

CHANDANI RAI

Chemistry Postgraduate | Pioneering Green Chemistry Solutions | Materials & Energy Innovation

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SUMMARY

Motivated postgraduate student of Chemistry with a strong foundation in analytical techniques, organic synthesis, and real-world chemical applications. Passionate about applying chemistry knowledge to solve environmental and industrial problems. Known for practical problem-solving, teamwork, and active participation in research and outreach programs.

EXPERIENCE



Chemical Safety Auditor

Educational Institutions & Small Industries

01/2022 - 04/2024 Varanasi, Uttar Pradesh

- Conducted laboratory safety audits for schools and colleges.
- Assisted in regulatory compliance documentation for chemical usage for local small scale industries.



Environmental Testing Researcher

Agricultural & Industrial Clients

06/2022 - Present Varanasi, Uttar Pradesh

- Conducted soil pH and nutrient analysis for local farmers and nurseries.
- Performed chemical compatibility tests for agricultural fertilizer combinations.
- Provided soil testing and fertility analysis services for 50+ local farmers.
- Developed bio-fertilizer solutions using beneficial microorganisms for soil health improvement.



Chemistry Content Developer

Online Education Platforms

03/2021 - Present Varanasi, Uttar Pradesh

- Created educational content for chemistry concepts and industrial applications.
- Supported senior product managers in roadmap planning and execution.



Laboratory Analysis Consultant

Local Small Businesses

03/2022 - 02/2024 Varanasi, Uttar Pradesh

- Provided water quality testing services for local restaurants and small industries.
- Conducted pH, hardness, and contamination analysis for water treatment plants.
- Offered consultation on chemical safety protocols for small manufacturing units.
- Assisted in quality control testing for local Soft drinks and Ice-Cream manufacturers.

EDUCATION



Master of Science in Chemistry (M.S.C.) - 66.4%

Mahatma Gandhi Kashi Vidyapith, Varanasi

05/2022 - 05/2024 Varanasi, Uttar Pradesh



Bachelor of Science in Chemistry (B.S.C.) - 61.8%

Mahatma Gandhi Kashi Vidyapith, Varanasi

03/2019 - 05/2022 Varanasi, Uttar Pradesh



Intermediate (XII) - Science Stream - 53.8%

A.B. Vajpayee Intermediate College, Varanasi

03/2018 - 05/2019 Varanasi, Uttar Pradesh



High School (X) - Science Stream - 68.3%

A.B. Vajpayee Intermediate College, Varanasi

03/2016 - 05/2017 Varanasi, Uttar Pradesh

KEY ACHIEVEMENTS



Optimized Fertilizer Formulations for Local Farmers Through Chemical Analysis

- Developed customized nutrient solutions for 50+ local farmers, reducing fertilizer costs by 20% while maintaining crop yields.



Developed Cost-Effective Soil Testing Methods for Agricultural Applications

- Created and simplified soil Testing Methods, making soil testing accessible to small-scale farmers at 70% reduced cost.



Researched Natural Water Purification Methods Using Plant-Based Materials

- Investigated moringa seed-based water treatment.



Herbal Cosmetic Formulation Using Natural Colorants

- Formulated 5 natural lipstick shades using beetroot and turmeric extracts, creating completely biodegradable cosmetics.

SKILLS

Analytical Techniques

Laboratory Expertise

Technical Softwares

Materials Science

Agricultural Chemistry

Food & Environmental Chemistry

Environmental Chemistry

Battery Technology

CERTIFICATION

Battery Technology - From ARIZONA STATE UNIVERSITY

Completed course on battery fundamentals and energy storage from Coursera.

Hydrogen Fuel Cells - From UDEMY

Certified in hydrogen fuel cell basics and clean energy systems via Udemy.

INTERESTS



Industrial Chemistry Innovation

Focused on scalable, eco-friendly solutions for efficient industrial processes.



Sustainable Energy Development

Interested in advancing battery materials for clean energy and EVs.