


CURRICULUM VITAE

Full Name	Dr. Anuj Kandwal	
Designation	Assistant Professor	
Department	Chemistry	
College	H.V.M. (PG) College, Raisi, Haridwar	
Mobile	+918057082010	
Email Id	anujkandwal4@gmail.com	

➤ EDUCATION QUALIFICATION:

Qualification	Year	Institution	Board /University
Ph.D Chemistry	2021	H.N.B Garhwal University Srinagar(Garhwal) Uttarakhand	H.N.B Garhwal University Srinagar(Garhwal) Uttarakhand
CSIR JRF	2017	CSIR	CSIR
UGC JRF	2017	CSIR	CSIR
M.Sc. Chemistry	2014	Dr. P.D.B Govt. PG College Kotdwara	H.N.B Garhwal University Srinagar(Garhwal) Uttarakhand

➤ **Area of Interest/Specialization:** Organic Chemistry, Physical Chemistry, Nanoscience and Natural Products.

➤ Honours and Awards:

- * Junior and Senior Research Fellowship by CSIR under CSIR-UGC Fellowship Scheme, 2017-2019.
- * Young Scientist Award by 16th Uttarakhand State Science and Technology Congress 2021-2022.

➤ **PROFESSIONAL EXPERIENCE: (9 Years)**

Institution	Designation	Service	
		From	To
H.N.B Garhwal University Srinagar(Garhwal) Uttarakhand	Research Scholar	10/02/2015	31/12/2019
Harsh Vidya Mandir PG College, Raisi Haridwar	Assistant Professor	07/01/2020	Till date

➤ **Paper Publication: 22 published and 2 communicated.**

1. Gupta, S., Purohit, R., Syal, S., Purohit, S., **Kandwal**, A., Bachheti, A., & Purohit, M. C. (2026). Bioinspired gold nanoparticles synthesized from *Persicaria capitata* leaves and their antimicrobial and anticancer activities. *International journal of Environmental Sciences*, 2025, 11(23), 2098-2114.
2. Khajuria, A. K., **Kandwal**, A., Sharma, R. K., Bachheti, R. K., Worku, L. A., & Bachheti, A. (2025). In vitro antioxidant and antibacterial activities of biogenic synthesized zinc oxide nanoparticles using leaf extract of *Mallotus philippinensis* Mull. Arg. *Scientific Reports*, 15(1), 6541.
3. Ashagrie, Y. N., Chaubey, K. K., Tadesse, M. G., Dayal, D., Bachheti, R. K., Rai, N., **Kandwal**, A., & Bachheti, A. (2025). Antidiabetic phytochemicals: an overview of medicinal plants and their bioactive compounds in diabetes mellitus treatment. *Zeitschrift für Naturforschung C*.
4. Sharma, R., Tyagi, S., **Kandwal**, A., Bachheti, R. K., & Bachheti, A. (2024). Green Synthesis of Silver/Silver Chloride Nanoparticles Mediated by *Alternanthera philoxeroides* Leaf Extract and Their Biological Activity. *Russian Journal of General Chemistry*, 94(7), 1750-1757.
5. Parveen, S., Gupta, V., **Kandwal**, A., Gautam, A., Rawat, R., Gupta, P.K. & Singh, N. (2024). Biosynthesis and evaluation of metallic nanoparticles (ZnO-NPs) using polyphenol-containing *Ajuga macrosperma* (Ghonke ghas) leafextract, along with anticancer activity and antimicrobial activity. *Advances in Bioresearch*, 2024,15, 379-390.
6. Parveen, S., Gupta, V., Kumar, V. N., Srineetha, U., **Kandwal**, A. & Gautam, A. (2024). Therapeutic potential of bioactive copper oxide nanoparticles (CNPs) towards breast cancer, lungs cancer and prostate cancer. *Bulletin of Environment, Pharmacology and Life Sciences*, 2024 13(2), 225-230.
7. Parveen, S., Gupta, V., **Kandwal**, A., & Kumar, V. N. (2023). In Vitro Antimicrobial and Anticancer Activity of Metallic Nanoparticles (Ag and FeO) against Human Pathogenic Bacteria and Cancer Cell Lines. *Engineering Proceedings*, 56(1), 294.
8. Gupta, S., Jasrotia, S., **Kandwal**, A., Rawat, R., & Purohit, M. C (2023). Green Synthesis of Silver Nitrate Nanoparticles using L. of *Pyracantha crenulata* and its Anticancer Activity on Liver Cancer 18(2), 273-283.

9. Rawat, R., **Kandwal**, A., Purohit, R., Khajuria, A. K., Gupta, S., & Purohit, M. C (2023). Green Synthesis Of Zinc Oxide Nanoparticles Using *Sapindus Mukorossi* Fruit Extact, *Characterization And Their Antioxidant Activity*, 18(2), 25-32.
10. Parveen, S., **Kandwal**, A., Rao, C.N., & Kumar, D.V.K. (2023). Green Fabrication of Titanium Dioxide Nanoparticles and their Antimicrobial and Anticancer Activities. *Asian Journal of Chemistry*, 35(6), 1315-1319.
11. Sharma R., **Kandwal**, A. & Tyagi, S. (2023). Plant-mediated Green Synthesis of Silver Nanoparticles and its Biomedical Applications: A Review. *Journal of Environment and Bio-Sciences*, 37(1), 75-81.
12. Parveen, S., Gupta, V. & **Kandwal**, A (2022). Biosynthesis and evaluation of metallic silver nanoparticles (AgNPs) using *Ajuga macrosperma* (Ghonke ghas) leaf extract, along with anticancer activity. *Advances in Bioresearch*,13(6), 71-79.
13. Purohit, M. C., Rawat, R. **Kandwal**, A., Semwal, A. R., Joshi, R. K. (2021). Biosynthesis of Silver Nanoparticles Using *Terminalia Bellirica* Fruit Extract and Their Characterization. *Journal of Mountain Research*, 16(1), 267-273.
14. Parveen, S., & Sharma, G., & Khajuria, A. K., & **Kandwal**, A. (2022). A Review Synthesis and Biological Evaluation of Plant-Based Metallic Gold Nanoparticles. *Journal of Pharmaceutical Research International*. 68-88. 10.9734/jpri/2022/v34i7B36262. ISSN: 2456-9119
15. Purohit, M. C., **Kandwal**, A., Purohit, R., Semwal, A. R., Parveen, S., & Khajuria, A. K. (2021). Antimicrobial Activity of Synthesized Zinc Oxide Nanoparticles using *Ajuga bracteosa* Leaf Extract. *Asian Journal of Pharmaceutical Analysis*, 11(4), 275-280.
16. Parveen, S., Sharma G., Sharma, S.B. and **Kandwal**, A. (2021) A Review on Synthesis and Biological Evaluation of Plants Based Metallic Nanoparticles. *Global Journal of Research and Review*, 8, 1-17.
17. Khajuria, A. K., Kumari, M., **Kandwal**, A., Singh, A. and Bisht, N. (2021). Biofabrication of Zinc Oxide nanoparticles from two different zinc source and their antimicrobial activity. *Journal Bionanosciences*, 1-17.
18. Purohit, M. C., **Kandwal**, A., Khajuria, A. K., Singh, M., Rawat, R. (2020). Antimicrobial Activity Of *Ajuga Parviflora* Leaf Extract Mediated Synthesized Zinc Oxide Nanoparticles. *Plant Archives*, 20(2), 1627-30.
19. Purohit, P., Purohit, M. C., **Kandwal**, A., Rawat, R. (2020). Dyeing of Woollen Fibers with *Rhododendron arboreum* Flowers Using *Symplocos racemosa* Leaves as Mordant under Optimum Condition. *Journal of Mountain Research*, 15, 57-62.
20. Khajuria, A. K., Negi, A., Bisht, N. S., Maurya, V. and **Kandwal**, A. (2019) Green Synthesis, Characterization and Antimicrobial Activity of Zinc Oxide Nanoparticles Using Root Extract of *Viola canescens* Wall. ex. Roxb. *Asian Journal of Chemistry*, 31, 551-554.

21. **Kandwal, A.**, Purohit, P., Khajuria, A. K., Kumar, G., Purohit, M. C. and Mandal, N. K. (2019). Synthesis of zinc oxide nanoparticles using leaf extract of *Ajuga parviflora* Benth. in Wall. and their characterization. *Journal of Pharmacognosy and Phytochemistry*, 8, 493-96.
22. **Kandwal, A.**, Purohit, M. C., Khajuria, A. K., and Joshi, R. K. (2019). Green Synthesis, Characterization And Antimicrobial Activity Of Silver Nanoparticles Using Leaf Extract Of *Ajuga Parviflora* Benth. In Wall. *Plant Archives*, 19(2), 762-768.

➤ **BOOKS and BOOK CHAPTERS:** 8 published, 2 communicated.

1. Parveen, S., Thakur, H., Khajuria, A. K., Gautam, A., Bachheti, R. K., Purohit, S., & **Kandwal, A.** (2026). Medicinal and Health Benefits of Crocus Sativus (Saffron). In *Exploring Medicinal and Commercial Uses of Flowers* (pp. 139-149). CRC Press.
2. Purohit, S., Khajuria, A. K., Gautam, A., Bachheti, R. K., Bachheti, A., & **Kandwal, A.** (2026) Catharanthus Roseus: A Magical Flower with Numerous Medicinal Properties. In *Exploring Medicinal and Commercial Uses of Flowers* (pp. 129-138). CRC Press.
3. Khajuria, A. K., Bachheti, R. K., Bachheti, A., & **Kandwal, A.** (2024). Plant-Mediated Synthesis and Characterization of Zinc Oxide Nanoparticles. In *Metal and Metal-Oxide Based Nanomaterials: Synthesis, Agricultural, Biomedical and Environmental Interventions* (pp. 25-41). Singapore: Springer Nature Singapore.
4. **Kandwal, A.**, Parveen, S., Bachheti, R. K., Bachheti, A., & Khajuria, A. K. (2024). Green Synthesis of Silver and Silver Oxide Nanoparticles from Plants and Their Characterization. In *Metal and Metal-Oxide Based Nanomaterials: Synthesis, Agricultural, Biomedical and Environmental Interventions* (pp. 1-24). Singapore: Springer Nature Singapore.
5. **Kandwal, A.**, Bachheti, R.K., Parveen, S., Bachheti, A., Khajuria, A.K. (2023). Role of Nanoemulsions in Cosmetics. In: Husen, A., Bachheti, R.K., Bachheti, A. (eds) *Current Trends in Green Nano-emulsions. Smart Nanomaterials Technology.* Springer, Singapore. https://doi.org/10.1007/978-981-99-5398-1_14.
6. Purohit, M. C., **Kandwal, A.**, Purohit, S., Bachheti, A., & Khajuria, A. K. (2023). Photochemistry, Medicinal and Commercial Applications of Beta vulgaris L. In *Medicinal Roots and Tubers for Pharmaceutical and Commercial Applications* (pp. 179-187). CRC Press.
7. **Kandwal, A.**, Bachheti, R. K., Purohit, S., Bachheti, A., & Khajuria, A. K. Medicinal and Commercial Uses of Angelica Roots. In *Medicinal Roots and Tubers for Pharmaceutical and Commercial Applications* (pp. 89-100). CRC Press.
8. Purohit, S., Purohit, M. C., Khajuria, A. K., Bachheti, R. K., & **Kandwal, A.** (2023). Therapeutic Importance of Withania somnifera (Ashwagandha) in Medicine. In *Medicinal Roots and Tubers for Pharmaceutical and Commercial Applications* (pp. 117-129). CRC Press.
9. Associate editor- Application of Nanotechnology (National Press Associates, New Delhi, ISBN: 978-81-19674-58-9)

10. Associate Author- Pharmaceutical Inorganic Chemistry (Multidimensional publications, Lucknow, ISBN- 9788196159542)

➤ **ORIENTATION AND REFRESHER COURSES:**

1. Eight Weeks MOOCs course (Jan-March 2020) on “Chemical Applications of symmetry and Group Theory”.
2. One day Workshop on “Regional Sensitization And Training Workshop Of Water Quality Management For Educational Institutions” dated 09th Mar’ 2021 organized by HVM (P.G.) College, Raisi, Haridwar.
3. Successfully completed a One-Week Faculty Enrichment Programme on “21st Century Skills for University Teachers” (21 June 2021- 26 June 2021) Organized by Amity University, Haryana.
4. One week FDP, 5 July- 12 July 2021, organized by Teerthankar Mahaveer University, Moradabad.
5. Four week induction/orientation programme, 19 November- 18 December 2021, organized by Ramanujan College, University of Delhi.
6. Two week refresher course, 22 December 2021- 05 January 2022, organized by Ramanujan College, University of Delhi.
7. Five day workshop, 25th April- 29th April 2022, organized by Amity University, Haryana.
8. Two day workshop, 20 June- 21 June 2022, jointly organized by NASI, Prayagraj; BCIL, New Delhi; UCOST, Dehradun; UCB, Haldi, U.S.Nagar.
9. One week FDP, 20 August- 26 August 2022, organized by Ramanujan College, University of Delhi.
10. Two week refresher course, 23 January 2021- 06 February 2022, organized by Ramanujan College, University of Delhi.
11. One week FDP, 11 February- 17 February 2023, organized by Raghunath Girls (P.G.) College, Meerut.
12. One week FDP UNMESH, 16 May- 22 May 2023, organized by Saheed Mangal Pandey Government Girls (P.G.) College, Meerut.
13. 9 days professional development programme, 13 April- 21 April, 2023, organized by IGNOU.
14. One week FDP UNMESH, 16 May- 22 May 2023, organized by Saheed Mangal Pandey Government Girls (P.G.) College, Meerut.
15. Two week refresher course in Chemistry from 15 december to 29 december 2023.
16. Faculty training programme ‘NEP 2020 Orientation & Sensitization Programme’ from 23 december to 31 december 2023.

➤ **EXTRA CURRICULAR ACTIVITIES:**

- * Participated and presented a paper in the international seminar on “Environmental degradation- Causes and Consequences” at Panchayatbhawan Moradabad on 25 Feb 2018.
- * Participated and presented a paper in 12th USSTC 2017-18 during 07-09 March 2018 at Uttarakhand State Council for Science and technology, Vigyan Dham, Dehradun.

- * Participated and presented a paper in the international conference on “Advances in Analytical Sciences (ICAAS-2018)” at CSIR-IIP, Dehradun during 15-17 March 2018.
- * Participated and presented a paper in the national conference on “Recent Advances in Chemical and Nanosciences” held at Department of Chemistry, HNB Garhwal university, BGR Campus, Pauri (Garhwal) on 29 & 30 October 2018.
- * Participated and presented a paper in the national conference on “Recent frontiers in chemistry (NCRFC-2018)” held at Department of Chemistry, HNB Garhwal university, Srinagar Garhwal on 27 & 28 April 2018.
- * Participated and presented a paper in the national conference on “Recent Advances in Natural Products Chemistry and Nanotechnology (RANPCN-2019)” held at Department of Chemistry, HNB Garhwal university, Srinagar Garhwal on 09 & 10 September 2019.
- * Participated and presented a paper in the national conference on “Science & Technology: Rural Development” Organised by The Indian Science Congress Association: Haridwar Chapter held at Department of Chemistry and Department of Physics Gurukul Kangri Vishwavidyalaya, Haridwar on 15 & 16 February 2020.
- * Participated in one day International Webinar “Covid-19 Pandemic Emerging Challenges and Perspectives in E-learning dated 29th May 2020 organized by Harsh Vidya Mandir (P.G.) College, Raisi- Haridwar.
- * Paper presented in International Conference on Applied Sciences & Engineering (ICASE-2021) “Science & Technology: Rural Development” entitled “ANTIMICROBIAL ACTIVITY OF BIO-FABRICATED ZINC OXIDE NANOPARTICLES USING LEAF EXTRACT OF *AJUGA BRACTEOSA*” dated 20-21 February 2021 organized by Roorkee Institute of Technology.
- * Participated in one day International Webinar “New Horizons in Chemical Sciences & Technology” dated 29th Sep 2020 organized by Ch. Chhotu Ram (P.G.) College, Muzafarnagar.
- * Participated in one day International e-conference “Recent Advances in Chemical sciences” dated 15 June 2021 organized by University of Lucknow, Lucknow.
- * Paper presented in a two days international online conference on Advances in Chemical Science entitled “Plant mediated synthesis of ZnO nanoparticles using extracts of *Cyanthillium cinerium*, characterization and antimicrobial activities” dated 04 December 2021 organized by H.V.M.P.G. College, Raisi, Haridwar.
- * Paper presented in a one day national seminar on Social media: Society and Culture entitled “Impact of social media on mental health” dated 04 December 2021 organized by H.V.M.P.G. College, Raisi, Haridwar.
- * Paper presented in a 16th Uttarakhand State Science and Technology Congress 2020-22 entitled “A green approach to plant mediated synthesis of silver nanoparticles using *Rumex*

hastatus leaf extract and their antimicrobial and in vitro antioxidant activities” dated 22nd to 24th June 2022 organized by UCOST, Dehradun.

- * Participated in a two days national webinar on Role of India In Environmental Sustainability: In Context To Bio-Resources & Water dated 27-28 August 2021 organized by Uttarakhand Open University.

➤ **SOFTWARE PROFICIENCY:**

- ❖ Basics of Computers
- ❖ Ms-Office

➤ **KNOWN LANGUAGES:**

- ❖ English
- ❖ Hindi

➤ **PERSONAL STRENGTH:**

- ❖ Good Communication
- ❖ Interpersonal Relationship
- ❖ Independent Working Ability
- ❖ Excellent Grasping Ability
- ❖ Extensive knowledge in Theoretical and Practical Aspects
- ❖ Self-Confidence with Tolerance Capability
- ❖ Well developed in organizational and Leadership Skills