic Association 2005**
29. Manager, 37 U.P. State Basketball Championship 1995
30. Manager, 38 U.P. State Basketball Championship 1996
31. Manager, 39 U.P. State Basketball Championship 1997
32. President, Basketball/Volleyball Club, 1995-20
33. Anchor, Technical Sessions, MRSI 2006
34. Head, Stage Managing Committee MRSI 2006
35. Member, University Works Monitoring Committee 2006
36. Member, Monitoring Committee, College of Fine Arts 2006
37. Member, Hostel Maintenance Committee 2006
38. Member, Advisory Committee, Computer Centre 2005
39. Member, University Court 2005
40. Member, Board of Studies, Department of Physics 2004-06
41. Life Member, Indian Association of Physics Teachers 1998
42. Member, Departmental Committee, Physics Department, 2000
43. Member, Academic Council, University of Lucknow 1995-96
44. Member, Board of Studies, Physics Department, 1994-96
45. **Member, Student’s Affairs Council, I.I.T. Delhi 1987-88**
46. **Nominee to Board for Post Graduate Studies, I.I.T., Delhi 1987-88**
47. **Nominee to Senate, I.I.T., Delhi 1987-88**
48. Research Scholar’s Representative, Physics Society, I.I.T., Delhi 1989-90
49. **Secretary, Physics Society, I.I.T. Delhi 1988-89**
50. Member, Board for Student’s Welfare, I.I.T. Delhi 1986-87

### **c. extra currricular activities**

# **xiii N.C.C. and Sports**

1. **C - Certificate** 1983
2. **B - Certificate** 1982
3. **A-II Certificate** 1979
4. **A-I Certificate** 1978
5. Senior Division (Annual Training Camp) 1981
6. Junior Division (Annual Training Camp) 1978
7. Captain, Badminton Club, St. Xavier’s College, Ranchi 1982-84
8. Sergeant, N.C.C., St. Xavier’s College, Ranchi 1980-83
9. Sergeant, N.C.C., Rajendra High School, Sindri 1979-80
10. Badminton Champion : House Competitions, IIT Delhi 1986-87
11. Certificate for Significant Contribution 1987-88

to Volleyball in the House, I.I.T., Delhi.

1. Representation Certificate at School Level 1980
2. Runners - up in College Badminton 1982-83

Championship & Captain of College Team

# **xiv Columns PUBLISHED**

1. A regular weekly, “Science Quiz’ column in ‘The Pioneer’ newspaper, Lucknow Edition (stopped).
2. A regular weekly, “Science Quiz” column in the ‘Hindustan Times’, newspaper, Lucknow Edition (stopped).

# **xv At I.I.T. Delhi**

1. Debate Competition Proficiency Certificate 1985-86
2. Extempore Competition I 1986
3. Thought Bank Campaign III 1986
4. Elocution, Board for Recreation III 1986

and Cultural Activities

1. Creative Writing, Board for I 1986

Student’s Publication (BSP)

1. Magazine Contest, (BSP) I 1985-86

# **xvi At St. Xavier’s College, Ranchi**

1. All India Inter-Collegiate Cultural II 1984
Festival, Indian School of Mines, Dhanbad,

Extempore Competition [10]

1. Extempore competition [5] II 1984
2. Quiz Competition [5] II 1983
3. Sanskrit Drama Cons. 1981-83

# **xvii At School**

1. Inter School Debate Competition II 1978
2. Inter School Debate Competition Consolation 1978
3. Essay Competition, Hindi I 1976

Sahitya Parishad, Sindri

1. Cultural Programme II 1976

### **D. my Working**

1. **Basic Attributes:**
* I like to work in challenging conditions. Crisis situations do not deter me. I take considered decision and remain firm with them.
* I am always available for communication and reconciliation. I am always open to new ideas and opinions.
* I am friendly; students approach me with ease.
* I have a wide ranging experience in administrative as well as educational field.
* I take interest in organizing extra-curricular activities.
* I have firm commitment and belief in developing and functioning through a system so that Universities do not become individual centric.
* My classes are loved by my students. I am committed to my work. I follow team spirit in work. I have capacity to lead from the front.
* I have a good communication skill in Hindi and English.
* I have anchored many programs. All important programs in the University having dignitaries like central and state ministers, governor, etc. as guests are coordinated and anchored by him
1. **Contribution in Research Field:**
* I have established Sensors and Materials Research Laboratory in the Department of Physics, University of Lucknow.
* My Research area is in the Materials Science and Nanotechnology based solid state sensors. 11 students have finished their doctorate degree under my guidance, 01 has submitted Ph.D. thesis, 01 has completed Pre-PhD viva, 04 are currently working for their doctorate degree.
* I have also worked in the area of optical fiber sensors.
* My present research work relates to characterization and humidity and gas sensing applications of various metal oxide ceramic materials.
* I have a good line of publications in reputed International Journals.
* I have organized **SIX National Conferences on Materials Science and Nanotechnology**, ONE Workshop on Intellectual Property Rights, FOUR Workshops on Electronics and many other programs.
1. **Director Cultural Activity Board**
* I for the first time constituted the **Cultural Activity Board** in which I established seven functional clubs for students. These clubs are the Debating Club, the Dramatics Club, the Literary Club, the Visual Art Club, the Performing Art Club, the Western Beats Club and the Innovations Club.
* I started the annual series of **Cultural and Literary Fest** in the University. In 2019, 7th version of the Fest was conducted. There was a huge response of students to the fest.
* My team established the official Rock Band of the University, Rubaroo…for the first time in the history of the University. The Rock Band is invited by prestigious institutions in the city.
* I constituted the **Meritorious Students Council** of the University. The students of this council are representatives in various bodies of the University. They help in curriculum development, Cultural and social activities, and administrative functioning. I am also the coordinator of the Lucknow University Students Union.
* It was my responsibility to coordinates the prestigious Convocation of the University.
1. **Director, Center for Information Publication and Public Relations (IPPR)**
* For the sake of transparency in the functioning of the university I wrote three books for University viz. One year Journey of Vice Chancellor in 2017, 2nd year journey of Vice Chancellor in 2018 and three year journey of the Vice Chancellor in 2019.
* I was the official spokesperson of the University for six years.