

Curriculum Vitae

Manoj Kumar Vishwakarma

Assistant Professor

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Education

- **Ph.D. : Physics, Mahatma Gandhi Kashi Pidyapith, Varanasi**
- **M.Sc. : Physics, V.B.S. Purvanchal University, Jaunpur (2004)**
- **B.Sc. : Physics, Math, V.B.S. Purvanchal University, Jaunpur (2002)**

Other Academic Achievement

Award: CSIR NET – June 2007 & June 2009

Work Experience

- **Assistant Professor:** Department of Physics, Kashi Naresh University, (Formerly Kashi Naresh Government P.G. College), Gyanpur S.R.N. Bhadohi, U.P. – 221304, Since Sep. 2017.
- **Assistant Professor :** Department of Physics, Government Degree College, Dhadha Buzurg, Hata, Kushinagar, U.P. – 274207, Dec. 2013 – Sep. 2017.

Academic Board Member

- **Member**, Board of Studies (Physics)-2021-22, Faculty of Science & Technology, Mahatma Gandhi Kashi Vidyapith Varanasi.
- **Member**, Board of Studies (Physics)-2026-27, Faculty of Science, Kashi Naresh University, Bhadohi.

Professional Membership

- **Life Member**, Indian Association of Physics Teachers (IAPT), Kanpur, Since - 2020
- **Life Member**, Indian Physics Association (IPA), TIFR-Mumbai, Since - 2019.
- **Life Member**, Indian Science Congress Association (ISCA), Kolkata, Since - 2018.
- **Life Member**, Plasma Science Society of India (PSSI), Institute for Plasma Research, Gandhinagar, (Regd. Office - Physical Research Laboratory, Ahmedabad) Since - 2024

PUBLICATIONS:

❖ *Journal Articles:*

1. **M.K. Vishwakarma, S.P. Mishra, Ashish Varma. *Nonlinear resonant absorption of a laser beam in arrays of vertically aligned anharmonic carbon nanotubes over different dielectric surfaces*. Radiation Effects and Defects in Solids, 2026, <https://doi.org/10.1080/10420150.2026.2660730>.**
2. **M.K. Vishwakarma, S.P. Mishra, Arvind Kumar, Asheel Kumar, Ashish Varma. *Excitation of a large amplitude electrostatic wave by counterpropagation of two laser beams in spherical nanoparticles*. Radiation Effects and Defects in Solids, 181(7-8), 1227-1247, 2025, <https://doi.org/10.1080/10420150.2025.2581584>.**
3. **M. K. Vishwakarma, S. P. Mishra, Arvind Kumar, Asheel Kumar, Ashish Varma. *Enhanced electron heating by electron plasma wave assisted beat wave of two different profile laser beams in magnetized collisional plasma with density rippled*. Journal of the Korean Physical Society, 87(8), 968-983, 2025, <https://doi.org/10.1007/s40042-025-01446-y>.**
4. **M.K. Vishwakarma, S.P. Mishra, Arvind Kumar, Asheel Kumar, Ashish Varma. *Electron Bernstein wave aided Hermite cosh-Gaussian laser beam absorption in plasma with static magnetic field*. Journal of Optics, 55(3), 2647-2659, 2024, <https://doi.org/10.1007/s12596-024-02343-6>.**

5. **M.K. Vishwakarma**, S. P. Mishra, Arvind Kumar, Asheel Kumar, Ashish Varma. *Excitation of electrostatic lower hybrid wave by nonlinear interaction of hermite cosh-gaussian and cosh-gaussian laser beams in collisional plasma embedded with static magnetic field*. **Optical and Quantum Electronics**, 56(10), 1644, 2024, <https://doi.org/10.1007/s11082-024-07584-0>.
6. A.K. Kushwaha, S.P. Mishra, Shivali Chauhan, **M.K. Vishwakarma**, R. Ahmed, R. Khenata, Bakhtiar Ul Haq, S. Bin Omran. *Lattice-Dynamical, Elastic and Thermo-Dynamical Properties of GaAs, InAs, and their Mixed Ga_{1-x}In_xAs Alloys*. **Journal of Electronic Materials**, 51(6), 3033-3041, 2022, <https://doi.org/10.1007/s11664-022-09524-8>.
7. A.K. Kushwaha, S.P. Mishra, **M.K. Vishwakarma**, Shivali Chauhan, Hamad R. Jappor, R. Khenata, S. Bin Omran. *Theoretical study of thermal conductivity, mechanical, vibrational and thermodynamical properties of Ln₂Zr₂O₇ (Ln= La, Nd, Sm, and Eu) pyrochlore*. **Inorganic Chemistry Communications**, 127, 108495, 2021, <https://doi.org/10.1016/j.inoche.2021.108495>.
8. **M.K. Vishwakarma**. *Implementation and Role of ICT in Science and Technology*. **Shodh Drishti**, 9(22) ISSN : 0976-6650, 87-92, 2018.
9. A. K. Kushwaha, **M. K. Vishwakarma**, S. Akbudak. *Lattice dynamical and elastic properties of mixed quaternary semiconducting alloys CuGa_{1-x}Al_xS₂ and Ag_xCu_{1-x}GaS₂*. **Materials Research Express**, 6(2), 025901, 2018, <https://doi.org/10.1088/2053-1591/aaeb6b>.

❖ *Book Chapters / Conference Proceedings:*

1. **M.K. Vishwakarma**, S.P. Mishra, Arvind Kumar, Asheel Kumar, Ashish Varma. *Tunable Nonlinear Current Density Generation by Beating of Two High Power Laser Beams in Plasma Embedded with Nanocluster*. **Advancement in Functional Materials**, ISBN: 978-81-19448-43-2, Shree Publishers & Distributors, New Delhi, 204 – 212, 2024.
 2. **M.K. Vishwakarma**, A.K. Kushwaha, S.K.S. Yadav. *Waste Management for Safe Environment: Challenge and Opportunities*. **Environmental Aspect of Alternative Energy Sources**; ISBN: 978-93-89657-43-2, Bharti Publications, New Delhi, 196-211, 2020.
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Orientation/ Refresher Programme / Trainings / FDPs

Attended:

1. **Refresher Programme, *Refresher Course in Physics/Electronics (Online)***, UGC-Malaviya Mission Teacher Training Centre, University of Jammu, Jammu Tawi, **Department of Physics and Electronics, University of Jammu, Jammu Tawi**, 07 October 2024 to 19 October 2024.
2. **Short Term Programme, *NEP 2020 Orientation & Sensitization Programme***, Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC), **UGC-Malaviya Mission Teacher Training Centre, D.D.U. Gorakhpur University, Gorakhpur**, 04 January 2024 to 12 January 2024.
3. **Refresher Programme, *Online Two - Week Refresher Course in "Physics"***, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching, Ministry of Education, Government of India, **Teaching Learning Centre, Ramanujan College, University of Delhi**, 09 June 2023 to 23 June 2023.
4. **Short Term Programme, *Computer Technology Assisted Teaching Tools for Effective Implementation of NEP - 2020 Through ICT***, National Institute of Technical Teachers Training and Research Chandigarh, Ministry of Education, Government of India, **Mahatma Gandhi Kashi Vidyapith University Varanasi (Uttar - Pradesh)**, 21 March 2022 to 25 March 2022.
5. **Faculty Development Programmes, *Faculty Development Program on Research Methodology***, SWAYAM, IIT Madras, 24 January 2022 to 15 April 2022.
6. **Faculty Development Programmes, *FDP on Moodle Learning Management System***, Spoken Tutorial Project, IIT Bombay, **K.N. Government P.G. College, Gyanpur, Bhadohi, U.P.**, 23 August 2020 to 29 August 2020.
7. **Faculty Development Programmes, *Training Programme on MOOCs, E-Content Development and Open Educational Resources***, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNTT), Ministry of Education, Government of India, **Iswar Saran P.G. College Prayagraj – 211004**, 20 August 2019 to 02 September 2019.
8. **Faculty Development Programmes, *Solar Photovoltaics Fundamentals, Technology and Applications***, SWAYAM, IIT Roorkee, 29 July 2019 to 20 September 2019.
9. **Short Term Programme, *Academic and Research Report Writing***, SWAYAM, National Institute of Technical Teachers' Training and Research (NITTTR), **Kolkata**, 07 January 2019 to 01 March 2019.
10. **Refresher Programme, *UGC Sponsored Refresher Course in Physics***, UGC-HRDC **University of Allahabad, Prayagraj**, 12 November 2018 to 02 December 2018.
11. **Orientation Programme, *UGC Sponsored Orientation Course***, UGC-HRDC **Banaras Hindu University, Varanasi – 221005**, 30 August 2016 – 26 September 2016.

Conference / Workshop / Seminar / Symposium:

1. **National Seminar on *Indian Knowledge System Historical, Literary & Cultural Dimension with Contemporary Relevance***, Hindustani Academy U.P. Prayagraj & Kashi Naresh Government P.G. College, Gyanpur Bhadohi, 17-18 March 2026.
2. **International Conference on "*Viksit Bharat @2047: The Confluence of Tradition, Transformation and Artificial Intelligence*"**, Rajkiya Mahavidyalay Academic Society, Higher Education Directorate, Uttar Pradesh Prayagraj, India, 13-14 Dec. 2025.
3. **International Conference on *Developed India @ 2047 – An Initiative to Transform the Nation***, Government Girls P.G. College Bindki, Fatehpur (U.P.), 07-08 Nov. 2025.
4. **National Conference on *Technological Innovations & Environmental Sustainability (NCTIES-2025)***, Amity University Madhya Pradesh, Maharajpura, Gwalior (M.P.), 04 Sep. 2025.
5. **International Conference on *Materials for Emerging Technologies- 2025 (ICMET-2025)***, Research and Development Cell, Lovely Professional University, Punjab, 22-23 Aug. 2025.
6. **10th Plasma Science Society of India Plasma Scholars' Colloquium (PSSI-PSC 2024)**, Department of Energy Science and Engineering & Department of Physics, Indian Institute of Technology (IIT) Delhi, 04-06 July 2024.
7. **National Conference on *Recent Trends in Physics-2024***, Sri Shankar Government Degree College, Sasaram Bihar, 11- 12 March 2024.
8. **International Conference on *Advancement in Functional Materials (ICAFM-2024)***, Prof. Rajendra Singh (Rajju Bhaiya) Institute of Physical Sciences for Study and Research, Veer Bahadur Singh Purvanchal University ,Jaunpur, Uttar Pradesh, 08- 10 Feb. 2024.
9. **National Seminar on *Self-Reliant India: Challenges and Prospects***, K. N. Government P.G. College, Gyanpur Bhadohi, U.P., 24-25 March 2023.
10. **National Seminar on *Biodiversity & Environmental Sustainability (NCBDES-2022)***, K. N. Government P.G. College, Gyanpur Bhadohi, U.P., 25- 26 March 2022.
11. **National Education Policy 2020: Issued and Challenge**, K. N. Government P.G. College, Gyanpur Bhadohi, U.P., 25-26 Feb. 2021.

12. **National Conference on *Innovative Approaches Towards Sustainable Development (NCIATSD-2020)***, K. N. Government P.G. College, Gyanpur Bhadohi, U.P., 09-10 Jan. 2020.
13. **National Conference on *Heal from Green***, K. N. Government P.G. College, Gyanpur Bhadohi, U.P., 30-31 March 2019.
14. **National Seminar on *Eco-Centric Thought and Action: A Need for Human Existence (ETANHE-2018)***, Dr. S.P.M. Government Degree College, Bhadohi, U.P., 24-25 Feb. 2018.
15. **National Seminar on *The Impact of Digitalization of Public Services on Society (NSIDPSS-2018)***, Mahamaya Government Degree College, Mahona, Lucknow, 20-21 Jan. 2018.
16. **National Seminar on *Climate Change and Its Vast Impact on Human Life and Society (NCVHS-2017)***, Dr. S.P.M. Government Degree College, Bhadohi, U.P., 17-18 Feb. 2017.
17. **National Conference on *Energy, Environment and its Impact on Society (NCEEIS-2017)***, K. N. Government P.G. College, Gyanpur Bhadohi, U.P., 19-20 Jan. 2017.
18. **National Conference on *Vistas of Scientific Approach for Welfare of Society (NCVSAWS-2016)***, K. N. Government P.G. College, Gyanpur Bhadohi, U.P., 30-31 March 2016.
19. **National Seminar on *Environmental Pollution and its Impact on Social and Ecological Imbalances in Urjanchal (Sonbhadra)***, B.R.D. Government P.G. College, Duddhi, Sonabhadra, U.P., 21-22 Feb. 2015.
20. **National Conference on *Vistas of Environmental Awareness (NCVEA-2014)***, K. N. Government P.G. College, Gyanpur Bhadohi, U.P., 30-31 March 2014.