

Prof. GAUTAM JAISWAR

Email: gjaiswar@gmail.com

- **Qualification** : M.Sc., NET, Ph.D.
- **Present Designation** : Professor
- **Research area** : Polymer nanocomposites
- **Experience(till April 2023)** : 20 years
- **Publications in Scopus Journal** : 30 (till Dec 2022)
- **Presentation in conferences** : 04 (till Dec 2022)
- **Conferences/ Symposia Organized** : 04
- **Invited talk/Resource person** : 04
- **Books/Books chapters** : 04
- **Project** : 02
- ***h*-index(till Dec 2022)** : ***h*-index 10**
- **Orcid ID** : <https://orcid.org/0000-0001-5264-4260>
- **Scopus ID** : 905795/634076
- **Refresher courses** : 02
- **No. of M.Phil./Ph.D Supervised/Regd.** : 38 M.Phil. + 01+4(regd.) Ph.D.
- **Membership of Professional Societies/Organization:**03
- **Foreign Countries Visited** : 03(sponsored by DST, UGC and University)
- **Member of Professional Societies/Organization:** 03
- **Reviewer for International Journals** :08

BIO-DATA

Dr. GAUTAM JAISWAR

Email: gjaiswar@gmail.com

Department of Chemistry,

Dr. Bhimrao Ambedkar University, Institute of Basic Sciences, Khandari Campus, Agra.



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) |

Publications in Journals

- 1) **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: 10.1007/s13762-022-04526-9, Sept **2022**(Article in Press)
- 2) Paramjit Singh, Hari Madhav, Neetika Singh, **Gautam Jaiswar**, and NahidNishat. "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

- 3) Mohit Kumar, Meenakshi Singh, **Gautam Jaiswar**, Ram Sunil Kumar Lalji, Brajendra K. Singh, Arun Sharma, GhazalaKhanum et al. "Quantum chemical, spectroscopic, hirshfeld surface and molecular docking studies on 2-aminobenzothiazole." *Journal of Molecular Structure* 1253, 132254, (2022)
- 4) Vijay Prakash Jain, Shivani Chaudhary, Deepa Sharma, NeeruDabas, 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.
- 5) SonamRathore, 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.
- 6) 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.
- 7) 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.
- 8) 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.
- 9) 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.
- 10) HariMadhav, 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.
- 11) Shweta Yadav, and **Gautam Jaiswar**. "Review on Undoped/doped TiO₂ nanomaterials: Synthesis, Photocatalytic and antimicrobial activity." *CCS Chemistry* (2017): 103-116.
- 12) 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.

- 13) 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.
- 14) Reeva Katheria, Neetika Singh, ShwetaYadav, 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.
- 15) 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.
- 16) 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.
- 17) 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
- 18) 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.
- 19) A.Gupta, M Anand, S Yadav, **Gautam Jaiswar** "Phytochemical studies and antioxidant activity of different leaves extracts of A. Cadamba" *Int. J. FuturSciEngg Technol.* 1 (2013): 21.
- 20) 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.
- 21) 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.
- 22) M.K. Pal and **Gautam Jaiswar** "Synthesis and characterisation of polyacrylamide-calcium carbonate and polyacrylamide-calcium sulphate nanocomposites" *Polymer composites*, 33 issue 4, (2012): 515-523.
- 23) **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.

Books Chapters

1. **Gautam Jaiswar**, SurajModak, Rishika Singh and NeeruDabas. "Functionalization of biopolymer keratin-based biomaterials and its absorption properties for healthcare application." *Polymeric Biomaterials for Healthcare Applications*. Elsevier, 2022.

2. Neeru Dabas, and **Gautam Jaiswar**. “Fundamental of processing and characterization of polysaccharide nanocrystal based materials.” *Innovation in Nano-Polysaccharides for Eco-Sustainability*. Elsevier, 2021.
3. 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.
4. 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.
5. 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 108th Indian Science Congress, held at Nagpur University, on 3-7th Jan 2023.
2. Paper Presentation in National Academy of Science which was held at NASI-HQ, Allahabad, 4-6th Dec 2022.
3. Paper presentation (oral) in Indian council of Chemists 6th International conference at **Paris** on 6-8th June 2019.
4. 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.
5. 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.
6. Paper presentation (oral) 88th Annual Session of NASI at **Chitrakoot**, to be held on December 6-8, 2018.
7. 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
8. 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.
9. 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**.
10. 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**

11. 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**.
12. 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**.
13. 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.
14. 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.
15. 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.
16. 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. “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.
2. “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.
3. As Resource Person in the Training programme on Advanced Scientific Skills organized by St Johns College Agra during 03-10th Dec 2018
4. As Resource Person in the Training programme on Advanced Scientific Skills organized by St Johns College Agra during 13-20th Nov 2017.

Conference Organized

1. Organized National conference, 41st Indian Council of Chemists which was held at Dr. Bhimrao Ambedkar University, Agra, 27-29th December 2022.
2. Member of Organising Committee in the celebration of “National Science Day” held at Dr. B. R. Ambedkar University, Agra, 27th - 28th February 2017.
3. Organized “Science, Technology and Emerging Applications of Microscopy”, Dr. B. R. Ambedkar University, Khandari, Agra, 11-12, November, 2019 as convener
4. 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: 03

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: 08

1. Journal of Applied Polymer Science
2. Arabian Journal of Chemistry
3. Iranian Polymer Journal
4. Science of the Total Environment
5. Polymer composites
6. Journal of Thermal Analysis and Calorimetry
7. Journal of Environmental Chemical Engineering
8. Material Bulletin

Research Areas: Nanotechnology, Natural products, Water pollutions, Polymer science, Computational Chemistry.

Research Project:(01 On-going from UP Govt.) (01 completed from UGC-New Delhi)

M.Phil/Ph.D. Research Guided:38(M.Phil.)+1(Ph.D. Co-supervised)

Place: AGRA

Dr. Gautam Jaiswar