CURRICULUM VITAE

Dr. Pushpa Rani, M. Tech (Gold Medalist), Ph. D
Assistant Professor
Deptt. of Environmental Science & Engineering,
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Research Expertise: Bio-energy/Bio-fuel, Pollution Monitoring and Abatement Wastewater treatment, Bioremediation

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Teaching Experience

1. Assistant Professor, Department of Environmental Science & Engineering, Guru Jambheshwar University of Science & Technology, Hisar, Haryana (Since 21st April 2025).
2. Worked as Temporary Teacher in the Department of Environmental Science & Engineering, Guru Jambheshwar University of Science & Technology, Hisar, Haryana from 14th September, 2023 to 21st April, 2025.
3. Worked as Guest Faculty in the Department of Environmental Science & Engineering, Guru Jambheshwar University of Science & Technology, Hisar, Haryana from August, 2016 to April, 2017 and from August 2017 to March 2018.

Education Qualification: - M.Sc., M.Tech., Ph.D.
Department of Environmental Science and Engineering,
Guru Jambheshwar University of Science and Technology, Hisar (Haryana) India

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Awards & Honors:

Sr. No	Name of Award	Awarding Agency	Year
1	TEQIP-III	World Bank fellowship	May, 2019-Sept 2021
2.	M.Tech **Topper (Gold Medalist)**	GJUS&T, Hisar	2013
3.	UGC Net	UGC, New Delhi	2012

Research Project (Ongoing)

- Inspection of Grossly Polluting Industries (GPIs-2025) located in Haryana under the project titled *'Inspection of GPIs for Compliance Verification'* sponsored by the Central Pollution Control Board, New Delhi (CPCB).

- Cost-effective Acetone-Butanol-Ethanol Production from Cellulosic Biomass Hydrolysate via Adaptive Evolution Approach" Rashtriya Uchchatar Shiksha Abhiyan Ministry of Human Resource Development, Department of Higher Education Government of India.

- Synthesis of Agro-Based Adsorbent for Textile Dye Removal: An Economical and Sustainable Approach for Wastewater Treatment.

Research Project (Completed)

- Inspection of Grossly Polluting Industries (GPIs-2024) located in Uttar Pradesh under the project titled *'Inspection of GPIs for Compliance Verification'* sponsored by the Central Pollution Control Board, New Delhi (CPCB).

Publications

- **Pushpa Rani,** Chhotu Ram, Arti Yadav, Deepak Kumar Yadav, Kiran Bishnoi, Narsi R. Bishnoi and Surendra Prasad (2025). Bio-hydrogen Production from Rice Straw via Ferrous Sulphate and Nickel Chloride Inclusion: A Pathway to Enhanced Efficiency. **communicated**
- Kiran Bishnoi, **Pushpa Rani**, and Narsi R. Bishnoi (2024). Enhanced Phenanthrene biodegradation by *Bacillus brevis* using Response Surface Methodology. *Nature Environment and Pollution Technology*, 23 (3) 1517-1526.
- Kiran Bishnoi, **Pushpa Rani**, Minakshi Karwal and Narsi R. Bishnoi (2024). PAHs biodegradation by locally isolated *P. chrysosporium* and *P. citrinum* from liquid and spiked soil. *Nature Environment and Pollution Technology*, 23 (2).
- Kiran Bishnoi, **Pushpa Rani** and Narsi R. Bishnoi (2024). Polycyclic aromatic hydrocarbons in sewage-irrigated vegetables from industrial cities in Haryana, India. *Environmental Monitoring and Assessment*, 196 (4), 337 **(Springer, IF: 3.3)**
- **Pushpa Rani**, Deepak Kumar Yadav, Arti Yadav, Narsi R. Bishnoi, Vivek Kumar, Chhotu Ram, Arivalagan Pugazhendhi, Smita S Kumar (2024). Frontier in dark fermentative biohydrogen production from lignocellulosic biomass: Challenges and future prospects. *Fuel*, 366, 131187 (**Elsevier, IF: 8.03)**
- Arti Yadav, **Pushpa Rani**, Deepak Kumar Yadav, Rishi Mittal, Asha Gupta, and Narsi R. Bishnoi. (2024). Comparative study for enzymatic hydrolysis of sugarcane bagasse using free and nanoparticle immobilized holocellulolytic enzyme cocktail. *Waste Management Bulletin*, 2, 191-202 (**Elsevier**).
- Arti Yadav**, Pushpa Rani**, Deepak Kumar Yadav, Nisha Bhardwaj, Asha Gupta, and Narsi R. Bishnoi (2024). Enhancing Enzymatic Hydrolysis and Delignification of Sugarcane Bagasse Using Different Concentrations of Sodium Alkaline Pretreatment. *Nature Environment and Pollution Technology*, 23 (1), 1-8.
- Kiran Bishnoi, **Pushpa Rani**, and Narsi R. Bishnoi (2024). Optimization of Phenanthrene biodegradation process by isolated bacterial strain *Rhodococcus spp.* using response

surface methodology. *Research Journal of Chemistry and Environment,* 28,7. https://scopus.com/sourceid/5300152224.

- **Pushpa Rani**, Chhotu Ram, Deepak Kumar Yadav, Arti Yadav, Kiran Bishnoi, and Narsi R. Bishnoi (2023). Comparative analysis of various seed sludge for biohydrogen production from alkaline pretreated rice straw. *Nature Environment & Pollution Technology*, 23(2), 1065-1073. (**Scopus, Impact Factor: 0.91**)
- **Pushpa Rani**, Deepak Kumar Yadav, Arti Yadav, Subhash Chander, and Narsi R. Bishnoi (2023). Structural and morphological alteration of wheat straw biomass utilizing alkali pre-treatment. *Annals of Biology*, 39 (2), 185-191. (**Scopus, Impact Factor: 0.32**).
- Arti Yadav**, Pushpa Rani**, Deepak Kumar Yadav and Narsi R. Bishnoi, and Asha Gupta (2023). Functionalized iron oxide nanoparticle for covalent immobilization of cellic CTec2 cellulase: Enabling enzyme reusability in cellulosic biomass conversion. *Biofuel,* 1-11(**Taylor & Francis, Impact Factor: 2.90**).
- Deepak Kumar Yadav, Meenu Yadav, **Pushpa Rani,** Arti Yadav**,** Nisha Bhardwaj, and Narsi R. Bishnoi, and Anita Singh (2023). Screening of best growth media for *Chlorella vulgaris* cultivation and biodiesel production. *Biofuel*,15(3), 271-277. (**Taylor & Francis, Impact Factor: 2.73**).
- Deepak Kumar Yadav, Meenu Yadav, **Pushpa Rani,** Arti Yadav, Nisha Bhardwaj, and Narsi R. Bishnoi, and Anita Singh (2023). Demonstration of n-dodecane suitability for milking lipids from *Chlorella vulgaris* for the production of biodiesel. *Bioresource Technology Reports*, 23, 101550 (**Elsevier, Impact Factor**).
- Deepak Kumar Yadav, Meenu Yadav, **Pushpa Rani,** Arti Yadav, Narsi R. Bishnoi, and Anita Singh (2023). Impact of silica oxide and functionalized silica oxide nanoparticles on growth of *Chlorella vulgaris* and its physiochemical. *Sustainable Chemistry for the Environment*, 3, 100029. (**Elsevier,)**
- Chhotu Ram, A. Kumar, **Pushpa Rani** (2021). Municipal Solid Waste Management: A Review of Waste to Energy (WTE) Approaches. *Bioresources*, 16, 2, ISSN:1930-2126 **(SCI, Impact Factor: 1.747**).
- Chhotu Ram, **Pushpa Rani,** and Amit Kumar (2020) Recent developments in biohydrogen production from wastewater: A review. *Biocatalysis and Biotransformation*, 42(1), 1-18 (**Taylor & Francis, Impact Factor: 2.34**).
- Suman Mor, Surender Singh, Punam Yadav, Versha Rani, **Pushpa Rani**, Monika Sheoran, Gurmeet Singh, Ravindra Khaiwal (2009). Appraisal of salinity and fluoride in a semi-arid region of India using statistical and multivariate techniques, *International Journal Environ Geochem Health*, 31, 643–655 (**Springer, Impact Factor: 4.898**).

Book Chapter

- **Pushpa Rani,** Kiran Bishnoi, Deepak Kumar Yadav and Narsi R. Bishnoi, and Anita Singh (2022). Biohydrogen Production Technologies: Past, Present, and Future Perspective. In Biomass, Bioenergy & Bioeconomy (pp. 185-205). Singapore: Springer Nature Singapore.
- Chhotu Ram**, Pushpa Rani,** K. A. Gebru, Mebrhit G/mariam A. (2019). Pulp and paper industry wastewater treatment: Use of microbes and their enzymes: Book: Green Pulp and Paper Industry: Biotechnology for Ecofriendly Processing.**,** Edited by: A. Kumar, P. Pathak and D. Dutt (2020), De Gruyter, Germany. ISBN: 978-3-11-059184-2.