Dr. RITU SINGH

Assistant Professor
Department of Environmental Science, School of Earth Sciences,
Central University of Rajasthan, Ajmer, Rajasthan

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AREAS OF RESEARCH INTEREST

Nano-Remediation, Nano-Fertilizers, Waste-Water Treatment, Emerging Contaminants

EDUCATION

Ph.D. Environmental Science — 2008-2014
CSIR-IITR, Lucknow and Babasaheb Bhimrao Ambedkar University, Lucow, U.P.
Thesis Title: Remediation of Soil Contaminated with Hexavalent Chromium and gamma-Hexachlorocyclohexane (Lindane) using Zero-valent Iron Nanoparticles
Supervisor: Prof. Rana P Singh (BBAU)
Co- Supervisor: Dr. Virendra Misra (CSIR-IITR)

M.Sc., Environmental Science, CSJM University, Kanpur, U.P. — 2006-2008

B.Sc., Botany, Zoology, Chemistry, CSJM University, Kanpur, U.P. — 2003-2006

RESEARCH AND TEACHING EXPERIENCE

Assistant Professor, Department of Environmental Science, Central University of Rajasthan — Sep 2013-Till date

Senior Research Fellow at Analytical Chemistry Division, CSIR-Indian Institute of Toxicology Research, Lucknow, U.P. — Jan-Aug 2013

Senior Research Fellow at Ecotoxicology Division, CSIR-Indian Institute of Toxicology Research, Lucknow, U.P. — 2011-2012

Junior Research Fellow at Ecotoxicology Division, Ecotoxicology Division, CSIR-Indian Institute of Toxicology Research, Lucknow, U.P. — 2008-2010

ACADEMIC HONOURS/AWARDS

- **Best Research Paper** in International Conference on Smart Environment Management and Solutions (ICEMS-2022), April 21-22, 2022.
- **Young Scientist Award**, The Society for Science of Climate Change and Sustainable Development (SSCE), 2021
- **Best Session Paper** in International conference on "Recent Developments on Materials, Reliability, Safety, and Environmental issues'', at NIT Jalandhar, June 25-27, 2021.
- **Best Paper Presentation Award** in National conference - ETWQQM-2019.
- **DEF Young Scientist Award**, by Academy of Environmental Biology, Dec 2013.
- Awarded **Senior Research Fellowship** by University Grant Commission (UGC), Oct 2011.
- Qualified **NET-UGC** and **Junior Research Fellowship** in Environmental Sciences, Dec 2008.

- Awarded **Gold Medal** in bachelors, 2004.

RESEARCH PROJECTS (COMPLETED/ ONGOING)

1. "Remediation of Heavy Metals contaminated water using Encapsulated Zero-valent Iron Nanoparticles"
   Funding Agency: UGC, 6 Lakhs (*Completed*)
2. "Remediation of pharmaceutical drugs using Chitosan modified Nanoscale Zerovalent Iron supported Biochar (CS@nZVI-BC) in Hail region, Saudi Arabia", Collaborative project (2022)
   Funding Agency: Deanship of Scientific Research, University of Hail, 10,000 SAR (*Ongoing*)
3. "Floating Treatment Wetland System (FTWS) - Sustainable green technology to remediate polluted surface water bodies in the COVID 19-era", Collaborative project (2021)
   Funding Agency: APN, 17,137 USD (*Ongoing*)

PUBLICATIONS (h-Index 20, i-10 Index 22, Citations 1543 as per GOOGLE SCHOLAR)

1. Siddiqui AJ, Kumari N, Adnan M, Kumar S, Abdelgadir A, Saxena J, Badraoui R, Snoussi M, Khare P, **Singh R*** (2023) Impregnation of modified magnetic nanoparticles on low-cost agro-waste derived biochar for enhanced removal of PhACs: Performance evaluation and optimization using RSM-CCD approach. Water (**I.F. 3.53**, ISSN 2073-4441)
2. Jain B, Jain R, Jaiswal PKJ, Zughaibi T, Sharma T, Kabir A, **Singh R**, Sharma S (2023) A non-instrumental green analytical method based on surfactant assisted dispersive liquid-liquid microextraction-thin layer chromatography-smartphone based digital image colorimetry (SA-DLLME-TLC-SDIC) for determining favipiravir in biological samples. ***Molecules***, 28, 529. DOI: 10.3390/molecules28020529 (**I.F. 4.927**, ISSN 1420-3049)
3. Kumari N, Behera M, **Singh R*** (2022) Facile synthesis of biopolymer decorated magnetic coreshells for enhanced removal of xenobiotic azo dyes through experimental modelling, ***Food Chem. Toxicol,*** 113518. DOI: 10.1016/j.fct.2022.113518 (**I.F. 5.572**, ISSN 0278-6915)
4. Sharma A, Kumar S, **Singh R*** (2022) Synthesis and Characterization of a Novel Slow-release Nanourea /Chitosan nanocomposite and its effect on *Vigna radiata* L. ***Environmental Science: Nano***, 9, 4177-4189. DOI: 10.1039/D2EN00297C (**I.F. 9.40**, ISSN No. 2051-8161)
5. Behera M, Kumari N, Raza K, **Singh R*** (2022) Fabrication of glutathione functionalized self-assembled magnetite nanochains for effective removal of Crystal Violet and Phenol Red dye from aqueous matrix. ***Environ Sci Pollut Res***. DOI:10.1007/s11356-022-19520-4. (**I.F. 5.190**, ISSN No. 0944-1344)
6. Siddiqui A, Jahan S, **Singh R**, Saxena J, Khan AA, Chaudhry R, Badraoui R, Bardakci F, Adnan M, Balakrishnan S (2022) Plants in Anticancer Drug Discovery: From Molecular Mechanism to Chemoprevention. ***BioMed Research International***. Article ID 5425485. DOI 10.1155/2022/5425485 (**I.F. 3.411**, ISSN No. 2314-6133)
7. **Singh R***, Behera M, Kumari N, Kumar S, Rajput VD, Minkina TM, Adnan M, Siddiqui AJ, Kumar N (2021). Nanotechnology-Based Strategies for the Management of COVID-19: Recent Development and Challenges. ***Curr Pharm Des.*** 27(41), 4197 – 4211. DOI: 10.2174/1381612827666210830105459. (**I.F. 3.116**, ISSN No. 1873-4286)
8. Giri R, Kumari N, Behera M, Sharma A, Kumar S, Kumar N, **Singh R*** (2021). Adsorption of hexavalent chromium from aqueous solution using pomegranate peel as low-cost biosorbents. ***Environmental Sustainability,*** 4, 401–417. DOI:10.1007/s42398-021-00192-8. (ISSN No. 2523-8922)
9. Ashraf SA, Siddiqui AJ, Abd Elmoneim OE, Khan MI, Patel, M., Alreshidi, M.,.. **Singh R**, Snoussi M, & Adnan, M. (2021). Innovations in Nanoscience for the Sustainable Development of Food and Agriculture with Implications on Health and Environment. ***Science of the Total Environment***, 786, 144990. DOI: 10.1016/j.scitotenv.2021.144990 (**I.F. 10.753**, ISSN No. 0048-9697)

10. Kumar S, **Singh R***, Kumari N, Karmakar S, Behera M, Siddiqui AJ, Rajput VD, Minkina T, Bauddh K, Kumar N. (2021) Current understanding of the influence of environmental factors on SARS-CoV-2 transmission, persistence, and infectivity. ***Environ Sci Pollut Res****,* 28, 6267–6288. https://doi.org/10.1007/s11356-020-12165-1. (**I.F. 5.19**, ISSN No. 0944-1344)
11. Siddiqui AJ, Danciu C, Ashraf SA, Moin A, **Singh R**, Alreshidi M, ... & Badraoui R (2020). Plants-Derived Biomolecules as Potent Antiviral Phytomedicines: New Insights on Ethnobotanical Evidences against Coronaviruses. ***Plants***, 9(9), 1244. 10.3390/plants9091244 (**I.F. 4.658**, ISSN No. 2223-7747)
12. Chaplygin VA, Rajput VD, Mandzhieva SS, Minkina TM, Nevidomskaya DG, Nazarenko OG, Kalinitchenko VP, **Singh R**, Maksimov AY, Popova VA (2020) Comparison of Heavy Metal Content in *Artemisia austriaca* in Various Impact Zones. ***ACS omega***, 5(36), 23393-23400. DOI: 10.1021/acsomega.0c03340 (I.**F. 4.132**, ISSN No. 2470-1343)
13. Siddiqui AJ, Jahan S, Ashraf SA, Alreshidi M, Ashraf MS, Patel M, Snoussi M, **Singh R** & Adnan M (2020). Current status and strategic possibilities on potential use of combinational drug therapy against COVID-19 caused by SARS-CoV-2. ***Journal of Biomolecular Structure and Dynamics*****,** 39(17):6828-6841. DOI:10.1080/07391102.2020.1802345. (**I.F. 3.392**, ISSN No. 1538-0254)
14. Rajput V, Minkina T, Ahmed B, Sushkova S, **Singh R**, Soldatov M, ... & Musarrat J (2019). Interaction of Copper-Based Nanoparticles to Soil, Terrestrial, and Aquatic Systems: Critical Review of the State of the Science and Future Perspectives. ***Rev Environ Cont Toxicol****.* 252 pp 51-96. DOI 10.1007/398_2019_34. (**I.F. 7.56**, ISSN No. 0179-5953)
15. Rajput VD, Minkina TM, Behal A, Sushkova SN, Mandzhievaa S, **Singh R**, Gorovtsov A, Tsitsuashvili VS, Purvis WO (2018) Effects of Zinc-oxide nanoparticles on soil, plants, animals and soil organisms: A review. ***Environ Nanotechnol Monit Manag***. 9, 76-84. DOI: 10.1016/j.enmm.2017.12.006 (**I.F. 1.430**, ISSN No. 2215-1532)
16. Jain R, **Singh R**, Sudhaker S, Barik, AK, Kumar S (2017) Coupling microextraction with thin layer chromatography image processing analysis: A new analytical platform for drug analysis. ***Toxicology and Forensic Medicine Open Journal****,* 2(1), 17-25. DOI: 10.17140/TFMOJ-2-113 (ISSN No. 2474-8978)
17. Jain R, **Singh R** (2016) Microextraction techniques for analysis of cannabinoids. ***TRAC*-Trend *Anal. Chem.*** 80, 156-166 DOI: 10.1016/j.trac.2016.03.012 (**I.F. 12.296**, ISSN No. 0165-9936)
18. Jain R, **Singh R*** (2016) Applications of dispersive liquid-liquid microextraction in forensic toxicology. ***TRAC*-Trend *Anal. Chem****.* 75, 227-237. (**I.F. 12.296**, ISSN No. 0165-9936)
19. Mudiam MKR, Jain R, **Singh R** (2014) Application of ultrasound-assisted dispersive liquid-liquid microextraction and auto-injector port silylation for the simultaneous determination of phenolic endocrine disruptor chemicals in water samples by gas chromatography - triple quadrupole mass spectrometry. ***Anal. Meth.*** 6, 1802-1810 10.1039/C3AY41658E (**I.F. 3.352**, ISSN No. 0003-2654)
20. **Singh R**, Manickam N, Mudiam MKR, Murthy RC, Misra V (2013) An integrated (nano-bio) technique for Degradation of γ-HCH Contaminated Soil**. *J. Hazard. Mater****.*** 258-259, 35-41. doi: 10.1016/j.jhazmat.2013.04.016. (**I.F. 10.588**; ISSN No. 0304-3894)
21. **Singh R,** Misra V, Mudiam MKR, Chauhan LKS, Singh RP (2012) Degradation of γ-HCH spiked soil using stabilized Pd/Fe^0 bimetallic nanoparticles: Pathways, kinetics and effect of reaction conditions. ***J. Hazard. Mater.*** 237-238, 355-364. 10.1016/j.jhazmat.2012.08.064 (**I.F. 10.588**; ISSN No. 0304-3894)
22. **Singh R,** Misra V, Singh RP (2012) Removal of Cr(VI) by nanoscale zero-valent iron (nZVI) from soil contaminated with tannery wastes. ***Bull. Environ. Contam. Toxicol****.* 88, 210-214. (**I.F. 2.151**; ISSN No. 0007-4681)
23. **Singh R**, Misra V, Murthy RC (2012) Integrated Approach for the Enhanced Degradation of Lindane, in proceedings of 57th OMICS Group Conference, **J Ecosyst Ecogr**, 2, 169. DOI: 10.4172/2157-7625.S1.009 (**I.F. 0.02**; ISSN No. 2157-7625)

24. **Singh R**, Singh A, Misra V, Singh RP (2011) Degradation of Lindane contaminated soil using zero-valent iron nanoparticles. ***J. Biomed. Nanotechnol.*** 7, 175-176. 10.1166/jbn.2011.1256 (**I.F. 4.483**; ISSN No. 1550-7033)
25. **Singh R,** Misra V, Singh RP (2011) Remediation of γ-Hexachlorocyclohexane contaminated soil using nanoscale zero-valent iron. ***J. Bionanosci.*** 5, 82-87. (**I.F. 1.050**; ISSN No. 1557-7910)
26. **Singh R,** Misra V, Singh RP (2011) Synthesis and characterization of Zero-valent iron nano-particle and its role in removal of hexavalent chromium from chromium spiked soil. ***J. Nanoparticle Res.*** 13, 4063-4073. 10.1007/s11051-011-0350-y (**I.F. 2.253**; ISSN No. 1388-0764)
27. **Singh R,** Misra V, Singh RP (2011) Removal of Hexavalent Chromium from contaminated Ground Water using Zero-valent Iron Nanoparticles. ***Environ. Monit. Assess.*** 184:3643–3651. 10.1007/s10661-011-2213-5 (**I.F. 2.513**, ISSN No. 0167-6369)
28. **Singh R**, Misra V, Singh RP (2011) Remediation of Cr(VI) contaminated soil by zero-valent iron nanoparticles entrapped in calcium alginate beads, in proceedings of ICESD-2011, *IPCBEE*, 4, 162-165. (ISBN No. 978-1-4244-9235-0)

APPLICATION NOTE

1. Mudiam MKR, Jain R, **Singh R,** Huebschmann HJ (2015) Determination of Phenolic Endocrine Disruptors in Water by GC-MS/MS using Injection Port Derivatization ThermoFisher Scientific, Application Note 10471.

BOOKS

1. **Singh R**, Kumar S (2017) 'Green Technologies and Environmental Sustainability', Springer International Publishing AG, Gewerbestrasse 11, 6330 Cham, Switzerland. (ISBN No. 978-3-319-50653-1).
2. Jain R, **Singh R** (2021) 'Microextration Technique in Analytical Toxicology, CRC Press, Taylor and Francis Group (ISBN 9780367651947).
3. Kumar S, Buddh K, **Singh R**, Kumar N, Kumar R (2023) 'Aquatic Macrophytes: Ecology, Functions and Services', Springer Nature *(under process).*

BOOK CHAPTERS

1. Karmakar S, Roy R, Bhattacharya A, Biswajit K, Kumar S, **Singh R**, Bauddh K, Kumar N (2022) Rhizobacteria assisted phytoremediation of oily sludge contaminated sites. In Advances in Microbe- Assisted Phytoremediation of polluted sites (Bauddh K, Ma Y), Elsevier, pp 403-417 (ISBN 9780128234433).
2. Siddiqui AJ, **Singh R**, Jahan S, Alreshidi M, Hamadou, WS, Khan A, Ahmad A, Patel M, Abdelmuhsin AA, Sulieman AME and Adnan M (2022). Enzymes in Food Fermentations. In African Fermented Food Products-New Trends (pp. 101-133). Springer, Cham. (ISBN: 978-3-030-82902-5).
3. Jain R, **Singh R**, Kabir A (2021) Microextraction Techniques in Analytical Toxicology: An Overview, In *Microextraction Techniques in Analytical Toxicology* (Eds Jain R, Singh R, Kabir A) CRC Press, Ch1, pp 18-27 (ISBN 9780367651947)
4. **Singh R**, Kumar S, Karmakar S, Siddiqui AJ, Mathur A, Adnan Mohd., Rajput V, Rani A, Kumar N (2021) Causes, Consequence Consequences, and Control of Persistent Organic Pollutants, In *Persistent Organic Pollutants in the Environment Origin and Role Publisher* (Eds Kumar N Shukla V) CRC Press, Ch2, pp 31-53 (ISBN 9780367512880)
5. **Singh R**, Jaiswal PK, Kumari N, Behera M, Sharma A, Gupta SK (2021) Microbially synthesized nanomaterials for remediation of organic contaminants. In *Microbe Mediated Remediation of Environmental Contaminants* (Eds Kumar A, Singh VK, Singh P, Mishra VK) Woodhead Publishing

Series in Food Science, Technology and Nutrition, Woodhead Publishing, Ch 23, pp 287-301 (ISBN 9780128211991)https://doi.org/10.1016/B978-0-12-821199-1.00023-7.

6. **Singh R**, Sharma A, Kumari, N, Behera M, Kumar S, Siddiqui AJ (2020) Nanoagroparticles: An emerging trend in modern agriculture system. In Ecological and Practical applications for sustainable agriculture (Eds Bauddh K, Kumar S, Singh RP, Korstad J), Springer nature, Singapore, pp 207-227 (ISBN 978-981-15-3371-6).
7. Kumar S, Kumari N, Karmakar S, Ankit, **Singh R***, Behera M, Rani A, Kumar N (2020) Advances in plant-microbe-based remediation approaches for environmental cleanup, In: *Emerging eco-friendly green technologies for wastewater treatment, Microorganism for Sustainability* (Eds Bhargava, R.N.) 18, Springer nature, Singapore, pp 103-128(ISBN 978-981-15-1389-3)
8. **Singh R***, Behera M, Kumar S (2019) Nano-Bioremediation: An Innovative Remediation Technology for Treatment and Management of Contaminated Sites, In *Bioremediation of Industrial Waste for Environmental Safety – Vol. I: Biological Agents and Methods for Industrial Waste Management* (eds Bhargava RN, Saxena G) Springer Nature, Singapore, pp 165-182 (ISBN 978-981-13-3425-2)
9. **Singh R***, Behera M, Kumar S (2019) Current state of knowledge on algae mediated remediation of Endocrine Disrupting Chemicals (EDCs) from wastewater, In *Application of Microalgae in Wastewater Treatment- Volume 1: Domestic and Industrial Wastewater Treatment,* (eds Gupta SK, Bux F), Springer Nature, Singapore, pp 101-120 (ISBN 978-3-030-13912-4)
10. Kumar S, **Singh R**, Behera M, Kumar V, Sweta, Rani A, Kumar N, Bauddh K (2019) Restoration of pesticide contaminated sites through plants, In *Phytomanagement of polluted sites* (eds Pandey VC, Bauddh K), Elsevier. Ch 12, pp 313-327 (ISBN: 978-0-128-13912-7)
11. Kumar S., Kumar M., **Singh R.**, Kumar D., Prasad R., Ankit, Rani A., Kumar N (2018) Plant-microbe symbiosis a synergistic approach for heavy-metal bioremediation. In: *Recent Advances in Environmental Management* (Ed Bharagava R.N.) CRC press, Taylor & Francis Group, USA, pp 293-309. (ISBN: 978-0-8153-8314-7)
12. Prasad R, Kumar S, Yadav, AK, Kumar, S, Kumar, M, **Singh R,** Kumar N (2017) *Impacts of Climate Change on Agriculture: Adaptation, Mitigation and Environmental Policy*, In: Plant adaptations strategies in changing environment (Eds Shukla V, Kumar S, Kumar N) Springer Publication, 329-345. (ISBN 978-981-10-6744-0).
13. Kumar S, **Singh R***, Kumar V, Rani A (2017) *Cannabis sativa: A plant suitable for Phytoremediation and Bioenergy production*, In Phytoremediation Potential of Bioenergy Plants (eds Bauddh K and Singh B), 269-285, Springer publication. (ISBN No. 978-981-10-3083-3).
14. Misra V, **Singh R***, Kumar S (2017) *Need for an integrated approach towards environmental quality control in developing countries*, In: Green Technologies and Environmental Sustainability (eds Singh R, Kumar S), Chapter 11, 241-258, Springer International Publishing AG, Gewerbestrasse11, 6330 Cham, Switzerland. (ISBN No. 978-3- 319-50653- 1).
15. **Singh R**, Misra V (2015) *Stabilization of Zero-valent Iron Nanoparticles: Role of Polymers and Surfactants*, In: Handbook of Nanoparticles (eds Aliofkhazraei M), 1-19, Springer International Publishing Switzerland, (ISBN No. 978-3-319-13188-7)
16. Kumar S, Bauddh K, **Singh R**, Rani A (2015) *Nitrogen use efficiency of Triticum aestivum (L.) under condition of elevated carbon dioxide and temperature*, In: Climate Change and Environment (eds Sharma D), Chapter 6, 71-85, New India Publishing Agency (ISBN: 978-9-385-51637-5)
17. **Singh R**, Misra V (2014) *Application of Zero-valent Iron Nanoparticles for Environmental Clean Up,* In: Advanced Materials for Agriculture, Food, and Environmental Safety (eds A Tiwari and M Syväjärvi), John Wiley & Sons, Inc., Hoboken, NJ, USA. Chapter 14, 385-414, (ISBN No. 978-1-118-77385-7)
18. Misra V, **Singh R**, Sharma R (2011) *Environmental application of nanotechnology with special reference to nano scale zero-valent iron (nZVI)*, In: Nanomaterials and Hazard Assessment (eds PV Mohanan), Educational Book Center, Mumbai, India, Chapter 17, 287-306. (ISBN No. 978-8-1903-6261-5).

CONFERENCES/SEMINARS/SYMPOSIUM

INVITED LECTURE/SESSION CHAIR

1. 'Application of Nanotechnology in Environmental Remediation' at International Conference on Current Trends in Waste Treatment, Reuse, and Valorization, 25th to 27th February, 2022 organized by The Society for Green Environment, New Delhi, India in Association with Sandip University, Nashik, Maharashtra, India.
2. 'Nanoparticles based remediation of environmental contaminants' at Safe and Sustainable Technologies and Strategies for Integrated Freshwater Resource Management, 25th to 28th June, 2019, JSS Academy of Higher Education and Research, Mysuru, Karnataka
3. Chaired a session on 'WFE Nexus Technology for Sustainable Management' in Safe and Sustainable Technologies and Strategies for Integrated Freshwater Resource Management, 25th to 28th June, 2019, JSS Academy of Higher Education and Research, Mysuru, Karnataka.
4. 'Water Testing Parameters' Delivered Invited Lecture on 24th November, 2017 in the Capacity Building Workshop of Eco-WASH, organized by Department of social works, Central University of Rajasthan, on November 22-26, 2017 under the aegis of Department of Science and Technology (NCSTC), Government of India, New Delhi.
5. 'Application of Nanoparticles for Remediation of Organic and Inorganic Pollutants' at Indo-UK Workshop: Nano-Biomaterials for Water Purification, 12th-16th Dec 16, MG University, Kottayam, Kerala.

ORAL PRESENTATION

1. **Singh R- '**Evaluation of azo dyes removal with polymer functionalized iron nanoparticles' at *International Conference of Emerging Trends in Water Quantity & Quality Management (ETWQQM-2023)*, 22nd- 23rd 2023, "Poornima University, Jaipur.
2. **Singh R- '**Comparative evaluation of the effect of commercial urea and nanourea on growth and development of mungbean' at *International Conference on Emerging Trends in Plant and Environment Sciences*, 2nd-4th February, 2023, University of Rajasthan, Jaipur.
3. **Singh R- '**Magnetic core shell nanoparticles for enhanced removal of xenobiotic dyes through experimental modeling' at *National Conference on Sustainable Environment "Challenges and Opportunities*, 29th-30th Aug 2022, Era University, Lucknow.
4. **Singh R**- 'Assessment of Microplastics in the industrial area of Jaipur city' at *International Conference on Smart Environment Management And Solutions (ICEMS-2022)*, 21st-22nd April 2022.
5. **Singh R** – 'Synthesis of chitosan modified nZVI for anionic azo dye removal from aqueous solution: Isotherm, Kinetics and RSM modelling approach' at *International Conference on Smart Environment Management and Solutions (ICEMS-2022)*, 21st-22nd April 2022, IFERP.
6. **Singh R** – 'Evaluation of two synthetic dyes removal from aqueous environments using modified magnetite nanoparticles: A comparative study' at *International conference on "Recent Developments on Materials, Reliability, Safety, and Environmental issues*, 25th-27th June 2021, NIT Jalandhar.
7. **Singh R** – Surface modified magnetite nanoparticles for dye removal: Kinetics and thermodynamics at International e-Conference on WATER SOURCE SUSTAINABILITY, *Indian*

Water Resources Society (IWRS) and Department of Water Resources Development and Management, IIT Roorkee June 18-20, 2021, Roorkee.

8. **Singh R** – 'Functionalization of Magnetic Nanoparticles for Remediation of Synthetic Dyes' at *International Conference On Advances in Chemical, Biological and Environmental Engineering (ICACBEE-2021)*, Under TEQIP III, 23th -24th April, 2021, Malaviya National Institute of Technology, Jaipur.
9. **Singh R** – 'Application and optimization of vortex assisted emulsified microextraction coupled with UV-Visible spectrophotometer for determination of acetyl salicylic acid in water samples' at *National Conference on Emerging Trends in Water Quality and Quantity Management-III*, 22nd-23rd April 2021, Poornima University, Jaipur
10. **Singh R** – 'Assessment of dye removal capability of polymer functionalized nanoparticles' at *International conference on "Environmental sustainability: Innovations, translational dimensions and way forward*, 11th-12th Feb 2020, BBA University, Lucknow.
11. **Singh R** - Application and Optimization of Vortex Assisted Emulsified Microextraction Coupled with UV-Visible Spectrophotometer for Determination of Acetyl Salicylic Acid in Water Samples at *National Conference on Emerging Trends in Water Quality and Quantity Management-II,* 29th-30th March 19, Poornima University, Jaipur.
12. **Singh R** - Application of Iron Nanoparticles for Environmental Clean up at *VI Rajasthan Science Rajasthan Science Congress*, 13th-15th October 18, Central University of Rajasthan, Ajmer.
13. **Singh R** - 'Application of Iron Nanoparticles for Environmental Clean up' at National Seminar on environmental conservation and Waste Management: Challenges and Alternatives, 5th June 18, IGCHEEPS, University of Rajasthan, Jaipur.
14. **Singh R**, Pathak AK, Kumar S - Application of Nanoparticles for Remediation of Textile Industry Wastewater at International Conference on Nanoscience and Nanotechnology (ICNAN'16), 19th-21st Oct 16, VIT University, Vellore.
15. **Singh R**, Rajeev Jain- Vortex Assisted Emulsification Microextraction coupled with UV-Visible Spectrophotometer: A Green Analytical Method for rapid analysis of Acetyl Salicylic Acid In Environmental and Biological Samples at *International Conference on Recent Advances in Analytical Science (RAAS-2016)*, 7th-9th April 16, IIT BHU, Varanasi.
16. **Singh R**- 'A Green Approach for Environmental Remediation' at *National Conference on Climate Change and Sustainable Development Emerging Issues and Mitigation Strategies (CCSD 2015)*, 23rd-24th Nov 15, Babasaheb Bhimrao Ambedkar University, Lucknow.
17. **Singh R-** 'Removal of Eriochrome Black T from aqueous samples using Nanotechnology' at *2nd International Conference on Emerging Technology- Micro to Nano (ETMN 2015)*, 24th -25th Oct 15, Manipal University, Jaipur.
18. **Singh R-** 'Nanoparticles: Opportunities in Environmental Remediation' at *4th Biennial International Conference on 'Entrepreneurship, Tourism, Energy, Environment'*, 11th-12th Oct 14, Maharshi Dayanand University, Ajmer.
19. **Singh R** - "New approach for pesticides removal- Nanotechnology" at *International Conference on Non-Renewable Energy Sources (NCRER-2014)*, 28th-29th Mar 2014, Bhagwant University, Ajmer, India.
20. **Singh R**, Misra V, Singh RP - "Nanoparticles- A Remediation tool for Environmental Clean up" at *33rd Annual Session of The Academy of Environmental Biology and International Conference on Biosciences with Special Reference to Environmental Issues (ICBEI-2013)*, 18th – 20th Dec 2013, Shivaji University, Kolhapur, India.

21. **Singh R**, Murthy RC, Misra V - "Removal of Hexavalent Chromium using stabilized bimetallic nanoparticles" at *International Conference on Advances in Free Radicals, Redox Signaling and Translational Antioxidant Research & XII Annual Meeting of the Society of Free Radical Research, India (SFRR STAR 2013)*, 30th Jan – 1st Feb 2013, Hotel Clark Avadh, Lucknow, India.
22. **Singh R**, Misra V, Murthy RC - "Degradation of γ-HCH by an integrated nano-bio redox process" at I*nternational Conference on Chemistry and Materials: Prospects and Perspectives – 2012 (ICCMPP-2010)*, 14th – 16th Dec, 2012, Babasaheb Bhimrao Ambedkar University, Lucknow, India.
23. **Singh R**, Misra V, Murthy RC - "Integrated Approach for the Enhanced Degradation of Lindane" at *International Conference on Biodiversity & Sustainable Energy Development (ICBSED 2012)*, 14th – 16th Sep 2012, International Convention Centre, HICC Complex, Hyderabad, India.
24. **Singh R**, Singh A, Misra V, Singh RP - "Degradation of Lindane contaminated soil using zero-valent iron nanoparticles" at *International Symposium on the safe use of Nanomaterials & Workshop on Nanomaterial Safety: Status, Procedures, Policy & Ethical Concerns (SUN)*, 1st -3st Feb, 2011, Indian Institute of Toxicology Research, Lucknow, India.
25. **Singh R**, Misra V, Singh RP – "Remediation of Cr(VI) contaminated soil by zero-valent iron nanoparticles entrapped in calcium alginate beads" at *International Conference on Environmental Science and Development (ICESD)*, 7th - 9th Jan, 2011, Mumbai, India.
26. **Singh R**, Misra V, Murthy RC - "Kinetic Investigation of Lindane dechlorination using Stabilized Bimetallic Nanoparticles" at 32nd *session of Academy of Environmental Biology (AEB) and National Seminar on Emerging Pollutants and Pathogens: Challenges and Risk Reduction,* 20th – 22nd Sep 2012, Indian Institute of Toxicology Research, Lucknow, India.
27. **Singh R**, Misra V - "Effect of zero-valent iron nanoparticles and stabilized bimetallic nanoparticles on the degradation of γ-HCH" at *31st session of Academy of Environmental Biology (AEB) and National Symposium on Sustainable Development: Environment and Socio-Economic Challenges*, 14th - 16th Oct 2011, Bundelkhand University, Jhansi, India.
28. **Singh R**, Singh A, Sharma R, Misra V - "Assessment of soil with tannery wastes and its remediation using zero-valent iron nanoparticles (nZVI)" at *3rd National Conference on Nanomaterials and Nanotechnology*, 21st – 23st Dec, 2010, Amity University Uttar Pradesh, Lucknow Campus, Lucknow, India.

WORKSHOPS/REFRESHER/ORIENTATION COURSES ATTENDED

29. Twelve weeks NPTEL online Certification course on Physico-chemical processes for wastewater Treatment, IIT Roorkee, Jan-April 2022, ***Highest score***
30. Two weeks Refresher Course in Environmental Science and Sustainable Development (Multidisciplinary), UGC-HRDC , University of Rajasthan, Januray 11-21, 2021, ***A+ grade***
31. One week FDP on Research Methodology and Optimization Techniques, AICTE Training And Learning (ATAL) Academy, Government Polytechnic Nashik, December 13-17, 2021
32. Integrated workshop on Publication Ethics and Patenting, Department of Energy and Environment, BBA University, Lucknow, 10th Feb 2020
33. GIAN course in "Researching Sustainability in the Built Environment", MHRD, Department of Architecture, Central University of Rajasthan, January 8-12, 2018.
34. Summer School, UGC-HRDC, University of Lucknow, June 15-July 5, 2017,
35. Orientation Course, UGC-ASC, University of Lucknow, July2-31, 2014

MEMBERSHIP IN ACADEMIC AND PROFESSIONAL ASSOCIATIONS

- The Society for Science of Climate Change and Sustainable Development (Life Member)
- Prof. H.S. Srivastava Foundation for Science and Society (Life Member)
- Academy of Environmental Biology (Life Member)