

Curriculum-Vitae of  
**Bhoj Raj Poudel, Ph.D.**



**Personal Information:**

Date of birth : 14<sup>th</sup> Sept 1975 A.D.  
(2032-05-29 B.S.)

Place of birth : Chitwan, Nepal

Gender : Male

Marital Status: Married, two Children

Designation: Assistant Professor

Areas of research: Water Purification,  
Materials Synthesis and  
Characterization,  
Nanochemistry

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**Contact Information:**

Dr. BHOJ RAJ POUDEL

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Tribhuvan University,

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**Academic Qualifications:**

Abbreviation of the degree	Passed Year	Institution	Major Subjects/Specialization
M.Sc. in Chemistry	2001	Central Department of Chemistry, Tribhuvan University, Nepal	Specialization in Inorganic Chemistry
Ph.D. in Chemistry	2023	Institute of Science and Technology, Tribhuvan University, Nepal	Materials synthesis/ Water Purification

### Positions held/ holding:

- **Part-time faculty** (2002 to 2008) at Department of Chemistry Tri-Chandra Multiple Campus, Tribhuvan University, Kathmandu, Nepal.
- **Lecturer (Contract)** (27<sup>th</sup> April 2008 to 18<sup>th</sup> March 2017) at at Department of Chemistry Tri-Chandra Multiple Campus, Tribhuvan University, Kathmandu, Nepal.
- **Lecturer (Permanent)** (19<sup>th</sup> March 2017 to till date) at Department of Chemistry Tri-Chandra Multiple Campus, Tribhuvan University, Kathmandu, Nepal.
- **B. Sc. Programme Coordinator** (23<sup>rd</sup> February 2016 to 31<sup>st</sup> March 2018) of Department of Chemistry Tri- Chandra Multiple Campus, Kathmandu, Nepal.

### Recognition:

- **Secretary** of the executive council (2013 to 2015) of Nepal Chemical Society (NCS).
- **Executive Member** (2015-2018) of Tribhuvan University Teachers Association (TUTA) Tri- Chandra campus unit.

### Major Research Publication in SCI-mago Ranked/ Impact Factor Rated Journals:

1. Baral, J., Timalisina, S., Dhungana, S., Tiwari, L., Khadka, D., & Poudel, B. R. (2025). Aloe vera–Based Green Synthesis of Silver Nanoparticles With Characterization, Potent Antibacterial and Antioxidant Properties. *Asia-Pacific Journal of Chemical Engineering*, e70198. <https://doi.org/10.1002/apj.70198>
2. Pant, B. D., Adhikari, S., Shrestha, N., Baral, J., Paudyal, H., Ghimire, K. N., ... & **Poudel, B. R.** (2024). Iron-loaded Punica granatum peel: An effective biosorbent for the excision of arsenite from water. *Heliyon*, 10(17), e37382. <https://doi.org/10.1016/j.heliyon.2024.e37382>
3. Rai, R., Aryal, R. L., Paudyal, H., Gautam, S. K., Ghimire, K. N., Pokhrel, M. R., & **Poudel, B. R.** (2023). Acid-treated pomegranate peel; an efficient biosorbent for the excision of hexavalent chromium from wastewater. *Heliyon*, 9(5), e15698. <https://doi.org/10.1016/j.heliyon.2023.e15698>
4. Bashyal, N., Aryal, S., Rai, R., Lohani, P. C., Gautam, S. K., Pokhrel, M. R., & **Poudel, B. R.** (2023). Effective Biosorption of Phosphate from Water Using Fe (III)-Loaded Pomegranate Peel. *Chemical and Biochemical Engineering Quarterly*, 37(2), 67-77. <https://doi.org/10.15255/CABEQ.2022.2174>
5. Bhattarai, K. P., Pant, B. D., Rai, R., Aryal, R. L., Paudyal, H., Gautam, S. K., ... & **Poudel, B. R.** (2022). Efficient Sequestration of Cr (VI) from Aqueous Solution Using Biosorbent Derived from *Arundo donax* Stem. *Journal of Chemistry*, 2022, 9926391. <https://doi.org/10.1155/2022/9926391>

6. Pant, B. D., Neupane, D., Paudel, D. R., Lohani, P. C., Gautam, S. K., Pokhrel, M. R., & **Poudel, B. R.** (2022). Efficient biosorption of hexavalent chromium from water by modified arecanut leaf sheath. *Heliyon*, 8(4), e09283. <https://doi.org/10.1016/j.heliyon.2022.e09283>
7. **Poudel, B. R.**, Aryal, R. L., Gautam, S. K., Ghimire, K. N., Paudyal, H., & Pokhrel, M. R. (2021). Effective remediation of arsenate from contaminated water by zirconium modified pomegranate peel as an anion exchanger. *Journal of Environmental Chemical Engineering*, 9(6) 106552. <https://doi.org/10.1016/j.jece.2021.106552>
8. **Poudel, B.R.**, Aryal, R.L., Bhattra, S., Koirala, A.R., Gautam, S.K., Ghimire, K.N., Pant, B., Park, M., Paudyal, H., & Pokhrel, M.R. (2020). Agro-waste Derived Biomass Impregnated with TiO<sub>2</sub> as a Potential Adsorbent for Removal of As (III) from Water, *catalysts*, 10, 1125. <https://doi.org/10.3390/catal10101125>
9. Aryal, R. L., Bhurtel, K. P., **Poudel, B. R.**, Pokhrel, M. R., Paudyal, H., & Ghimire, K. N. (2022). Sequestration of phosphate from water onto modified watermelon waste loaded with Zr (IV). *Separation Science and Technology*, 57(1), 70-82. <https://doi.org/10.1080/01496395.2021.1884878>
10. Aryal, R. L., Thapa, A., **Poudel, B. R.**, Pokhrel, M. R., Dahal, B., Paudyal, H., & Ghimire, K. N. (2022). Effective biosorption of arsenic from water using La (III) loaded carboxyl functionalized watermelon rind. *Arabian Journal of Chemistry*, 103674. <https://doi.org/10.1016/j.arabjc.2021.103674>
11. **Poudel, B. R.**, Dhungana, S., Dulal, A., Poudel, A. R., Tiwari, L., Khadka, D., Pokhrel, M. R., Poudel, M. B., Kim, A. A., & Baral, J. (2025). Eco-Friendly Fabrication of Zinc Oxide Nanoparticles Using *Gaultheria fragrantissima*: Phytochemical Analysis, Characterization, and Antimicrobial Potential. *Inorganics*, 13(7), 247. <https://doi.org/10.3390/inorganics13070247>
12. Shrestha, S., Tiwari, L., Dhungana, S., Maharjan, J., Khadka, D., Kim, A. A., Pokhrel, M. R., Baral, J., Park, M., & **Poudel, B. R.** (2025). Exploring Photocatalytic, Antimicrobial and Antioxidant Efficacy of Green-Synthesized Zinc Oxide Nanoparticles. *Nanomaterials*, 15(11), 858. <https://doi.org/10.3390/nano15110858>
13. Parajuli, K., Khanal, L. N., Ganga, G. C., Koju, S., Bhujel, S., Khadka, D., ... & **Poudel, B. R.** (2025). Lentil-Husk-Mediated Green Synthesis of Silver Nanoparticles: Characterization and Antibacterial Activity. *ChemEngineering*, 9(1), 17. <https://doi.org/10.3390/chemengineering9010017>
14. Paudel, D. R., Kaphle, G. C., **Poudel, B. R.**, KC, M., Singh, M., & Ojha, G. P. (2025). Enhanced Hydrogen Evolution Reaction of a Zn<sup>+2</sup>-Stabilized Tungstate Electrocatalyst. *Electrochem*, 6(1), 3. <https://doi.org/10.3390/electrochem6010003>
15. Khadka, D., Gautam, P., Dahal, R., Ashie, M. D., Paudyal, H., Ghimire, K. N., B. Pant, B. P. Bastakoti, **B. R. Poudel** & Pokhrel, M. R. (2024). Evaluating the

**Major Research Publication in Journal Publishing and Practices Standards (JPPS) Star Rated Journals:**

1. Thapa, R. B., Ojha, S. D., Dhungana, S., Tiwari, L., Khadka, D., Poudel, M. B., ... & **Poudel, B. R.** (2025). Eco-friendly synthesis of silver nanoparticles using *Withania somnifera* root extract: characterization, phytochemical profiling, and evaluation of antimicrobial activity. *BIBECHANA*, 22(3), 248-257. <https://doi.org/10.3126/bibechana.v22i3.76471>
2. Khadka, D., Bista, P., Baral, J., Gautam, S. K., Bastakoti, B. P., **Poudel, B. R.**, & Pokhrel, M. R. (2025). Green Synthesis of Zinc Oxide Nanoparticles Using *Swertia chirayita* for Photocatalytic and Antimicrobial Activity. *Journal of Institute of Science and Technology*, 30(1), 45-56. <https://doi.org/10.3126/jist.v30i1.72209>
3. **Poudel, B. R.**, Aryal, R. L., Ghimire, K. N., Paudyal, H., & Pokhrel, M. R. (2024). Potential removal of arsenite from contaminated water using a fixed bed column packed with TiO<sub>2</sub>-impregnated pomegranate peel powder. *BIBECHANA*, 21(1), 51-62. <https://doi.org/10.3126/bibechana.v21i1.60048>
4. **Poudel, B. R.**, Ale, D. S., Aryal, R. L., Ghimire, K. N., Gautam, S. K., Paudyal, H., & Pokhrel, M. R. (2022). Zirconium modified pomegranate peel for efficient removal of arsenite from water. *BIBECHANA*, 19(1-2), 1-13. <https://doi.org/10.3126/bibechana.v19i1-2.45943>
5. Shrestha, S., **Poudel, B.R.**, Silwal, M., & Pokhrel, M.R. (2018). Adsorptive removal of phosphate onto iron-loaded *Litchi chinensis* seed waste, *Journal of Institute of Science and Technology*, 23, 81-87. <https://doi.org/10.3126/jist.v23i1.22200>
6. Rai, R., Pokharel, M., Khadka, D., Baral, J., Paudel, D. R., Gautam, S. K., ... & **Poudel, B. R.** (2023). Effective Chromium (VI) Removal from Contaminated Water by Chemically Modified Litchi Chinensis Seed Powder: Characterization, Kinetic and Isotherm Studies. *International Journal of Environment*, 12(2), 83-102. <https://doi.org/10.3126/ije.v12i2.65442>
7. Aryal, R. L., **Poudel, B. R.**, Pokhrel, M. R., Paudyal, H., & Ghimire, K. N. (2021). Effectiveness of Zr (IV)-loaded banana peels biomass for the uptake of fluoride anion from water. *Journal of Institute of Science and Technology*, 26(2), 67-78. <https://doi.org/10.3126/jist.v26i2.41436>
8. Bhujel, A., Sapkota, B., Aryal, R. L., **Poudel, B. R.**, Bhattarai, S., & Gautam, S. K. (2021). Insight of precursor concentration, particle size and band gap of zirconia nanoparticles synthesized by co-precipitation method. *BIBECHANA*, 18(1), 1-9. <https://doi.org/10.3126/bibechana.v18i1.28958>

- Pokhrel, M.R., **Poudel, B.R.**, Aryal, R.L., Paudyal, H., & Ghimire, K.N. (2019). Removal and Recovery of Phosphate from Water and Wastewater Using Metal-Loaded Agricultural Waste-Based Adsorbents: A Review, *Journal of Institute of Science and Technology*, 24(1), 77-89. <https://doi.org/10.3126/jist.v24i1.24640>

#### Research Publication in Non-Ranked Peer-Reviewed Journals:

- Poudel, B. R.**, Tiwari, L., Magar, C., Dhungana, S., Poudel, A. R., Khadka, D., ... & Baral, J. (2025). Eco-friendly synthesis of zinc oxide nanoparticle using *Centella asiatica*: phytochemical analysis, characterization and antimicrobial activity assessment. *Scientific World*, 18(18), 39-46. <https://doi.org/10.3126/sw.v18i18.78439>
- Baral, J., Pokharel, N., Dhungana, S., Tiwari, L., Khadka, D., Pokhrel, M. R., & **Poudel, B. R.** (2025). Green Synthesis of Copper Oxide Nanoparticles Using *Mentha* (Mint) Leaves Characterization and Its Antimicrobial Properties with Phytochemicals Screening. *Journal of Nepal Chemical Society*, 45(1), 111-121. <https://doi.org/10.3126/jncs.v45i1.74491>
- Binadi, T. R., Mishra, P., **Poudel, B. R.**, & Gautam, S. K. (2025). Green Synthesis of Tin Oxide Nanoparticles using *Psidium guajava* Leaves Extract and its Applications in Antibacterial and Antioxidant Activities. *Journal of Nepal Chemical Society*, 45(1), 133-142. <https://doi.org/10.3126/jncs.v45i1.74493>
- Dhungana, S., Gauli, A., Tiwari, L., Khadka, D., Gautam, S. K., Pokhrel, M. R., ... & **Poudel, B. R.** (2024). Synthesis and Characterization of Copper Oxide Nanoparticles Isolated from *Acmella oleracea* and Study of Antimicrobial and Phytochemical Properties. *Amrit Research Journal*, 5(1), 18-29. <https://doi.org/10.3126/arj.v5i1.73521>
- Adhikari, S., Subedi, K., Dhungana, S., Arhyal, R. L., Paudyal, H., Ghimire, K. N., **Poudel, B. R.**, & Pokhrel, M. R. (2023). Chemical Modification of Banana Peels and Banana Pseudostem for the Adsorptive Removal of Chromium (VI) from Aqueous Solution. *Journal of Nepal Chemical Society*, 43(2), 23–33. <https://doi.org/10.3126/jncs.v43i2.53338>
- Sharma, P., Dhungana, S., Rai, R., Khadka, D., Hitan, D. K., Pokhrel, M. R., Gautam, S. K. & **Poudel, B. R.** (2022). Temperature Dependent Synthesis of Zinc Sulphide (ZnS) Nanoparticles and Its Characterization. *Amrit Research Journal*, 3(01), 67-74. <https://doi.org/10.3126/arj.v3i01.50498>
- Subedi, K., Adhikari, S., Dhungana, S., **Poudel, B. R.**, & Pokhrel, M. R. (2022). Spectrophotometric determination of phosphate in presence of arsenate. *Scientific World*, 15(15), 10-17. <https://doi.org/10.3126/sw.v15i15.45636>
- Subedi, S., Adhikari, D., & **Poudel, B. R.** (2022). Determination of heavy metals in varieties of fresh and packaged fruit juices along with powdered fruit drink mixes in Kathmandu Valley. *Journal of Balkumari College*, 11(1), 63-69. <https://doi.org/10.3126/jbkc.v11i1.53024>
- Aryal, S., Bashyal, N., Gautam, S. K., Pokhrel, M. R., & **Poudel, B. R.** (2021). Evaluation of lead and cadmium levels in lipsticks sold in Kathmandu, Nepal, and

- their potential health risk assessment. *International Journal of Applied Sciences and Biotechnology*, 9(3), 213-219. <https://doi.org/10.3126/ijasbt.v9i3.38834>
10. Rai, R., Karki, D. R., Bhattarai, K. P., Pahari, B., Shrestha, N., Adhikari, S., Gautam, S. K., & **Poudel, B. R.** (2021). Recent Advances in Biomass-Based Waste Materials for the Removal of Chromium (VI) from Wastewater: A Review. *Amrit Research Journal*, 2(01), 37–50. <https://doi.org/10.3126/arj.v2i01.40736>
  11. Regmi, B., Binadi, T. R., Jha, S. N., Chaudhary, R. K., **Poudel, B. R.**, & Gautam, S. K. (2021). Antibacterial and Antioxidant Studies of Green Synthesized Silver Nanoparticles using *Azadirachta indica* (Neem) Leaf Extract. *International Journal of Applied Sciences and Biotechnology*, 9(3), 220-226. <https://doi.org/10.3126/ijasbt.v9i3.39069>
  12. Bhujel, A., Wagle, K., Regmi, B., Sapkota, B., **Poudel, B. R.**, & Gautam, S. K. (2021). Utilization of Charred Water Hyacinth (*Jalkumvi*) as Biosorbent for Removal of Ca (II) Ion from Aqueous Solution. *Journal of Nepal Chemical Society*, 42(1), 107-114. <https://doi.org/10.3126/jncs.v42i1.35360>
  13. Aryal, R.L., Adhikari, B.R., Pokhrel, M.R., **Poudel, B.R.**, Paudyal, H & Ghimire, K.N. (2020). Preparation of pectin-based adsorbent for the uptake of phosphate anion from water, *Research Journal of Chemical Sciences*, 10(3), 16-24.
  14. **Poudel, B.R.**, Aryal, R.L., Khadka, L.K., Ghimire, K.N., Paudyal, H., & Pokhrel, M.R. (2020). Development of Biomass-Based Anion Exchanger for the Removal of Trace Concentration of Phosphate from Water, *Journal of Nepal Chemical Society*, 41, 56-63. <https://doi.org/10.3126/jncs.v41i1.30488>
  15. Aryal, R.L., **Poudel, B.R.**, Gautam, S.K., Paudyal, H., Pokhrel, M.R. & Ghimire, K.N. (2019). Removal of Fluoride from Aqueous Solution using Biomass-Based Adsorbents: A Review, *Journal of Nepal Chemical Society*, 40, 44-51. <https://doi.org/10.3126/jncs.v40i0.27281>
  16. **Poudel, B.R.** & Pokhrel M.R. (2019). A Critical Review of Chemistry Curriculum at Four Years B.Sc. Level Under the Institute of Science and Technology, Tribhuvan University, *Bulletin of Nepal Chemical Society*, April 2019, 1-7.
  17. Bhatt, P. R., Aryal, R. L., **Poudel, B. R.**, Bhattarai, S., & Gautam, S. K. (2018). Adsorptive Removal of Cr (VI) from Aqueous Solution onto Charred Sugar Cane Bagasse. *Journal of Nepal Chemical Society*, 39, 62-69. <https://doi.org/10.3126/jncs.v39i0.27035>
  18. Karki, S., Aryal, R.L., Bhattarai, S., Gautam, S.K., & **Poudel, B.R.** (2017). Adsorptive Removal of Arsenic(III) from Aqueous Solution Using Chemically-Modified Sweet Lime (*Citrus limetta*) Peels, *Journal of Nepal Chemical Society*, 37, 11-19. <https://doi.org/10.3126/jncs.v37i0.32044>
  19. Adhikari, D.L., Aryal, R.L., Bhattarai, S., Gautam, S.K., & **Poudel, B.R.** (2017). Removal of Chromium (VI) from Aqueous Solution Using Chemically Modified

Sweet Lime (*Citrus limetta*) Peels as Adsorbent, *Journal of Nepal Chemical Society*, 36, 82-95. <https://doi.org/10.3126/jncs.v36i0.34613>

20. Dhungana, S., Poudel, B.R., & Gautam, S.K. (2016). Synthesis and Characterization of ZnTe Nanoparticles. *Nepal Journal of Science and Technology*, 17(1), 1-3. <https://doi.org/10.3126/njst.v17i1.25054>

#### **Publications of Books:**

1. Kaulani, S. K., Sharma, K.R., & Poudel, B.R. 2018. Advanced Organic Reaction Mechanism, National Book Centre, Kathmandu, Nepal.
2. Gautam, S.K., Poudel, B.R., & Sharma, H.R. 2018. Concise Analytical Chemistry for B.Sc. 3<sup>rd</sup> year, Second Edition. National Book Centre, Kathmandu, Nepal.
3. Gautam, S.K., Kalauni, S.K., Sharma, K.R., Poudel, B.R., & Wagle, D. 2016. A Text-Book of Chemistry Volume I for B.Sc. 4<sup>th</sup> year, National Book Centre, Kathmandu, Nepal.
4. Gautam, S.K., Kalauni, S.K., Sharma, K.R., Poudel, B.R., & Wagle, D. 2016. A Text-Book of Chemistry Volume II for B.Sc. 4<sup>th</sup> year, National Book Centre, Kathmandu, Nepal.
5. Pokhrel, M.R., & Poudel, B.R. 2012. A Text Book of Inorganic Chemistry for B.Sc. Level, Second Edition, National Book Centre, Kathmandu, Nepal.
6. Gautam, S.K., Sharma, K.R., Aryal, R.L., Poudel, B.R. 2021. Concepts of Chemistry for Grade XII, United Nepal Publication Pvt. Ltd., Kathmandu, Nepal.
7. Gautam, S.K., Sharma, K.R., Aryal, R.L., Poudel, B.R. 2022. Concepts of Chemistry for Grade XI, United Nepal Publication Pvt. Ltd., Kathmandu, Nepal.

#### **Contribution to Scientific Forums:**

1. **International Conference on Advanced Functional Materials (ICAFM) 2025**, held on March 27-29, 2025, Kathmandu, Nepal. (Organizing Committee)
2. **International Conference on Advanced Functional Materials (ICAFM) 2024**, held on October 25-27, 2024, Kathmandu, Nepal. (Organizing Committee)
3. **International Chemical Congress (ICC-2023) organized by Nepal Chemical Society** held on May 25-27, 2023, Kathmandu, Nepal. (Invited Lecture presentation).
4. **International Winter School 2021 on Frontiers in Materials Science** held on December 6-10, 2021, JNCASR, Bengaluru, India. (Poster presentation).
5. **The 8<sup>th</sup> Asian Conference on Colloid & Interface Science (ACCCIS 2019)**, organized by Asian Society for Colloid & Interface Science (ASCAIS) held on September 24-27, 2019, Kathmandu, Nepal. (Poster presentation).
6. **POLY-CHAR 2019, Polymers for Sustainable Global Development** held on May 19-23, 2019, Kathmandu, Nepal. (Oral Lecture presentation).
7. **International Winter School 2018 on Frontiers in Materials Science** held on December 3-7, 2018, JNCASR, Bengaluru, India. (Poster presentation).

8. **International Soft Matter Summer School: Soft Matter and Topology** held on July 2-6, 2018, KIAS, Seoul, Korea. (Poster presentation).
9. **International Conference on Computer, Communication, Chemical, Materials and Electronics Engineering, IC<sup>4</sup>ME<sup>2</sup>** held on March 24-25, 2016, at the University of Rajshahi, Bangladesh. (Oral Lecture Presentation).
10. **Regional Conference of Young Scientists Frontiers in Scientific Research**, held on December 21-24, 2015, JNCASR Bangalore, India, organized by TWAS-ROCASA. (Oral Lecture presentation).
11. **International Conference on Advanced Materials and Nanotechnology (ICAMN - 2014)** for Sustainable Development, held in Kathmandu, Nepal from November 4-6, 2014, organized by Nepal Chemical Society in co-operation with the Central Department of Chemistry, Tribhuvan University, Kathmandu, Nepal. (Organizing Committee).
12. **POLYCHAR 19 International Conference** organized by Nepal Polymer Institute in Association with Tribhuvan University from March 20-24, 2011. (Poster presentation).
13. **Kathmandu 2012 Workshop on Theoretical Chemistry Atoms, Molecules and Solids: Models and Concepts**, from April 30-May 4, 2012, Kathmandu, Nepal. (Poster presentation).

#### **Thesis/Project work Supervision**

- Ph. D. Thesis Supervision: 3 (In Progress:)
- M. Sc. Dissertation: 20 (Completed) + 3 (In Progress)
- M. Sc. Project work: 11 (Completed)
- B. Sc. Project work: 19 (completed) + 3 (In Progress)

#### **Fellowships, Awards, Medals & Grants:**

- 2024: "Nepal Bidhya Bhusan KA" awarded on National Education Day, Ministry of Education, Government of Nepal
- India Science Research Fellowship (ISRF)- 2021 provided by Indian National Science Academy (INSA), Department of Science and Technology (DST), India.
- 2024: Faculty Research (Small RDI) Grant, University Grants Commission (UGC), Nepal.
- 2021: Ph.D. Research Grant, Office of the Rector, Research Directorate, Tribhuvan University, Kathmandu,

#### **Professional Membership:**

- Life member of Nepal Chemical Society (NCS).
- Member of Tribhuvan University Teachers Association (TUTA).

#### **Computing:**

- Proficient in MS office package.
- Conversant with ChemDraw, Photoshop, Origin

**Language:**

- English (Fluent)
- Nepali (Native)
- Hindi (Beginner)