

BIO-DATA

Dr. GAUTAM JAISWAR

M.Sc., Ph.D.

Professor

Department of Chemistry,
Dr. Bhimrao Ambedkar University,
Institute of Basic Sciences, Khandari Campus,
Agra.-282002(Uttar Pradesh)



Academic Qualification

Degree	Year	Subject	University/ Institution
SSC	1995	Eng, Hindi, Marathi, Sci, S.Sci, Maths	Maharashtra Board
HSC	1997	Eng, hindi, Phy, Che, Bio, Maths	Maharashtra Board
B.Sc. Chemistry	2000	Chemistry and Drugs & Dyes	Mumbai University
M.Sc. Organic chemistry	2002	Organic Chemistry	Mumbai University
UGC-NET	June 2002& Dec 2002	Chemical Sciences	UGC-CSIR New Delhi

Ph.D Thesis title, University, Year of Award: Synthesis, Characterisation and Electrical Properties of Conducting Polymer of Pyridine Derivatives, Dr. Bhimrao Ambedkar University, Agra, 2009.

Work Experience

Sr. No	Position Held	Name of the University	From	To
1	Asst. Professor/ Lecturer	Dr. Bhimrao Ambedkar University, Agra	26 th April 2003	25 th April 2009 (AGP 6000)
2	Asst. Professor Sr. Scale	Dr. Bhimrao Ambedkar University, Agra	26 th April 2009	25 th April 2014 (AGP 7000)
3	Asst. Professor Selection grade	Dr. Bhimrao Ambedkar University, Agra	26 th April 2014	25 th April 2017 (AGP 8000)
4	Associate Professor	Dr. Bhimrao Ambedkar University, Agra	26 th April 2017	25 th April 2020 (AGP 9000)
5	Professor	Dr. Bhimrao Ambedkar University, Agra	26 th April 2020	Till date (AGP10,000)

Award

Received **Best Teacher Award 2025(Research)**, awarded by Honble Governor of Uttar Pradesh, Smt. Anandiben Patel Ji in the 91st Convocation of Dr. Bhimrao Ambedkar University, Agra held on 20th Aug 2025.

Patent Publication

Published Date: 16/05/2025, Application Number – 202511038678, Title- Polymeric Hyper Dispersing Agent Composition for Paint And Printing Ink And Synthesis Method Thereof Date of Filing - 22/04/2025 Applicant - Dr. Bhimrao Ambedkar University, Agra., Inventor - Sumit Kumar Sharma, **Gautam Lalbihari Jaiswar** and Ajay Taneja

Publications

1. Jain, Khushbu, Monika, Kailash Chandra, Gautam Jaiswar, Sambuddha Chakraborty, Ashwini Chauhan, and Neeru Dabas. "Trachyspermum Ammi Supported Synthesis of Nano-CeO₂ and Its Scope in Photocatalytic Degradation of Ibuprofen in Water." *Chemistry Africa* 8, no. 2 (2025): 669-685. **[IF 2.83, Springer]**
2. Jain, Vijay Prakash, and Gautam Jaiswar. "Performance of Graphene Oxide Hydrogel Functionalized with Chitosan and Polyvinyl Alcohol for Enhanced Antibacterial Activities." *Chemistry Africa* (2025): 1-10. **[IF 2.83, Springer]**
3. Verma, Nand Lal, Shilendra Kumar, Mohit Kumar, Jai Pal, Deepa Sharma, Ram Sunil Kumar Lalji, Mohit Chahal and Gautam Jaiswar. "Quantum chemical treatment, electronic energy in various solvents, spectroscopic, molecular docking and dynamic simulation studies of 2-amino-N-(2-chloro-6-methylphenyl) thiazole-5-carboxamide: A core of anticancer drug." *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 326 (2025): 125263. **[IF 4.10, Elsevier]**
4. Jain, Vijay Prakash, A. S. Mathur, Gautam Jaiswar, and B. P. Singh. "Incorporation of graphene oxide as hole transport layer in PTB7: PC71BM/PFN: Br pure organic solar cells." *Next Research* 1, no. 2 (2024): 100066. **[Elsevier]**
5. Singh, Shalini, Vipin Kumar Singh, and Gautam Jaiswar. "Optical and Morphological Properties of Zinc Sulfide-Strontium Chloride-Doped Polymer Nanocomposites." *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences* (2024): 1-8. **[IF 1.20, Springer]**
6. Yadav, Shruti, Sapna Tomar, Vivek Sharma, and Gautam Jaiswar. "Investigation of potential of activated carbon by activation of *Rubia cordifolia* with phosphoric acid in removal of Cr (VI) from aqueous solution." *Chemistry Africa* 7, no. 4 (2024): 2073-2085. **[IF 2.83, Springer]**
7. Chaudhary, Shivani, Vijay Prakash Jain, Deepa Sharma, and Gautam Jaiswar. "Implementation of agriculture waste for the synthesis of metal oxide nanoparticles: its management, future opportunities and challenges." *Journal of Material Cycles and Waste Management* 25, no. 6 (2023): 3144-3160. **[IF 3.7, Springer]**
8. Sharma, Deepa, Mohit Kumar, Vijay Prakash Jain, Shivani Chaudhary, and Gautam Jaiswar. "Bio-based polyamide nanocomposites of nanoclay, carbon nanotubes and graphene: a review." *Iranian Polymer Journal* 32, no. 6 (2023): 773-790. **[IF 3.14, Springer]**
9. Kumar, Mohit, Gautam Jaiswar, Mohd Afzal, Mohd Muddassir, Abdullah Alarifi, Aysha Fatima, Nazia Siddiqui et al. "Quantum Computational, spectroscopic (FT-IR, FT-Raman,

- NMR, and UV–Vis) Hirshfeld surface and molecular docking-dynamics studies on 5-hydroxymethyluracil (monomer and trimer)." *Molecules* 28, no. 5 (2023): 2116. **[IF 4.6, MDPI]**
10. Verma, Nand Lal, Mohit Kumar, Deepa Sharma, Shilendra Kumar, Nisha Rathore, and Gautam Jaiswar. "Transition-metal-mediated CC bond activation: Recent advances and its applications in organic synthesis." *Results in Chemistry* (2023): 101130. **[IF 4.47, Elsevier]**
 11. Gautam Jaiswar, Neeru Dabas, Shivani Chaudhary and Vijay Prakash Jain "Progress in absorption of environmental carbon dioxide using nanoparticles and membrane technology" *International Journal of Environmental Science and Technology*, DOI: Vol.20 Issue 9(2023) 10385-10404. **[IF 2.87, Springer]**
 12. Paramjit Singh, Hari Madhav, Neetika Singh, Gautam Jaiswar, and Nahid Nishat. "Influence of different amino functional groups on structural, optical, and morphological properties of PMMA and their nanocomposites." *Polymer Engineering & Science* Vol. 62 issue 3 (2022): 824**[IF 3.2, Wiley]**
 13. Mohit Kumar, Meenakshi Singh, Gautam Jaiswar, Ram Sunil Kumar Lalji, Brajendra K. Singh, Arun Sharma, Ghazala Khanum et al. "Quantum chemical, spectroscopic, hirshfeld surface and molecular docking studies on 2-aminobenzothiazole." *Journal of Molecular Structure* 1253, 132254, (2022) **[IF 4.0, Elsevier]**
 14. Vijay Prakash Jain, Shivani Chaudhary, Deepa Sharma, Neeru Dabas, Ram Sunil Kumar Lalji, Brajendra Kumar Singh, and Gautam Jaiswar. "Advanced functionalized nanographene oxide as a biomedical agent for drug delivery and anti-cancerous therapy: A review." *European Polymer Journal* 142 (2021): 110124. **[IF 5.8, Elsevier]**
 15. Sonam Rathore, Hari Madhav, and Gautam Jaiswar. "Efficient nano-filler for the phase transformation in polyvinylidene fluoride nanocomposites by using nanoparticles of stannous sulfate." *Materials Research Innovations* 23, no. 4 (2019): 183-190. **[IF 1.9, Taylor and Francis]**
 16. Nitika Singh, Hari Madhav, Shweta Yadav, and Gautam Jaiswar. "Impact of vanadium-, sulfur-, and dysprosium-doped zinc oxide nanoparticles on various properties of PVDF/functionalized-PMMA blend nanocomposites: structural, optical, and morphological studies." *Journal of Applied Polymer Science* 136, no. 9 (2019): 47116. **[IF 3.13, Wiley]**
 17. Anjali Chhonkar, and Gautam Jaiswar. "Effect of nanoclay on dispersion, thermal stability, optical and burning behavior of sulfonated poly (1, 4-phenylene ether ethersulfone)–nanoclay blends." *International Journal of Plastics Technology* 22, no. 2 (2018): 275-290. **[IF 1.0, Springer]**
 18. Neetika Singh, Hari Madhav, Shweta Yadav, and Gautam Jaiswar. "Critical evaluation of thermal, optical and morphological properties of V, S and Dy doped ZnO/PVDF/functionalized-PMMA blended Nanocomposites." *Journal of Inorganic and Organometallic Polymers and Materials* 28, no. 5 (2018): 2121-2130. **[IF 4.9, Springer]**
 19. Agarwal, Harshika, Shweta Yadav, and Gautam Jaiswar. "Effect of nanoclay and barium sulfate nanoparticles on the thermal and morphological properties of polyvinylidene fluoride nanocomposites." *Journal of Thermal Analysis and Calorimetry* 129, no. 3 (2017): 1471-1479. **[IF 4.76, Springer]**
 20. Hari Madhav, Paramjit Singh, Neetika Singh, and Gautam Jaiswar. "Evaluations of thermal and antibacterial properties of nanocomposites of functionalized poly (methyl methacrylate) with different amino containing groups." *Macromolecular Research* 25, no. 7 (2017): 689-696. **[IF 3.4, Springer]**

21. Shweta Yadav, and Gautam Jaiswar. "Review on Undoped/dopedTiO nanomaterials: Synthesis, Photocatalytic and antimicrobial activity." CCS Chemistry (2017): 103-116. **[IF 1.5, Wiley]**
22. Shweta Yadav, M. Singh, D. K. Verma, and Gautam Jaiswar. "X-Ray Diffraction Study of the Effects of Dopant on the Lattice Strain of Zinc Oxide Nanoparticles." Adv. Nanomater. Technol. Energy Sect 1 (2017): 73-89.
23. Neetika Singh, Hari Madhav, Paramjit Singh, and Gautam Jaiswar. "Compatibility Studies of Polyacrylamide/Nanoclay/Copper oxide Nanocomposites on the Fluidic Physical Properties for Improvement of Inkjet Printability." Science and Engineering Applications (2017): 112-120.
24. Reeve Katheria, Neetika Singh, Shweta Yadav, Akanksha Dixit and Gautam Jaiswar. "Doping of Cerium, Boron and Sulfur with ZnO Nanoparticles and their Impact on Lattice Parameters, Studied Through UDM Model. "Emerging Trends in Chemical Engineering (2017): 21-28.
25. UllahMirza, Azar, Nusrat Tara, ShwetaYadav, and Gautam Jaiswar. "Synthesis of Biodiesel from Biowaste/Vegetable Oils by using Heterogeneous Nano-Catalyst." Journal of Catalyst and Catalysis (2017): 11-23.
26. D.Singh, H Madhav, Gautam Jaiswar "Effects of Zinc Oxide on Polyacrylic acid: A Coreshell nanoparticles" Science and Engineering Applications 1 issue 4 (2016): 36-39.
27. SunitaBhaskar, HariMadhav, Paramjit Singh, Gautam Jaiswar "Assessment of Heavy metals, Qualities of Ground water and its correlation with natural organic matter" Innovare Journal of Medical Sciences, 4 issue 5 (2016): 23-29
28. M.K. Pal and Gautam Jaiswar"Effects of inorganic nanofillers on the thermal degradation and Uv-absorbance properties of polyvinyl acetate" Journal of Thermal analysis and calorimetry, 111 issue 1(2013): 689-701. **[IF 4.76, Springer]**
29. Ajay Gupta, Madhu Anand, Shweta Yadav, Gautam Jaiswar "Phytochemical studies and antioxidant activity of different leaves extracts of A. Cadamba" Int. J. FuturSciEngg Technol. 1 (2013): 21.
30. M. K. Pal, B. Singh, Gautam Jaiswar "Thermal stability and UV-Shielding properties of polymethylmethacrylate and polystyrene modified with calcium carbonate nanoparticles" Journal of Thermal analysis and Calorimetry, 107 issue 1 (2012): 85-96. **[IF 4.76, Springer]**
31. M. K. Pal and Gautam Jaiswar"Improving the thermal properties of organic inorganic nanocomposites Plastic Research Online DOI: 10.2417/spepro.004262, (2012):1-3.
32. M.K. Pal and Gautam Jaiswar "Synthesis and characterisation of polyacrylamidecalcium carbonate and polyacrylamide-calcium sulphate nanocomposites"Polymer composites, 33 issue 4, (2012): 515-523. **[IF 6.10, Wiley]**
33. Gautam Jaiswar, M.K. Pal, B. Singh, U. Bhatnagar "Thermal and Electrical properties of acrylic acid grafted onto starch by ceric ammonium nitrate and potassium permanganate initiator" International Journal of Plastics Technology, 15 issue 2, (2011): 188-198. **[IF 1.0, Springer]**

Chapters

Sharma, Shivangi, Neeru Dabas, Deepa Sharma, Mohit Kumar, Sanjay Kumar Kataria, and Gautam Jaiswar. "Smart Materials for Sustained and Controlled Drug Release." In Smart Micro- and Nanomaterials for Pharmaceutical Applications, pp. 206-222. **CRC Press, 2024.**

1. Sharma, Deepa, Mohit Kumar, Nandlal Verma, Shivangi Sharma, Nisha Rathore, Sanjay Kataria, and Gautam Jaiswar. "Interaction of Nanoparticles with Macromolecules: Biomedical and Food Science Applications." *Nanoparticle Toxicity and Compatibility* 161 (2024): 64-82, **Material Research Forum LLC**.
2. Sharma, Shivangi, Neeru Dabas, Deepa Sharma, Mohit Kumar, Sanjay Kumar Kataria, and Gautam Jaiswar. "12 Smart Materials for." *Smart Micro-and Nanomaterials for Pharmaceutical Applications* (2024): 206, **Taylor& Francis Group**.
3. Dabas, Neeru, Shivani Chaudhary, Ritu Rani Chaudhary, and Gautam Jaiswar. "Ecofriendly nanomaterials for wastewater treatment." *Green Synthesis of Nanomaterials: Biological and Environmental Applications* (2024): 248-269 **Wiley**
4. Chaudhary, Shivani, and Gautam Jaiswar. "Mechanical Surface Treatments of Biomaterials." In *Surface Engineering of Biomaterials*, pp. 394-413. **CRC Press, 2024**.
6. Gautam Jaiswar, Suraj Modak, Rishika Singh and Neeru Dabas. "Functionalization of biopolymer keratin-based biomaterials and its absorption properties for healthcare application." *Polymeric Biomaterials for Healthcare Applications*.**Elsevier,2022**.
7. Neeru Dabas, and Gautam Jaiswar. "Fundamental of processing and characterization of polysaccharide nanocrystal based materials." *Innovation in Nano-Polysaccharides for Eco-Sustainability*.**Elsevier, 2021**.
8. Shivani Chaudhary., Vijay Prakash Jain and Gautam Jaiswar. "The Composition of Polysaccharides: Monosaccharides and binding, Group Decorating, Polysaccharides Chains." *Innovation in Nano-Polysaccharides for Eco-Sustainability*.**Elsevier, 2021**.
9. Hari Madhav, Neetika Singh, and Gautam Jaiswar. "Thermoset, bioactive, metal– polymer composites for medical applications." In *Materials for biomedical engineering*, pp. 105-143. **Elsevier, 2019**.
10. Atar Singh Pipal, Ajay Taneja and Gautam Jaiswar. "Risk Assessment and Toxic Effects of Exposure to Nanoparticles Associated with Natural and Anthropogenic Sources" **Springer, 2014**.

Paper Presentation in National and International Conferences

1. Paper presentation in 93rd Annual Session jointly with the Bhaba Atomic Research Centre (BARC), Mumbai and a symposium on "India Secure @75" during December 3-5, 2023
2. Paper presentation in 108th Indian Science Congress, held at Nagpur University, on 3-7th Jan 2023.
3. Paper Presentation in National Academy of Science which was held at NASI-HQ, Allahabad, 4-6th Dec 2022.
4. Paper presentation (oral) in Indian council of Chemists 6th International conference at Paris on 6-8th June 2019.
5. Paper presentation (oral) 89th Annual Session of NASI and Symposium on Science and Technology based Entrepreneurship Development to be held at ICAR National Academy of Agricultural Research Management, Hyderabad during Dec 21-23, 2019.
6. Phase transformation in polyvinylidene fluoride nanocomposites by using nanoparticles of stannous sulfate at 106th Indian Science Congress held at Lovely Professional University, Jalandhar from 3-7 Jan 2019.
7. Paper presentation (oral) 88th Annual Session of NASI at Chitrakoot, to be held on December 6-8, 2018.

8. Effect of Nanoparticles on polyvinylidene fluoride polymer in the International Conference on Science, Technology and Social Humanities, held at Deptt of Zoology, Dr. Bhimrao Ambedkar University, Agra from 26-28th Feb 2018
9. Comparative Study of BaCO₃ nanoparticles on thermal stability of polyvinylidene fluoride polymer at 102th Indian Science Congress held at University of Mumbai, Mumbai from 3-7 Jan 2015.
10. Paper presented as oral entitled: Synthesis and characterisation of functional polymer nanocomposites in 6th International conference of ICC held on 6-8 June 2019 Paris.
11. Paper presented as oral entitled: Synthesis and Characterization of polyacrylamide/ CaCO₃ and polyacrylamide/ CaSO₄ nanocomposites in 44th World Chemistry Congress (IUPAC sponsored), Turkish Chemical Society, which was held at Istanbul on the 11-16th August 2013. Turkey
12. Paper presented as poster entitled: "Toxic effects of nanoparticles: implications for public health, their risk assessment" in International conference on pure and applied chemistry organised by Department of Chemistry, Mauritius University, Mauritius (2010).
13. Paper presented as oral entitled: "Thermal and morphological studies of polyacrylamide/ CaCO₃ and polyacrylamide/ CaSO₄ nanocomposites" in International conference on pure and applied chemistry organised by Department of Chemistry, Mauritius University, Mauritius (2010).
14. Paper presented as oral entitled "Polystyrene/CaSO₄ Nanocomposites: Synthesis, Characterization and Thermal Studies" in 28th Annual Conference Indian Council of Chemists which was held at Department of Chemistry, Hemchandracharya North Gujarat University, Patan (Gujarat) on 7th-10th, November, 2009.
15. Paper presented as oral entitled "Synthesis of Characterization Polystyrene/CaSO₄ based Nanocomposites" in International Conference on Nanoscience and technology in Chemistry, Health, Environment and Energy "NATCHEE 2010" which was held at Department of Chemistry, Dayalbag Educational Institute, Dayalbagh, Agra on January 7-9, 2010.
16. Paper presented as oral entitled "Thermal and Optical Properties of Polymethyl methacrylate/CaCO₃ nanocomposites" in 29th Annual Conference Indian Council of Chemists which was held at Department of Chemistry, Panjab University, Chandigarh on 19th-21st, December, 2010.
17. Paper presented as poster in International Conference on Advances in Applied Chemical Sciences and Innovative Materials held at IIT-Delhi on 10th-12th August 2011.

Invited Talks/Resource Person

1. As a Resource person in National College(Autonomous), Trichy on the topic-NMR and its applications in organic molecules identification. 22nd Aug 2025
2. As a Resource person in Jamal College(Autonomous), Trichy on the topic- Structural identification using NMR spectroscopy on 22nd Aug 2025.
3. "Functionalized polymer nanocomposites as a promising materials for material development at International workshop on Recent Advances in Nanomaterials: Application and Future Trends at Hindustan College of Science and Technology, January 27-28, 2024
4. "Effects of nanoparticle on Poly vinylidene fluoride polymer" at International Conference on Science, Technology and Social Humanities, Department of Zoology, SLS, Dr. Bhimrao Ambedkar University, Agra, 26-28 Feb 2018.

5. “Synthesis of nanocomposites” in National Conference on Environment and Biodiversity: Challenges and Strategies in 21st Century to be held at Department of Zoology, Agra College, Agra on 02-03rd March 2020.
6. As Resource Person in the Training programme on Advanced Scientific Skills organized by St Johns College Agra during 03-10th Dec 2018.
7. As Resource Person in the Training programme on Advanced Scientific Skills organized by St Johns College Agra during 13-20th Nov 2017.

Workshop/ Seminar/Conference Organized

1. Workshop on Basic principle of XRD and its applications on 16 th April 2025 in Deptt of Chemistry. Speaker Dr. Rakesh Kr Sharma, Manager Rigaku, Japan.
2. Organized National conference, 41st Indian Council of Chemists which was held at Dr. Bhimrao Ambedkar University, Agra, 27-29th December 2022.
3. Member of Organising Committee in the celebration of “National Science Day” held at Dr. B. R. Ambedkar University, Agra, 27th - 28th February 2017.
4. Organized “Science, Technology and Emerging Applications of Microscopy”, Dr. B. R. Ambedkar University, Khandari, Agra, 11-12, November, 2019 as convener
5. Member of Organising Committee “The Wondrous World of Nanomaterials”, held at Dr. B.R. Ambedkar University, Agra, 23rd May 2020.(Online mode).

Member of Professional Societies/Organization

1. Life Member of the Indian Science Congress Association, Kolkata
2. Fellow of Indian Council of Chemist (FICC).
3. Green Chemistry, Delhi Chapter

Reviewer for International Journals (few listed)

Journal of Applied Polymer Science, Arabian Journal of Chemistry, Iranian Polymer Journal Science of the Total Environment, Polymer composites, Journal of Thermal Analysis and Calorimetry, Journal of Environmental Chemical Engineering, Material Bulletin, RSC Advance, RSC New Journal of Chemistry etc

Research Areas

Nanotechnology, Natural products, Water pollutions, Polymer science, Organic Synthesis and Computational Chemistry.

Research Projects

- A project sanctioned under Research and Development Grant of Uttar Pradesh Government to Prof. Gautam Jaiswar, project title- Synthesis, Characterizations and application of modified cellulose nano crystals composites from agricultural wastes (2021-24). Five lakhs

- Project sanctioned under Centre of Excellence to Department of Chemistry, Principal Investigator, Prof. Ajay Taneja, Co-PI Prof. Devendra Kumar and Prof. Gautam Jaiswar, Project Title-Role of Green Chemistry in controlling Environmental Pollution (2021-24). Six Lakhs
- Project Sanctioned from UGC-New Delhi Title-Synthesis, characterization and electrical properties of conducting polymers of pyridine derivatives (2010-12). 0.9 lakh

M.Phil./Ph.D. Research Guided/Supervision

38 M.Phil. supervised and 5 Ph.D under supervision

Place: AGRA
Date: 9th Sept 2025

Dr. Gautam Jaiswar