CURRICULUM VITAE

Prof. L. P. Purohit

Professor & Head, Department of Physics
Gurukula Kangri University
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Academic Qualifications

• Ph.D. in Physics (Condensed Matter Physics – Experimental)

• M.Sc. Physics (Specialization in Electronics)

• CSIR–NET (JRF & SRF)

Teaching & Research Experience

• Total Teaching & Research Experience: 30+ Years

• Experience as Professor (Full): 13+ Years

Courses Taught

Electronic Devices & Circuits, Quantum Mechanics, Communication Electronics, Thin Films & Nanostructures, Modern Physics, Optics

Administrative Experience

- Controller of Examinations (Additional Charge)
- Director, Research & Development
- Dean, Faculty of Science
- Professor & Head, Department of Physics
- Chairman, NEP Implementation Committee
- Nodal Officer, AISHE (Govt. of India)
- Dean, Academic Audit
- Director Admissions
- Examination Superintendent
- Member, Planning & Monitoring Board
- Chairman, Board of Studies (Physics)
- Convener/Member, Research Degree Committee
- Member, Proctorial Board

- NSS Coordinator and Programme Officer

Association with Academic Bodies

- Member of Governing Body (UGC Nominee), CMR Engineering College, Hyderabad (2020–2026)
- Member, Academic Council, CCS University, Meerut

Member, Board of Studies / Research Degree Committees

- HNB Garhwal Central University, Srinagar
- CCS University, Meerut
- Graphic Era Deemed to be University, Dehradun
- Kumaun University, Nainital
- Uttaranchal University, Dehradun
- Dev Bhoomi Uttarakhand University, Dehradun
- IFTM University, Moradabad
- Sridev Suman University (State University, Govt. of U.K.), Badshahithaul

Association with Professional Bodies /Societies

- Member Semiconductor Society (India)
- Member Indian Association of Physics Teachers (IAPT)
- Member Indian Science Congress Association (ISCA)
- Member Magnetic Society of India (MSI)
- Member Swadeshi Science Congress, Vigyan Bharti, New Delhi
- Member, Editorial Board, J. of Nanoscience & Technology, Illinois, USA
- Member, Editorial Board, Journal of Applied & Natural Science, India
- Member, Editorial Board, Vedic Vag Jyoti, GKV, Haridwar, India
- Member Executive Council, Haridwar Chapter-Indian Science Congress Association 10. Reviewer of Science Direct (Elsevier) Journals, Photonics Technology Letters (IEEE), Indian Journal of Engineering & Materials Sciences (IJEMS), etc.

Research Profile

Research Output (Summary)

• Research Publications: 160+
• Citations: 4100+
• h-index: 37 | i10-index: 82+
• Ph.D. Scholars Guided: 22 Awarded | 4 Ongoing
• PG Dissertations Guided: 300+

Research Areas

- Condensed Matter Physics
- Nanomaterials and Nanocomposites
- Metal Oxide Thin Films
- Gas Sensors
- Photocatalysis
- Graphene-based Materials
- Optoelectronic Devices
- Solar Cell Materials

Projects & Grants

• PI, DST–FIST Project

• PI, UCOST Project (DST)

• PI, USERC Project (Govt. of Uttarakhand)

• Co-PI, UGC (02) and DRDO (01) Projects

Research Highlights

- Significant contributions in nanostructured metal oxide thin films and nanocomposites
- Developed advanced photocatalysts for environmental remediation applications
- Extensive work on gas sensing materials operating at low temperatures
- Research contributions in optoelectronic and photovoltaic devices
- Strong interdisciplinary collaborations with national and international researchers

Professional Memberships

- Member, Semiconductor Society of India (SSI)
- Member, Indian Association of Physics Teachers (IAPT)
- Member, Indian Science Congress Association (ISCA)
- Member, Magnetic Society of India (MSI)
- Member, Swadeshi Science Congress, Vigyan Bharti, New Delhi

International Exposure

Visited USA, UK, China, and Japan for invited talks and conferences

Conference & Academic Contributions

• 110+ Conferences/Seminars attended; 65+ Invited Talks delivered

• 25 Conferences/Seminars organized as Convener/Organizing Secretary

Research Papers Published in UGC-CARE/Scopus/SCIE (Latest (2025-26)

1. Butola, D., Panwar, S., & **Purohit, L. P.** (2026). Facile fabrication of Cu-doped SnO_2@g-C_3N_4 nanohybrids for highly selective NO_2 gas sensing at room temperature. *Journal of Alloys and Compounds*, 187668.

2. Mehra, L., Rana, M., Lakhera, S., Butola, D., **Purohit, L. P.,** Sharma, M., & Devlal, K. (2026). Green synthesis of highly fluorescent carbon quantum dots from *Citrus limetta* juice. *Colloid and Polymer Science*, 1–10.

3. Prasad, A., Butola, D., Kumar, K., **Purohit, L. P.**, & Ramola, R. C. (2026). Enhanced photocatalytic degradation of methylene blue using N and Cr co-doped $NaTi_3O_6(OH)\cdot 2H_2O$ nanoparticles synthesised via a sol–gel method. *Inorganic Chemistry Communications*, 116422.

4. Rani, D., Kumar, V., Pal, M., **Purohit, L. P.**, Sharma, S. K., & Gupta, H. (2026). Heterostructured photoredox TiO_2/CuO degraded mixed textile pollutants under natural sunlight irradiation. *Materials Chemistry and Physics*, 132119.

5. Dhuliya, V., Kumar, V., & Purohit, **L. P. (2026)**. Advanced characterization tools for photovoltaics technology. In *Advanced Materials and Technologies for Photovoltaics* (pp. 81–111).

   2025

6. Singh, A. K., Panwar, S., & **Purohit, L. P.** (2025). Cu-doped ZnO:CdO nanocomposites for highly efficient nanostructured photocatalyst. *Journal of Molecular Structure*, 1345, 143021.

7. Sharma, K., Panwar, S., **Purohit, L. P.** (2025). Dual-functional applications of highly efficient (CuO:TiO_2:ZnO)/g-C_3N_4 nanocomposites in photocatalytic and gas sensing using hydrothermal technique. *Applied Surface Science*, 165156.

8. Mehra, L., Rana, M., Lakhera, S., Butola, D., **Purohit, L. P.**, Sharma, M., & Devlal, K. (2025). Green synthesis of highly fluorescent carbon quantum dots using sweet lemon juice.

9. Dhuliya, V., Kandwal, V., & **Purohit, L. P.** (2025). Opto-electronic properties of hydrothermally grown rod-like TiO_2 nanostructures: Potential electron transport layer for photovoltaic devices. *International Journal of Materials Research*, 116(9), 797–805.

10. Butola, D., & **Purohit, L. P.** (2025). Synergistic g-C_3N_4@ZnO/SnO_2 heterojunction nanocomposites for multifunctional applications in photocatalysis and gas sensing. *Surfaces and Interfaces*, 72, 106963.

11. Lakhera, S., Rana, M., Dhuliya, V., **Purohit, L. P.,** Dhanusha, A., Girisun, T. C. S., *et al.* (2025). Enhancement of optical limiting activity of para-aminobenzoic acid using silver nanoparticles. *Scientific Reports*, 15(1), 31001.

12. Lakhera, S., Dhuliya, V., Rana, M., & **Purohit, L. P.** (2025). Low-temperature chemical synthesis and stabilization of silver nanoparticles for optical power limiting applications. *Photonics and Nanostructures – Fundamentals and Applications*, 101434.

13. Prasad, A., Singh, F., Dhuliya, V., **Purohit, L. P.**, & Ramola, R. C. (2025). Comprehensive study of dual-doped TiO_2 thin films: Phase transition, bandgap tuning, and microstructural characterization. *Next Materials*, 7, 100632.

14. Dhuliya, V., **Purohit, L. P.**, Lakhera, S., & Rana, M. (2025). Potentiality of 1-(4-nitrophenyl)-2-pyrrolidine methanol as an efficient photosensitizing material: A multi-solvent first principle DFT study. *Materials Science in Semiconductor Processing*, 188, 109231.

15. Upadhyay, G.K., Purohit, L.P., Sharma, H., Jain, N., & Sharma, S.K. (2025). *Z-scheme based photoactive ZnO:TiO_2:CdO:g-C_3N_4 nanocomposites for advanced oxidation process*. Journal of Molecular Structure, 1319. ISSN: 0022-2860. (Scopus/SCIE/Q2, IF: 4.7).

16. Dhuliya, V., Purohit, L.P., Lakhera, S., & Rana, M. (2025). *Potentiality of 1-(4-nitrophenyl)-2-pyrrolidine methanol as an efficient photosensitizing material: A multi-solvent first-principle DFT study*. Materials Science in Semiconductor Processing, 188. ISSN: 1369-8001. (Scopus/SCIE/Q1, IF: 5.01).

17. Singh, A.K., Panwar, S., & Purohit, L.P. (2025). *Cu-doped ZnO:CdO nanocomposites for highly efficient nano-structured photocatalyst*. Journal of Molecular Structure, Article No. 143021. ISSN: 0022-2860. (Scopus/SCIE/Q2, IF: 4.7).

18. Butola, D., & Purohit, L.P. (2025). *Synergistic g-C_3N_4@ZnO/SnO_2 heterojunction nanocomposites for multifunctional applications in photocatalysis and gas sensing*. Surfaces and Interfaces, 72. ISSN: 2468-0230. (Scopus/SCIE/Q1, IF: 6.3).

19. Joshi, G., Purohit, L.P., Suhas, Chaudhary, M., Pal, P.K., & Dehghani, M.H. (2024). *Developing high-performance low-temperature CO_2 gas sensors based on nanostructured Co_3O_4 thin films: A sol-gel approach and the role of annealing*. Surface Review and Letters. ISSN: 1793-6667. (Scopus/SCIE/Q3, IF: 2.09).

20. Panwar, S., Kumar, V., & Purohit, L.P. (2024). *Solar light driven enhanced photocatalytic activity of novel Gd incorporated ZnO/SnO_2 heterogeneous nanocomposites*. Scientific Reports, 14. ISSN: 2045-2322. (Scopus/SCIE/Q1, IF: 4.379).

21. Panwar, S., Kumar, V., Malik, H.K., & Purohit, L.P. (2024). *Role of fluorine doping on the electron transport layer of F-doped TiO_2 for photovoltaic systems and its environmental impact*. Journal of Applied and Natural Science, 16(3). ISSN: 0974-9411. (Scopus/Q4, IF: 0.84).

22. Pal, V.K., Kumar, D., Gupta, A., Neelratan, P.P., Purohit, L.P., Singh, A., Singh, V., Lee, S., Mishra, Y.K., Kaushik, A., & Sharma, S.K. (2024). *Nanocarbons decorated TiO_2 as advanced nanocomposite fabric for photocatalytic degradation of methylene blue dye*. Diamond and Related Materials, 148. ISSN: 0925-9635. (Scopus/SCIE/Q2, IF: 5.1).

23. Sharma, K., & Purohit, L.P. (2024). *Solar light assisted enhanced photocatalytic activity of smart ternary ZnO:TiO_2:SnO_2 nanocomposites*. Materials Science in Semiconductor Processing, 182. ISSN: 1369-8001. (Scopus/SCIE/Q1, IF: 4.6).

24. Lakhera, S., Rana, M., Dhuliya, V., Purohit, L.P., Dhanusha, A., & Sabari Girisun, T.C. (2024). *Enhanced nonlinear optical and optical limiting responses of 7-diethylamino-4-methyl coumarin functionalized with silver nanoparticles: A combined experimental and DFT study*. Journal of Photochemistry and Photobiology A: Chemistry, 457. ISSN: 1010-6030. (Scopus/SCIE/Q2, IF: 4.7).

25. Sweta, Dhuliya, V., Purohit, L.P., Malik, H.K., & Kumar, V. (2024). *Influence of fluorine doping on electron transport characteristics of TiO_2 for perovskite solar cells: A combined experimental and DFT analysis*. Hybrid Advances, 7. ISSN: 2773-207X. (Scopus/SCIE/Q2, IF: 3.9).

26. Butola, D., & Purohit, L.P. (2024). *Exceptional stability and reusability of Cu-doped ZnO:SnO_2 nanocomposites for photocatalysis under visible light*. Materials Chemistry and Physics, 328. ISSN: 0254-0584. (Scopus/SCIE/Q1, IF: 4.7).

27. Suthar, K., Suthar, D., Sharma, R., Panwar, S., Himanshu, Purohit, L.P., & Dhaka, M.S. (2024). *Analysis of air and vacuum annealing on microstructural, optical and electrical characteristics of In_2O_3 layers for gas sensors*. Physica Scripta. ISSN: 0031-8949. (Scopus/SCIE/Q3, IF: 2.6).

28. Rawat, A., Panwar, S., & Purohit, L.P. (2024). *Hollow cylindrical ternary ZnO/Co_3O_4/CuO nanocomposite thick film on inter-digitated electrodes for selective ammonia gas sensing*. Surfaces and Interfaces, 42, 103404. ISSN: 2468-0230. (Scopus/SCIE/Q1, IF: 6.6).

29. Kumar, V., Kumar, D., Singh, V., Kaushik, N., Kaushik, A., Purohit, L.P., Kaushik, N.K., & Sharma, S.K. (2024). *Ag-catalyzed strain engineering in ZnO for tailoring defects towards bacterial inactivation and removal of organic dyes for environmental sustainability*. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 698, 134460. ISSN: 0927-7757; E-ISSN: 1873-4359. (Scopus/SCIE/Q1, IF: 5.57).

30. Prasad, A., Singh, F., Dhuliya, V., Purohit, L.P., & Ramola, R.C. (2024). *Structural and optical characteristics of Cr-doped TiO_2 thin films synthesized by sol-gel method*. Optical Materials, 151, 115411. ISSN: 0925-3467. (Scopus/SCIE/Q1, IF: 4.1).

31. Shakya, D., Shukla, R.K., Kumar, S., & Purohit, L.P. (2024). *CuO/ZnO Type-II heterojunction modified by rGO nanosheets for improved photocatalytic mineralization of antibiotics*. Journal of Industrial and Engineering Chemistry, 132, 304–317. ISSN: 0970-2555. (Scopus/SCIE/Q1, IF: 6.58).

32. Kamlesh, D., Suthar, Sharma, R., Chasta, G., Panwar, S., Himanshu, Purohit, L.P., & Dhaka, M.S. (2024). *Exploration of annealing effect on physical properties of indium oxide films for gas sensors*. Physica B: Condensed Matter, 675, 415622. ISSN: 1873-2135. (Scopus/SCIE/Q2, IF: 2.88).

Research Papers Published in UGC-CARE Listed / Scopus Indexed Journals (2013–2023)

34. Kumar, S., Kaushik, R.D., & Purohit, L.P. (2023). RGO supported ZnO/SnO_2 Z-scheme heterojunctions with enriched ROS production towards enhanced photocatalytic mineralization of phenolic compounds and antibiotics at low temperature. *Journal of Colloid and Interface Science, 632*, 196–215.

35. Raj, R., Gupta, H., & Purohit, L.P. (2022). Performance of V_2O_5 hole selective layer in CdS/CdTe heterostructure solar cell. *Journal of Alloys and Compounds, 907*, 164408.

36. Panday, M., Upadhyay, G.K., & Purohit, L.P. (2022). Sb incorporated SnO_2 nanostructured thin films for CO_2 gas sensing and humidity sensing applications. *Journal of Alloys and Compounds, 904*, 164053.

37. Raj, R., Gupta, H., & Purohit, L.P. (2022). Performance of RF sputtered V_2O_5 interface layer in p-type CdTe/Ag Schottky diode. *Optical Materials, 126*, 112176.

38. Rana, V.S., Purohit, L.P., Sharma, G., Singh, S.P., & Sharma, S.K. (2022). Effect of RF power on physical and electrical properties of Al-doped ZnO thin films. *Indian Journal of Pure and Applied Physics, 60*(3), 246–253.

39. Kumar, S., Kaushik, R.D., & Purohit, L.P. (2022). ZnO-CdO nanocomposites incorporated with graphene oxide nanosheets for efficient photocatalytic degradation of bisphenol A, thymol blue and ciprofloxacin. *Journal of Hazardous Materials, 424*, 127332.

40. Panwar, S., Upadhyay, G.K., & Purohit, L.P. (2022). Gd-doped ZnO:TiO_2 heterogeneous nanocomposites for advanced oxidation process. *Materials Research Bulletin, 145*, 111534.

41. Pandey, A., Kumar, V., Kumar, S., Jule, L.T., Ramaswamy, K., Purohit, L.P., Kroon, R.E., & Swart, H.C. (2021). Interface analysis of $SrWO_4:Er^{3+}$-Yb^{3+}/Si thin films prepared by radio frequency magnetron sputtering for upconversion emission. *Physica B: Condensed Matter, 623*, 413349.

42. Kumar, S., Kaushik, R.D., & Purohit, L.P. (2021). Hetero-nanostructured Se-ZnO sustained with RGO nanosheets for enhanced photocatalytic degradation of p-chlorophenol, p-nitrophenol and methylene blue. *Separation and Purification Technology, 275*, 119219.

43. Tyagi, J., Gupta, H., & Purohit, L.P. (2021). Ternary alloyed $CdS_{1-x}Se_x$ quantum dots on TiO_2/ZnS electrodes for quantum dot-sensitized solar cells. *Journal of Alloys and Compounds, 880*, 160480.

44. Choudhary, K., Saini, R., Upadhyay, G.K., & Purohit, L.P. (2021). Sustainable behavior of cauliflower-like morphology of Y-doped ZnO:CdO nanocomposite thin films for CO_2 gas sensing application at low operating temperature. *Journal of Alloys and Compounds, 879*, 160479.

45. Joshi, G., Rajput, J.K., & Purohit, L.P. (2021). SnO_2–Co_3O_4 porous composites for CO_2 gas sensing at low operating temperature. *Microporous and Mesoporous Materials, 326*, 111343.

46. Panday, M., Upadhyay, G.K., & Purohit, L.P. (2021). Effect of Li doping on passivation of trap states and improvement in charge transport in TiO_2 thin films. *Pramana – Journal of Physics, 95*(3), 132.

47. Choudhary, K., Saini, R., Upadhyay, G.K., Rana, V.S., & Purohit, L.P. (2021). Wrinkle type nanostructured Y-doped ZnO thin films for oxygen gas sensing at lower operating temperature. *Materials Research Bulletin, 141*, 111342.

48. Raj, R., Gupta, H., & Purohit, L.P. (2021). ZTO transparent conducting thin films for optoelectronic applications. *Bulletin of Materials Science, 44*(2), 165.

49. Kumar, S., Sharma, S.K., Kaushik, R.D., & Purohit, L.P. (2021). Chalcogen-doped zinc oxide nanoparticles for photocatalytic degradation of Rhodamine B under ultraviolet light irradiation. *Materials Today Chemistry, 20*, 100464.

50. Raj, R., Gupta, H., & Purohit, L.P. (2021). Highly transparent and conducting Al-doped ZnO as a promising material for optoelectronic applications. *Pramana – Journal of Physics, 95*(2), 87.

51. Sharma, S.K., Gupta, R., Sharma, G., Vemula, K., Koirala, A.R., Kaushik, N.K., Choi, E.H., Kim, D.Y., Purohit, L.P., & Singh, B.P. (2021). Photocatalytic performance of

yttrium-doped CNT-ZnO nanoflowers synthesized by hydrothermal method. *Materials Today Chemistry, 20*, 100452.

52. Tyagi, J., Gupta, H., & Purohit, L.P. (2021). Mesoporous ZnO/TiO_2 photoanodes for quantum dot sensitized solar cells. *Optical Materials, 115*, 111014.

53. Rana, V.S., Rajput, J.K., Pathak, T.K., Pal, P.K., & Purohit, L.P. (2021). Impact of RF sputtering power on AZO thin films for flexible electro-optical applications. *Crystal Research and Technology, 56*(4), 2000144.

54. Rana, V.S., Rajput, J.K., Pathak, T.K., & Purohit, L.P. (2021). Porous-shaped n-CdZnO/p-Si heterojunctions for UV photodetectors. *Applied Physics A: Materials Science and Processing, 127*(4), 215.

55. Kumar, S., Kaushik, R.D., & Purohit, L.P. (2021). Novel ZnO tetrapod-reduced graphene oxide nanocomposites for enhanced photocatalytic degradation of phenolic compounds and MB dye. *Journal of Molecular Liquids, 327*, 114814.

56. Kumar, S., Kaushik, R.D., Upadhyay, G.K., & Purohit, L.P. (2021). rGO-ZnO nanocomposites as efficient photocatalyst for degradation of 4-BP and DEP using high temperature refluxing method under in-situ condition. *Journal of Hazardous Materials, 406*, 124300.

57. Upadhyay, G.K., Kumar, V., & Purohit, L.P. (2021). Optimized CdO:TiO_2 nanocomposites for heterojunction solar cell applications. *Journal of Alloys and Compounds, 856*, 157453.

58. Upadhyay, G.K., Pathak, T.K., & Purohit, L.P. (2020). Heterogeneous ternary metal oxide nanocomposites for improved advanced oxidation process under visible light. *Crystal Research and Technology, 55*(11), 2000099.

59. Upadhyay, G.K., Rajput, J.K., Pathak, T.K., Swart, H.C., & Purohit, L.P. (2020). Photoactive CdO:TiO_2 nanocomposites for dye degradation under visible light. *Materials Chemistry and Physics, 253*, 123191.

60. Joshi, G., Rajput, J.K., & Purohit, L.P. (2020). Improved stability of gas sensor by inclusion of Sb in nanostructured SnO_2 thin films grown on soda lime glass. *Journal of Alloys and Compounds, 830*, 154659.

61. Upadhyay, G.K., Rajput, J.K., Pathak, T.K., Pal, P.K., & Purohit, L.P. (2020). Tailoring and optimization of hybrid ZnO:TiO_2:CdO nanomaterials for advanced oxidation process under visible light. *Applied Surface Science, 509*, 145326.

62. Tyagi, J., Gupta, H., & Purohit, L.P. (2020). Cascade structured ZnO/TiO_2/CdS quantum dot sensitized solar cell. *Solid State Sciences, 102*, 106176.

63. Rana, V.S., Rajput, J.K., Pathak, T.K., & Purohit, L.P. (2020). Influence of N_2 flow rate on UV photodetection properties of sputtered p-ZnO/n-Si heterojunctions. *Colloids and Surfaces A: Physicochemical and Engineering Aspects, 586*, 124103.

64. Rajput, J.K., Pathak, T.K., Kumar, D., Swart, H.C., & Purohit, L.P. (2020). Effect of annealing temperature on the spectroscopic and photoluminescence properties of CdO-ZnO nanocomposites. *Journal of Modern Optics, 67*(17), 1410–1415.

65. Yadav, R.S., Monika, Rai, E., Purohit, L.P., & Rai, S.B. (2020). Realizing enhanced downconversion photoluminescence and high color purity in Dy^{3+} doped $MgTiO_3$ phosphor in presence of Li^+ ion. *Journal of Luminescence, 217*, 116810.
66. Pathak, T.K., Kroon, R.E., Purohit, L.P., & Swart, H.C. (2019). Highly luminescent ZnO based upconversion thin films grown by sol-gel spin coating. In *Spectroscopy of Lanthanide Doped Oxide Materials* (pp. 327–343).
67. Rajput, J.K., Pathak, T.K., & Purohit, L.P. (2019). Impact of sputtering power on properties of CdO:ZnO thin films synthesized by composite method for oxygen gas sensing application. *Journal of Electronic Materials, 48*(10), 6640–6646.
68. Rajput, J.K., Pathak, T.K., Swart, H.C., & Purohit, L.P. (2019). Synthesis of CdO nanoflowers by sol-gel method on different substrates with photodetection application. *Physica Status Solidi A: Applications and Materials Science, 216*(20), 1900093.
69. Rana, V.S., Rajput, J.K., Pathak, T.K., & Purohit, L.P. (2019). Cu sputtered Cu/ZnO Schottky diodes on fluorine doped tin oxide substrate for optoelectronic applications. *Thin Solid Films, 679*, 79–85.
70. Gairola, P., Purohit, L.P., Gairola, S.P., Bhardwaj, P., & Kaushik, S. (2019). Enhanced electromagnetic absorption in ferrite and tantalum pentoxide based polypyrrole nanocomposite. *Progress in Natural Science: Materials International, 29*(2), 170–176.
71. Upadhyay, G.K., Rajput, J.K., Pathak, T.K., Kumar, V., & Purohit, L.P. (2019). Synthesis of $ZnO:TiO_2$ nanocomposites for photocatalyst application in visible light. *Vacuum, 160*, 154–163.
72. Rajput, J.K., Pathak, T.K., Kumar, V., Swart, H.C., & Purohit, L.P. (2019). Controlled sol-gel synthesis of oxygen sensing CdO:ZnO hexagonal particles for different annealing temperatures. *RSC Advances, 9*(54), 31316–31324.
73. Gangwar, H., Singh, V., Tewari, B.S., Gupta, H., & Purohit, L.P. (2019). Study of zinc doped tellurite glasses using XRD, UV-Vis and FTIR. *Materials Today: Proceedings, 17*, 329–337.
74. Rana, V.S., Rajput, J.K., Pathak, T.K., & Purohit, L.P. (2018). Multilayer MgZnO/ZnO thin films for UV photodetectors. *Journal of Alloys and Compounds, 764*, 724–729.
75. Kumar, N., Pathak, T.K., Purohit, L.P., Swart, H.C., & Goswami, Y.C. (2018). Self-assembled Cu doped CdS nanostructures on flexible cellulose acetate substrates using low cost sol-gel route. *Nano-Structures and Nano-Objects, 16*, 1–8.
76. Rajput, J.K., Pathak, T.K., Kumar, V., Swart, H.C., & Purohit, L.P. (2018). Tailoring and optimization of optical properties of CdO thin films for gas sensing applications. *Physica B: Condensed Matter, 535*, 314–318.
77. Rajput, J.K., Pathak, T.K., Kumar, V., Swart, H.C., & Purohit, L.P. (2018). Liquid petroleum gas sensing application of ZnO/CdO:ZnO nanocomposites at low temperature. *AIP Conference Proceedings, 1942*, 080035.
78. Rajput, J.K., Pathak, T.K., Kumar, V., Swart, H.C., & Purohit, L.P. (2018). CdO:ZnO nanocomposite thin films for oxygen gas sensing at low temperature. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 228*, 241–248.
79. Gairola, P., Gairola, S.P., Dhawan, S.K., Tandon, R.P., Gupta, V., Purohit, L.P., & Sharma, S. (2018). Carbon material-nanoferrite composite for radiation shielding in microwave frequency. *Integrated Ferroelectrics, 186*(1), 40–48.
80. Gairola, S.P., Pande, A., Gairola, P., Sharma, S., Purohit, L.P., & Dhawan, S.K. (2018). Synthesis and electromagnetic shielding behaviour of poly(o-toluidine)/red mud composite. *Polymers for Advanced Technologies, 29*(1), 560–564.
81. Gairola, P., Ohlan, A., Gairola, S.P., Verma, V., Dhawan, S.K., & Purohit, L.P. (2017). Encapsulation of barium ferrite and reduced graphene oxide in poly(o-toluidine) as a

barrier for electromagnetic radiations. *Crystal Research and Technology, 52*(11), 1700117.
82. Rajput, J.K., Pathak, T.K., Kumar, V., & Purohit, L.P. (2017). Influence of sol concentration on CdO nanostructure with gas sensing application. *Applied Surface Science, 409*, 8–16.
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