




ZAKIR HUSAIN DELHI COLLEGE
(University of Delhi)

Faculty Details

(Please Fill the form and Email it to website@zh.du.ac.in)

Title: DR	First Name: MANJEET SINGH	Last Name: BARWA	Photograph
Designation	ASSISTANT PROFESSOR		
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Educational Qualification			
Degree	Institution	Year	
Ph.D	Kurukshetra University, Kurukshetra	2007	
M.Sc.	Kurukshetra University, Kurukshetra	2002	
Career Profile			
<ol style="list-style-type: none">1. M.Sc. (Previous & Final) practical classes for two sessions in Chemistry Dept., Kurukshetra. University, Kurukshetra.2. Lecturer at S. D. College, Ambala Cant., Haryana since 28-Aug-2006 to 03-Mar-2007.3. Lecturer at Gurgaon College of Engineering (GCE), Gurgaon since 10-Aug-2007 to 29-July-2011.4. Assistant Professor at Bhaskaracharya College of Applied Sciences, University of Delhi, Dwarka, since 1-Aug-2011 to 14-Dec-2013.5. Assistant Professor at PGDAV College, University of Delhi, Nehru Nagar, since 6-Jan-2014 to 25-Jul-2014.6. Assistant Professor at Bhaskaracharya College of Applied Sciences, University of Delhi, Dwarka, since 28-Jul-2014 to 28-Feb-2023.7. Assistant Professor at Zakir Husain Delhi College, University of Delhi, Delhi, since 01-Mar-2023 to till date.			
Administrative Assignments			

1. Worked as Head, Department of Applied Sciences & Humanities, at GCE Gurgaon since Dec-2008 to July-2011.
2. Organized Science Day as a Convener at GCE, Gurgaon on Feb 12, 2010 & Mar 18, 2011.
3. Organized English Seminar as a Convener at GCE, Gurgaon on Mar 12, 2011.
4. Worked as **Management Representative (MR)** in ISO certification for GCE, Gurgaon for two years.
5. Worked as Head, Co-curricular & Cultural activities at GCE Gurgaon.
6. **Coordinated** the National Workshop on “Intellectual Property Rights: Culmination of Research” held at BCAS, on Sept 23-24, 2016.
7. **Member of organizing committee** of One day seminar on “Career Opportunities for Polymer Engineers” held at BCAS on Aug 12, 2016.
8. **Member of organizing committee** of Tech. Quiz “ABHIGYAN” held at BCAS on Jan 21, 2016.
9. **Member of organizing committee** of One day seminar on “Polymer Modification, Processing and Characterization” held at BCAS on Jan 25, 2016.
10. **Member of organizing committee** of One day technical workshop on “Molecular Modelling and Structure based Drug Design” held at BCAS on Jan 21, 2017.
11. **Judge** in “MATHS, SCIENCE & SANSKRITI MAHOTSAV 2020” organized online by our School MHDC Saraswati Bal Mandir Sec. School, Janakpuri on October 10, 2020.
12. **Member of Organizing Committee** of National webinar on Women: Stewards of Environmental Sustainability” organised by Seva Sadan College of Education (SSCE), Ulhasnagar, Thane, Maharashtra in association with Bhaskaracharya College of Applied Sciences, University of Delhi, held online on January 28, 2021.
13. **Managing committee member** of Mahashaya Chunilal Saraswati Bal Mandir, Hari Nagar, New Delhi, for academic year 2019-20, 2020-21.
14. **Special Invitee** in **IQAC team, 2022-23**, Bhaskaracharya College of Applied Sciences, University of Delhi.
15. **Member of NAAC Task Force, Criterion-III**, for second cycle, **2023**, Bhaskaracharya College of Applied Sciences, University of Delhi.
16. **Member of GeM Committee**, Zakir Husain Delhi College, University of Delhi. **2023.**
17. **Member of NIRF-2023**, Zakir Husain Delhi College, University of Delhi.
18. **Member of NAAC SSR-2023**, Zakir Husain Delhi College, University of Delhi.

Areas of Interest / Specialization

Coordination Chemistry, Environmental Sciences

Subjects Taught

Chemistry, Environment Science, Polymeric Science, Yoga

Research Guidance

Supervision for Project proposal of M.Sc. Environment, IGNOU:

- ❖ Mr. Shyam Mehta (2106810881) E-waste management and Recycling: A study of recycler in Indian cities and villages, 2023.
- ❖ Mr. Ajay (2251437219), Biodiversity conservation in Delhi: Enhancing Urban Ecosystem, 2023.
- ❖ Mr. Bipnesh Yadav (2200622108) Assessment of Knowledgeable awareness about Yamuna Biodiversity Park, Wazirabad, Delhi, 2023.
- ❖ Ms. Kajal Bajaj, (2200628282), Survey on the concentration of Chloride, Nitrate and

Phosphate in Yamuna River, 2023.

- ❖ Ms. Kajal (2201296069) A Study on Solid Waste management and its impact on Environment in South West Delhi, 2023.
- ❖ Ms. Kiran (2253213033) E-waste Practices in Delhi: A Study of Environmental and Health Impact, 2023.
- ❖ Ms. Neha Yadav (2200623070) Attitude of Secondary School Teachers and students Towards Environmental Education in Najafgarh Area, 2023.
- ❖ Ms. Nikki Pandey (2200251265) Environment contamination in Food: An Investigative analysis with reference to South West Delhi, 2023.
- ❖ Ms. Pooja Garg (2201197976) Case Study: Stagnant water eutrophication in my Locality, 2023.
- ❖ Ms. Pooja singh (2253327123) A study on Grey Water quality and its impact on Plant Health with an assessment of public awareness, 2023.
- ❖ Ms. Priya Tyagi (2101256530) Sustainable Development (Environment), 2023.
- ❖ Ms. Priya Yadav (2101031678) Divergent pattern of Air Pollution, 2023.
- ❖ Ms. Priya (2253106673) Degradation of Water Resources: A study of Threats and management of Water resources in south West delhi, 2023.
- ❖ Ms. Ritika (2200619697) Survey on Air Quality in the Bahadurgarh City, 2023.
- ❖ Ms. Shikha Rana, Environmental contaminants in Ghaziabad Food, 2023.
- ❖ Mr. Suksham, (2101137736) Toxicant from the Environment in Food: A Study with reference to Chankya Puri, Delhi, 2023.

Publications Profile

1. Singh, K., **Barwa, M.S.** & Tyagi, P. (2006). Synthesis, characterization and biological studies of Co(II), Ni(II), Cu(II) and Zn(II) complexes with bidentate Schiff bases derived by heterocyclic ketones, *European Journal of Medicinal Chemistry*, 41, 147-153.
2. Singh, K., Singh, D.P., **Barwa, M.S.**, Tyagi, P. & Mirza, Y. (2006). Antibacterial Co(II), Ni(II), Cu(II) and Zn(II) complexes of Schiff bases derived from Fluorobenzaldehyde and Triazoles, *Journal of Enzyme Inhibition and Medicinal Chemistry*, 21(5), 557-562.
3. Singh, K., Singh, D.P., **Barwa, M.S.**, Tyagi, P. & Mirza, Y. (2006). Some bivalent metal complexes of Schiff bases containing N and S donor atoms, *Journal of Enzyme Inhibition and Medicinal Chemistry*, 21(6), 749-755.
4. Singh, K., **Barwa, M.S.** & Tyagi, P. (2007). Synthesis and characterization of Cobalt(II), nickel(II), copper(II) and zinc(II) complexes with Schiff bases derived from 4-amino-3-mercapto-6-methyl-5-oxo-1,2,4-triazine, *European Journal of Medicinal Chemistry*, 42, 394-402.
5. Singh, K., Kumar, Y. & **Barwa, M.S.** (2010). Synthesis, Characterization and Thermal Studies of Co(II), Ni(II), Cu(II) and Zn(II) Complexes of Some Schiff Bases Derived from 4-Amino-3-mercapto-6-methyl-5-oxo-1,2,4 triazine, *South African Journal of Chemistry*, 63, 169-174.
6. Pani, B., Sirohi, S., **Barwa, M.S.**, (2013). Effect of seasonal variation on metal speciation in leachate from a Thermal power plant ash pond: Impact on ground waters, *International Journal of Engineering Sciences & Research Technology*, 2(10), 2927-2937.
7. Meena, P.L., Vinay, Rai, V., Goel, A., Najiburrehman, Rao, E.S. & **Barwa, M.S.** (2017). Biodegradable Polyester Packaging Film: Synthesis & Application, *ISST Journal of Applied Chemistry*, 8(1), 1-4.
8. Meena, P.L., Vinay, Rai, V., Goel, A., Rao, E.S. & **Barwa, M.S.** (2017). Packaging material and need of biodegradable polymers: A review, *International Journal of*

Applied Research, 3(7) M, 886-896.

9. Barwa, S., Pani, B. & **Barwa, M.S.** (2017). Hyperaccumulation: A Phytoremediation approach for pollution control, *International Research Journal of Environmental Sciences*, 6(11), 46-52, November, ISSN 2319–1414.
10. Barwa, S., Pani, B. & **Barwa, M.S.** (2017). Physiological, Phenological and Grain Yield Responses in Wheat due to Delayed Sowing, *Elixir Appl. Botany*, 112, 49042, 49042-49045.
11. Pandey, S.S., Singh, B., **Barwa, M.S.**, Gautam, Y.P. & Pani, B. (2020). Geochemical Signatures and Chemical Toxicity Assessment of Groundwater Uranium in the Agricultural Dominated Tehsil after Indian Summer Monsoon, *Research Journal of Chemistry and Environment*, 24(10), 75-82.
12. Pandey, S.S., Singh, B., **Barwa, M.S.**, Gautam, Y.P. & Pani, B. (2021). Terrestrial Gamma Radiation Dose (TGRD) Environmental Distribution in Alluvial Soil Region, its Monsoonal Variation and Assessment of Lifetime Cancer Risk, *Research Journal of Chemistry and Environment*, 25(2), 186-193.
13. Rao, E.S., Meena, P.L. & **Barwa, M.S.** (2021) Development of sugar free cookies with novel biodegradable packaging film, *Journal of Applied and Natural Science*, 13(1), 316-326.
14. Pandey, S.S., Barwa, M.S., Gautam, Y.P., Markandeya, Pani, B. (2021). Spatial dependency of the groundwater uranium in the alluvial soil region of Gunnaur, India, *Journal of Radioanalytical and Nuclear Chemistry*, 329(1), 35–43.
15. Book chapter; Swasth Bharat Samridh Bharat, **Manjeet Singh Barwa**, Shubhra Barwa, Balaram Pani, in book titled, “Healthcare Systems In India: Challenges and Futuristic Path”, International Publishers, 81- 87, 2019, ISBN: **978-93-89198-02-7**.
16. Practical Handbook of Food Engineering, Meenakshi Garg, Saumya Chaturvedi, Susmita Dey Sadhu, **Manjeet Singh Barwa** & Balaram Pani, Aaryush Education, 2020, ISBN: **978-81-930437-5-2**.
17. Practical Handbook on Food Adulteration, Eram S Rao, Meenakshi Garg, **Manjeet Singh Barwa**, Variety Books Publishers’s Distributors, 2022, **978-93-81156-84-1**.
18. Handbook on Processing and Preservation of fruits and Vegetables, Eram S Rao, Meenakshi Garg, **Manjeet Singh Barwa**, Variety Books Publishers’s Distributors, 2022, **978-93-81156-85-8**.
19. Book chapter; Application of Clay in Construction Industry, **Manjeet Singh Barwa**, Shubhra Barwa, Chandra Mohan, in book titled, “Characterization and Application of Clay as Novel Material,” Cambridge Schloars Publishing, Newcastle, UK, 2023. (**Available Online**). **978-1-5275-1699-1**.
20. Book chapter; Utilizing nanomaterials in gene delivery, gene therapy and genome engineering: Retrospect and Prospects, Shubhra Barwa, **Manjeet Singh Barwa**, Balaram Pani, Prem Lata Meena, Chandra Mohan, in book titled, “Applications of Nanoscaled Platforms In Gene Delivery”, Springer Nature. 2023. (**Accepted**).
21. Plant Genome Engineering: Prospects of nano-particle based gene delivery, **Manjeet Singh Barwa**, Balaram Pani, Shubhra Barwa, Prem Lata Meena, in book titled, “Applications of Nanoscaled Platforms In Gene Delivery”, Springer Nature. 2023. (**Accepted**).

Conference Organization/ Presentations (in the last five years)

1. Organized the National Conference on “Clean & Green Energy: The Chemical & Environmental Aspects” as **Co-convenor** at Bhaskaracharya College of Applied Sciences, Dwarka from Feb 16-17, 2017.
2. **Member of organizing committee** of three days National Conference on Recent Trends and Advancements in Chemical Sciences on March 29-31, 2019 at Conference Center, University of Delhi, Delhi.

3. **Organizing Secretary** of two days 2nd National Conference on 'Clean & Green Energy: The Chemical & Environmental Aspects' at Bhaskaracharya College of Applied Sciences, Dwarka, Sept. 26-27, 2019.
4. **Coordinator** of National webinar on Economic Crises and its Redressal during Pandemic organised by Department of Chemistry, Bhaskaracharya College of Applied Sciences, University of Delhi, Delhi held online on May 15, 2020.
5. **Co-convener** of two days international webinar on Prevalent Crises Triggered by the Covid-19 Pandemic and its Appraisal jointly organized by Department of Chemistry and Biomedical Science, Bhaskaracharya College of Applied Sciences, University of Delhi, Delhi held online on May 18-19, 2020.
6. **Coordinator** of National webinar on Ecological Revival during Pandemic organised by Department of Chemistry, Bhaskaracharya College of Applied Sciences, University of Delhi held online on May 21, 2020.
7. Resource Person in Faculty Development Programme on Virtual Learning Tools during Pandemic organised by Rayat Group of Intuitions, Ropar Campus held online on May 28, 2020.
8. **Co-convener** of National webinar on Obesity Management jointly organised by Department of Physical Education, Bhaskaracharya College of Applied Sciences and Indira Gandhi Institute of Physical Education and Sports Sciences, University of Delhi held online on May 29, 2020.
9. Resource Person in Faculty Development Programme on Virtual Learning Creativity Tools organised by Rayat Group of Intuitions, Ropar Campus held online on June 9, 2020.
10. **Co-convener** of National webinar on Being Healthy jointly organised by Department of Physical Education, Bhaskaracharya College of Applied Sciences and Indira Gandhi Institute of Physical Education and Sports Sciences, University of Delhi held online on June 09, 2020.
11. **Coordinator** of विशेष व्याख्यान on “हिंदी दिवस “वैश्विक स्तर पर हिंदी की स्वीकार्यता” organized by शिक्षा संस्कृति उत्थान न्यास in collaboration with Bhaskaracharya College of Applied Sciences, University of Delhi, held online on September 14, 2020.
12. **Co-convener** of five days National workshop on Rapid Detection on Food Adulterants organised by Bhaskaracharya College of Applied Sciences, University of Delhi, funded by Indian Council of Social Science Research (ICSSR), Ministry of Education, Govt of India, held between Feb 21-25, 2022.
13. **Co-convener** of two days National seminar on Women Empowerment: Challenges Need and Issues organised by Bhaskaracharya College of Applied Sciences, University of Delhi, funded by Indian Council of Social Science Research (ICSSR), Ministry of Education, Govt of India, held between Mar 08-09, 2022.
14. **Convener** of two days National seminar on Ambedkar Ke Sapno Ka Bharat organised by Bhaskaracharya College of Applied Sciences, University of Delhi, funded by Indian Council of Social Science Research (ICSSR), Ministry of Education, Govt of India, held between Apr 12-13, 2022.
15. **Co-convener** of one day National seminar on Financial Literacy: Basics, Issues & Challenges organised by Bhaskaracharya College of Applied Sciences, University of Delhi, funded by Indian Council of Social Science Research (ICSSR), Ministry of Education, Govt of India, held between Apr 21, 2022.
16. **Coordinator** of Seven days National workshop on Hands on training on processing of fruits and vegetables by using preservation technologies to increase shelf life organised by Bhaskaracharya College of Applied Sciences, University of Delhi, funded by Science and Engineering Research Board, Delhi, held between Jul 04-12, 2022.

17. **Convener** of two days National seminar on “Swadeshi Haat” organised by Bhaskaracharya College of Applied Sciences, University of Delhi, funded by Indian Council of Social Science Research (ICSSR), Ministry of Education, Govt of India, held between Oct 11-18, 2022.
18. **Coordinator** of Five days short term training course on Bakery Science and Technology organised by Bhaskaracharya College of Applied Sciences, University of Delhi held between Dec 19-23, 2022.
19. **Coordinator** of Two days workshop on Research Proposal Writing organised by Bhaskaracharya College of Applied Sciences, University of Delhi, funded by Indian Knowledge System Division, MoE, held between Jan 04-05, 2023.
20. **Coordinator** of One-week National workshop on Capacity Building for Enhancing Administrative Efficiency for Teaching & Non-teaching staff of Higher Education Institutes organised by Bhaskaracharya College of Applied Sciences, University of Delhi, held between Jan 16-20, 2023.
21. **Guest Speaker** at Suraj (P.G.) Degree College, Sec-75, Gurugram, Haryana on topic titled, “Career and Research Opportunity for Science Students” on Sept 25, 2023.

Research Projects (Major Grants/Research Collaboration)

1. Development of Cookies with bio-degradable packaging material for Diabetics (BCAS-312), sponsored by University of Delhi, Delhi, 4.6 Lakhs, 2015-16.
2. Spatial Distribution of uranium and associated water quality parameters in groundwater/ surface water in six(06) districts of Uttar Pradesh (Agra, Mathura, Mahamaya Nagar, Kanshiram nagar, Etah and Badaun), sponsored by Borad of Research and Nuclear Sciences, BARC, Govt of India, Bombay, 28.74 Lakhs, 2016-18.
3. भारत में रसायन शास्त्र, sponsored by The Indian Knowledge Systems, Division of Ministry of Education @ AICTE (भारतीय ज्ञान संवाहिनी-1), 1.25 Lakhs, 2022.
4. भारतीय रसायन शास्त्र व रसायन वैज्ञानिकों का इतिहास, sponsored by The Indian Knowledge Systems, Division of Ministry of Education @ AICTE (भारतीय ज्ञान संवाहिनी-1), 3.75 Lakhs, 2023.
5. GIS-based SWOT Analysis of the Swachh Bharat Abhiyan in Rural and Urban Delhi, sponsored by Indian Council of Social Science Research, Ministry of Education, 14 Lakhs, 2023.

Awards and Distinctions

1. Awarded as Best Researcher Award-2021, under International Scientist Award-2021 by VDGOD Professional Association.
2. Awarded as Certificate of Appreciation for the Innovation Project(BCAS-312) during Research Display at the Convocation Ceremony, University of Delhi, 2016.
3. Awarded Consolation prize for paper presentation in an International Conference on Sustainable Development and Resource Utilization: Current Trends and Perspectives, University of Rajasthan, Jaipur, (2005).

Association With Professional Bodies

Life Membership of Academic Societies

- ❖ The Indian Science Congress Association (L 20445)
- ❖ International Association of Engineers (IAENG) (L 106016)

- ❖ Indian Chemical Society (F/7950 LM)
- ❖ Green Chemistry Network Centre, University of Delhi (0611/17/253)

Other Activities

1. Singh S., Mangawa S.K. & Barwa M.S. (2020) contributed a module title 'Alcohol: Introduction, Preparation and Reactions' in the development of Teacher's e-Kit (e-content in Four Quadrants) in Chemistry at GAD-TLC of MHRD under PMMNMTT, SGTB Khalsa College, University of Delhi, Delhi.
2. Utility Model on "A NOVEL IOT BASED SUSTAINABLE SYSTEM FOR THE TREATMENT OF MEDICAL" (IPC: B09B 3/40). 19.08.2022 by Federal Republic of Germany.
3. Utility Model on "NITROGEN FIXATION ENHANCEMENT IN PULSES UNDER MISTURE STRESS CONDITION BY FOLIAR APPLICATION OF KNO_3 ". (IPC: A01C 1/00). 26.09.2022 by Federal Republic of Germany.