

Brief Profile

Dr. Deepak Kumar Malik, Associate Professor, Department of Biotechnology Engineering,
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Date of Birth: December 1, 1974

Experience

- Project Assistant from 11 June- 2003 to 19 Feb 2004 in IMTECH, (Chandigarh).
- Research Associate from 20 Feb 2004 to 1 Aug- 2005 in IMTECH, (Chandigarh).
- Lecturer from 2 Aug- 2005 to 27 July 2007 in Ambala College of Engineering and Applied Research, Ambala, Haryana.
- Assistant Professor, in UIET, Kurukshetra University, Haryana, from 27 July 2007.
- Associate professor, in UIET, Kurukshetra University, Haryana, from 27 July 2019.

Project

Completed Research project given by KUK under seed money grant for a period of one year
“Removal of chlorpyrifos organophosphate compound from soil by using plant growth promoting rhizobacteria” during financial year 2022-23.

Publications

Research Paper

1. Shivram, **Malik DK** and SS Sindhu 2007 Improvement in symbiotic efficiency of chickpea (*Cicer arietinum*) by co-inoculation of *Bacillus* strains with *Mesorhizobium* sp. *Cicer. Indian journal of Microbiology*. 47:51-56. ISSN: 0046-899, Web of science
2. **Malik DK** and Sindhu SS 2008 Transposon- derived mutant of *Pseudomonas* strains altered in indole acetic acid production: Effect on nodulation and plant growth in green gram (*Vigna radiata* L.). *Physiol. Mol. Bio. Plants*. 14(4):315-320. ISSN: 0971-5894. Web of Science
3. M Rathi, **DK Malik**, Kumar P, Kumar M, Dahiya A and BS Dahiya 2009 Effect of Phosphate Solubilizing bacterial strains on plant growth of green gram (*Vigna radiata*) and mustard (*Brassica campestris*). *Journal of Pure and Applied Microbiology* 3(1): 125-133. ISSN: 0973-7510. Web of Science
4. **Malik DK**, Singh M and Bhatia P 2009 Biodegradation of Cypermethrin by *Pseudomonas* Strain CYP19 and its use in bioremediation of contaminated soil. *The Internet J. Micro*. 6(2) ISSN: 1937-8289
6. Singh A, Jakhar N, Dahiya S and **Malik DK** 2010 Metal accumulation ability of *Scripus littoralis* in Cu, Pb, Ni, Cd and Co spiked soil. *International Journal of microbes and environmental Management*. 1(1): 25-27. ISSN: 0976-6162
7. Rathi M, **Malik DK** Dahiya BS and Kumar V 2010 Assessment of phosphate solubilizing bacterial strains and their mutants with enhanced phosphate solubilization in relation to green gram (*Vigna radiata*). *Progressive Agriculture*. 10(2): 288-295. Print ISSN: 0972-6152. Online ISSN: 0976-4615

8. Bhatia D, Akshi, Goyat P and **Malik DK** 2011 Degradation of monocrotophos: An organophosphate compound by bacterial culture. *International Journal of Applied Biotechnology and Biochemistry*. 1:253-260. ISSN: 2248-9886.
9. **Malik DK** and Sindhu SS 2011 Production of indole acetic acid production by *Pseudomonas* Spp.: effect of co inoculation with *Mesorhizobium* sp. *Cicer* on nodulation and plant growth of chickpea. *Physiol. Mol. Bio. Plants*. 17(1):25–32. ISSN: 0971-5894. Web of Science
10. Bhatia D and **Malik DK** 2011 Plant microbe interaction with enhanced bioremediation. *Research Journal of Biotechnology*. 6(4):72-79. ISSN: 2278-4535. Web of science
11. Joshi D, Singh D, Bhatia D and **Malik DK** 2011 Effect of different raw substrate on SCP yield by using solid state fermentation. *International Journal of Applied Engineering Research*. Proceeding of National Conference on Converging Technologies Beyond 2020. 6(5): 623-625. ISSN: 0973-4562.
12. Ladwal A, Bhatia D and **Malik DK** 2012 Effect of coinoculation of *Mesorhizobium cicer* with PGPR on *Cicer arietinum*. *Australian Journal of Basic and Applied Sciences* 6(9): 183-187. ISSN: 1991-8178
13. M Rathi, **Malik DK**, and Dahiya BS 2012 Evaluation of Phosphate Solubilizing *Pseudomonas* Strains and their Mutants in Relation to Mustard (*Brassica campestris*) *Journal of Pure and Applied Microbiology* 6(4): ISSN: 0973-7510. Web of Science
14. **Malik DK**, Bhatia D, Nimbriya A and Kumar S 2012 Lactic acid bacteria and bacteriocin: A review. *Journal of Pharmacy Research*. 5(5): 2510-2513. ISSN: 0974-6943.
15. Parashar D, Gulati J and **Malik DK** 2012 Plasmid profiling and antibiotic resistance pattern of *Lactobacillus* LB3. *Journal of pharmacy research* 5(5): 3364-3365. ISSN: 0974-6943.
16. Prashar D and **Malik DK** 2012 Isolation of bacterial strains from fermented food: Active against pathogen. *Journal of pharmacy research* 5(2): 828-829. ISSN: 0974-6943.
17. Rashmi, Singh A, Jain A, Kaushal P, Sangeeta, Shruti, Bhatia D and **Malik DK** 2012 Antimicrobial and Antioxidant Activities of *Kalanchoe pinnata* Against Pathogens. *Journal of pharmacy research* 5(10): 5062-5063. ISSN: 0974-6943.
18. Akashi and **Malik DK** 2012 Isolation of endosulfan degrading *Acinetobacter hemolyticus* with agronomic significance. *Research journal of chemistry and environment* 16 (1): 15-22. ISSN: 2278-4527.
19. Saini J, Kashyap D, Batra B, Kumar S, Kumar R and **Malik DK** 2013 Green synthesis of silver nanoparticles by using neem (*Azadirachta indica*) and amla (*Phyllanthus emblica*) leaf extract. *Indian journal of applied research* 3(5): 209-210. ISSN: 2249-555X
20. Goyat P, Bhatia D and **Malik DK** 2013 Isolation of Malathion degrading *Pseudomonas xanthomarina* with plant growth promoting activity. *Research journal of chemistry and environment* 17 (3): 59-66. ISSN: 2278-4527. Web of Science
21. Sharma M, Rathi M, Gaur N, Grewal A and **Malik DK** 2013 Decolorization of the chlorophenol red (dye) by isolate *Aspergillus* strain from textile industrial waste soil. *Asian journal of experimental biological science* 4(3): 353-355. ISSN: 0975-5845.
22. Kumar S, Saini J, Kashyap D, Batra B, Grewal A, **Malik DK** and Kumar R 2013 Green synthesis of plant-mediated silver nanoparticles using *mangifera indica* and *syzygium cumini* leaf extract.

International Journal of Pharmaceutical Sciences and Research 4(8): 3189-3191. ISSN: 2320-5148. Web of Science

23. Bhatia D and **Malik DK** 2013 Isolation and characterization of chlorpyrifos degrading soil bacteria of environmental and agronomic significance. *Journal of environment science and engineering* 55(2): 227-238. ISSN: 0367-827X

24. Singh N, Kumar R, Khatak S, Malik DK and Grewal A 2013 Morphological, physiological and biochemical characterization of bacteria isolated from pineapple juice. *Asian journal of experimental biological science* 4(4): 651-653. ISSN: 0975-5845.

25. Kumar S, Malik DK and Kumar R 2013 Antimicrobial effect of *Mangifera indica*, *Bombax ceiba*, *Syzygium cumini* and *Kalanchoe pinnata* against acne inducing bacteria. *Asian journal of experimental biological science* 4(4): 645-647. . ISSN: 0975-5845.

26. Singh G and **Malik DK** 2013 Utilization of 2T engine oil by *Pseudomonas* sp. isolated from automobile workshop contaminated soil. *International Journal of Chemical and Analytical Science* 4: 80-84. ISSN: 0976-1209.

27. Singh G and Malik DK 2014 Degradation of 2T (2-stroke oil) engine oil by *Acinetobacter* sp. isolated from automobile workshop contaminated soil of Kurukshetra *Journal of Pure and Applied Microbiology* 8 (1): 739-742. ISSN: 0973-7510. Web of Science

28. Kiran **Malik DK** Khatak S 2014 Comparative antimicrobial activity of leaves and callus of *Gymnema sylvestre* against pathogenic bacteria. *Journal of Pure and Applied Microbiology* 8 (4): 3253-3261. ISSN: 0973-7510. Web of Science

29. Khatak S, Satayander **Malik DK** 2014 Antimicrobial activity of *withania somnifera*, *gymnema sylvestre* and *cannabis sativa* against pathogenic bacteria *Int. J. Chemical. Science*. 12(1): 286-292. ISSN: 0972-768X.

30. Khatak S, Chauhan Nitin, **Malik DK** 2014 DNA isolation and optimization of PCR conditions in *gymnema sylvestre* by using inter simple sequence repeat (ISSR) markers *Int. J. Chem. Sci.* 12(1): 385-392. ISSN: 0972-768X

31. Khatak S, Naagar J, Gupta A and **Malik DK** 2014 Antimicrobial activity of *Vitex negundo* against pathogenic bacteria. *Journal of pharmacy research* 8(2): 91-92. ISSN: 0974-6943.

32. Khatak S, Sharma P, Lallar S and **Malik DK** 2014 Antimicrobial, antioxidant and phytochemical properties of *Cassia tora* against pathogenic microorganisms. *Journal of pharmacy research* 8(9): 1279-84. ISSN: 0974-6943.

33. Swati Kodan, Divya Bhatia and **Deepak Kumar Malik** 2014 Green synthesis of silver nanoparticles by plant extract with its antimicrobial activity against human pathogens. Proceeding of 2nd National Conference on Converging Technologies Beyond 2020. 284-287. ISSN: 2394-2339.

34. Sunita Khatak*, Shikha Laller, Preeti sharma and **Deepak Malik** 2014 Phytochemical analysis and antioxidant properties of *Elettaria cardamomum*. Proceeding of 2nd National Conference on Converging Technologies Beyond 2020. 279-283. ISSN: 2394-2339.

35. Sunita Khatak*, Shikha Laller, Preeti Sharma and **Deepak Kumar Malik** 2014 Antimicrobial property of *Elettaria cardamomum* against pathogenic microorganism. Proceeding of 2nd National Conference on Converging Technologies Beyond 2020. 275-278. ISSN: 2394-2339.
36. Manisha yadav, Divya Bhatia and **D.K Malik** 2014. Screening of plants for the synthesis of silver nanoparticles with its antimicrobial activity. Proceeding of 2nd National Conference on Converging Technologies Beyond 2020. 288-292. ISSN: 2394-2339.
37. Archit Sharma, Divya Bhatia and **Deepak Kumar Malik** 2014. Fungal mediated synthesis of silver nanoparticle. Proceeding of 2nd National Conference on Converging Technologies Beyond 2020. 157-159. ISSN: 2394-2339.
38. Archit Sharma, Shruti, Manoj Kumar and **Deepak Malik** 2015 Lignocellulose degradation of rice straw by thermophilic microbial consortium isolated from mature compost of sugarcane industry. *International Journal of Applied and Pure Science and Agriculture*. **1** (8): 42-48. ISSN: **2394-5532**.
39. Shruti, Archit Sharma and **Deepak Malik** 2015 Lignocelluloses biomass degradation by microbial consortium isolated from harvested rice field. *International journal of current microbiology and applied sciences*. **4** (9): 274-280. ISSN: 2319-7706
40. Divya Bhatia, **Deepak Kumar Malik*** and Ashwani Mittal 2016 Screening of different Growth Medium for Extracellular Bacterial Synthesis of Silver Nanoparticles: Ecofriendly Method. *Journal of Pharmacy Research*, 10(1), 76-78. ISSN: 0974-6943.
41. Manoj Kumar, Rajesh Kumar and **Deepak Kumar Malik*** 2016 Keratin degradation by bacterial strain isolated from poultry farm soil. *Journal of Pharmacy Research*, 10(2), 113-115. ISSN: 0974-6943.
42. Divya Bhatia, Ashwani Mittal and **Deepak Kumar Malik*** 2016 Antimicrobial activity of PVP coated silver nanoparticles by *Kocuria rosea* and their antimicrobial activity. *3 Biotech*, 6:196 DOI 10.1007/s 1305-016-0514-7. Web of Science
43. Divya Dhaka, Divya Bhatia, Anita Grewal and **Deepak Kumar Malik*** 2017 Molecular characterization of bacteria isolated from rhizospheric and non-rhizospheric soil of *Saraca asoca*. *Journal of Pharmacy Research*, 11(6), 762-766. ISSN: 0974-6943.
44. Deepak Chopra, vivek Singh, Sunita Khatak and **Deepak Malik** 2017 Isolation of imidacloprid-degrading bacterial strain with plant growth promoting rhizobacteria activity. *Journal of Pharmacy Research*, 11(11), 1426-1428. ISSN: 0974-6943.
45. Deepak Parashar, Divya Bhatia, and **Deepak Kumar Malik*** 2017 Optimization of keritinase production by *Bacillus oleronius* isolated from poultry farm soil. *Journal of Pure and Applied Microbiology* **11** (2): 1129-1134. ISSN: 0973-7510. DOI: <https://dx.doi.org/10.22207/JPAM.11.2.58> Web of Science
46. Divya Bhatia, Ashwani Mittal and D. K Malik (2017). Rapid Biosynthesis of PVP Coated Silver Nanoparticles by *Kocuria rosea* and their Antimicrobial Activity. *Microbiology*. 86(5): 602-609. ISSN - 0026-2617. DOI: 10.1007/s13205-016-0514-7 Web of Science
47. Archit Sharma, Rajesh Kumar, Meenu Rathi, Divya Bhatia and **Deepak Kumar Malik** 2018 Lignocellulose biodegradation: An advance technology for sustainable environment. *Bioscience Biotechnology Research Communications*, **11**(4), 634-637. ISSN: 0974-6455. DOI: 10.21786/bbrc/11.4/14 Web of Science

48. Sunita Khatak, Naman Wadhwa and **Deepak Kumar Malik** 2019 Comparative analysis of antimicrobial activity and phytochemical assay of flower extracts of *Butea Monosperma* and *Cassia fistula* against pathogenic microbes. *Int. J. Recent. Sci. Res.* 10(03), pp. 31285-31290. DOI: <http://dx.doi.org/10.24327/ijrsr.2019.1003.3229>
49. Vivek Singh, Divya Bhatia, Sunita Khatak, and **Deepak Kumar Malik** 2019 Biological eco- friendly synthesis of nanoparticles and their application. *Bioscience Biotechnology Research Communications*, 12(1), 134-139. ISSN: 0974-6455. DOI: 10.21786/bbrc/12.1/17. Web of Science
50. Sunita Khatak, Swati Dahiya and **Deepak Kumar Malik** 2019. Antimicrobial potential of different plant parts of *Ficus carica* against pathogenic microbes in correlation to Phytochemical Analysis. *International Journal for Research in Applied Science & Engineering Technology*, 7 (IV): 548-552. ISSN: 2321-9653.
51. Manoj Kumar, Divya Bhatia, Sunita Khatak, Rajesh Kumar, Archit Sharma and **Deepak Kumar Malik*** 2019 Optimization and Purification of Keratinase from *Bacillus anthracis* with Dehairing *J Pure Appl Microbiol*, 13(1): 585-590 ISSN: 0973-7510. <https://dx.doi.org/10.22207/JPAM.13.1.67> Web of Science
52. Sunita Khatak, **Deepak Kumar Malik** and Rajesh Kumar 2019. *Tecoma stans*: A noxious weed put to beneficial use. *International Journal of chemical studies*, 7(3): 296-299. P-ISSN: 2349–8528
53. Sunita Khatak, Abhilasha, Hemlata and **Deepak Kumar Malik** 2019. Biological synthesis of copper nanoparticles using intra generic edible medicinal plants of Rosaceae family. *International Journal of chemical studies*, 7(3): 753-756 P-ISSN: 2349–8528.
54. Singh Vivek, Rath M, Bhatia Divya and **Malik DK** 2020 An Insight into the various toxicological effects of nanoparticles on our living system: A review. *Biosc. Biotech. Res. Comm.* 13 (2): 868-874. ISSN: 2321-4007. DOI: <http://dx.doi.org/10.21786/bbrc/13.2/72>. Web of Science
55. Aggarwal K, Bhatia D and Malik DK 2020 Electrochemical analysis and characterization of extracellularly synthesized gold nanoparticles by *E. coli*. *International journal of biology pharmacy and applied sciences*. 9(10): 2666-2675 ISSN. 2277–4998. <https://doi.org/10.31032/IJBPAS/2020/9.10.5222>, Web of Science
56. Aggarwal K, Bhatia D and **Malik DK** 2020 Intracellular synthesis of gold nanoparticles by *E. coli*. *International journal of biology pharmacy and applied sciences*. 9(10):2676-2683 ISSN: 2277–4998. <https://doi.org/10.31032/IJBPAS/2020/9.10.5223>, Web of Science
57. Singh Vivek, Rath M and **Malik DK** 2021 Prospecting application and classification of nanoparticle: Review. *International journal of biology, pharmacy and Allied Sciences* 10 (4): 1145-1159, ISSN: 2277-4998. Web of Science
58. Divya Bhatia, Ashwani Mittal and **Malik DK** 2021. Antimicrobial potential and in vitro cytotoxicity study of polyvinyl pyrrolidone-stabilised silver nanoparticles synthesised from *Lysinibacillus boronitolerans*. *IET Nano biotechnology*, 15:427–440. DOI: 10.1049/nbt2.12054. Web of Science
59. Singh Vivek ¹, Duhan Anil ² and **Malik DK** 2023. Removal of Chlorpyrifos, Malathion, Dichlorvos and Profenofos by Nanocomposite containing AgNP. *Indian Journal of Chemical Technology*, 30 (3):. DOI: 10.56042/ijct.v30i2.64532.

60. Bhatia Divya , Rathi Meenu and **Malik DK** 2023. Antimicrobial potential of polyvinyl pyrrolidone stabilized silver nanoparticles synthesized by *Sphingobacterium multivorum*. *Indian Journal of Experimental Biology*, 61(5):364-372. DOI: 10.56042/ijeb.v61i05.85.
61. Sood Yashika, Singhmar Raina, Singh Vivek and **Malik DK** 2023. Isolation and Characterization of Potential Potassium Solubilizing Bacteria with Various Plant Growth Promoting Traits. *Biosciences Biotechnology Research Asia*, 20(1): 79-84. <http://dx.doi.org/10.13005/bbra/3070>.
62. Vivek Singh, Raina Singhmar, Meenu Rathi, Divya Bhatia, **Deepak Kumar Malik** 2023. Biogenesis of Bacterial and Fungal Endophytic Mediated Silver Nanoparticles. *Asian Journal of Biological and Life Sciences*, 12(1): 130-137. DOI: 10.5530/ajbls.2023.12.18.
63. Annu Sharma, Sonika Ahlawat, Rekha Sharma, Reena Arora, Karan Veer Singh, **Deepak Malik**, Santanu Banik, Th Ranadhir Singh & M. S. Tantia 2023. Tracing the genetic footprints: India's role as a gateway for pig migration and domestication across continents. *Animal Biotechnology*, 34(9) 1-7. DOI: 10.1080/10495398.2023.2268683. ISSN no 1049-5398.
64. Vivek Singh, Kavita Rani, Amrinder Singh, Divya Bhatia, **Deepak Kumar Malik** 2024. Removal of Crystal Violet, Methyl Orange, Methylene Blue and Rhodamine B by Nanocomposite Containing Endophytic-Mediated AgNP. *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci*, 6:1-13. DOI: <https://doi.org/10.1007/s40011-024-01623-2>. ISSN: 0369-8211
- 65 **Deepak Kumar Malik**, Raina Singhmar, Vivek Singh, Meenu Rathi and Vishal Ahlawat 2024. Chlorpyrifos Degradation by *Bacillus tropicus* a Plant Growth Promoting Rhizobacteria. *Biosciences Biotechnology Research Asia*. 21(1), 349-354. **DOI:** <http://dx.doi.org/10.13005/bbra/3230>. **Print ISSN:** 0973-1245
66. Singhmar Raina, Rathi Meenu , Singh Amrinder and Malik Deepak Kumar 2024 Microbial degradation of chlorpyrifos, profenophos and cypermethrin by multi-trait PGPR strains. *Research Journal of Biotechnology*. 19 (8) 35-39.
67. Singhmar Raina, Vivek Singh, Laxmi Bhatti, Sudha Dalal and Malik Deepak Kumar 2024. Inoculation of multitrait plant growth promoting rhizobacteria for wheat growth promotion under pot house conditions. *Journal of microbiology biotechnology and food science*. 14 (3) 1-6. <https://doi.org/10.55251/jmbfs.10484>.
68. Deepak Kumar Malik, Vivek Singh, Rajesh Aghnihotri and Meenu Rathi 2024. Bioremediation of Chlorpyrifos-contaminated Soil by Exopolysaccharide, Surfactant and Biofilm Synthesising Plant Growth Promoting Rhizobacteria. *Biosciences Biotechnology Research Asia*. 21(4): 1409-1414.
69. Deepak Kumar, Meenakshi Suhag and Deepak Malik 2026. From soil stress to sustainable solutions: A bibliometric and systematic review of plant growth promoting rhizobacteria in climate-resilient agriculture. *European Journal of Agronomy*. 174 (1-13).
70. Garg Ramika, Bhatia Divya, Panchal Kamaljit and Malik Deepak 2026. Antimicrobial and Antioxidant Activity of Biologically Synthesized ZnO nanoparticle. *Res. J. Biotech*. 21:3 (306-316).

Books Chapter

1. Sindhu SS, **Malik DK** and Dadarwal KR 2003 Enhancing the potential of biological nitrogen fixation by genetic manipulation of diazotrophic bacteria for sustainable agriculture. *Improvement of plant by genetic engineering*. pp. 199- 221. **ISBN: 1-930813-17-1**
2. Labana S, Kapur M, **Malik DK**, Prakash D and Jain RK Diversity, Biodegradation and Bioremediation of polycyclic aromatic hydrocarbons. Eds. Shree N. Singh, Rudra D. Tripathi, Environmental Bioremediation Technology, Springer New York, 2007, pp. 409-443. **ISBN: 10 3-540-3479-9**
3. Sindhu. SS, Rakshiya YS and Malik DK Rhizosphere bacteria and their role in biological control of plant diseases. Eds. R.Z. Sayyed, Biotechnology Emerging Trends, Scintific Publisher, Jodhpur, 2009, Pg. 17-52. **ISBN: 978-81-7233-587-8.**
4. Sindhu SS, Goel S and **Malik DK** 2011 Soil flora and their significance. In: *Modern Concepts of Vegetable Production* (Ed. Rana, M.K.). Biotech Books, Daryaganj, New Delhi-110 012, Chapter 14, pp. 386-429. ISBN: 9788176222358
5. Bhatia D, Grewal A, Rathi M and **D. K. Malik** 2014 Bacterial and fungal degradation of Nitroglycrine. In: *Biological remediation of explosive residues* (Ed. Singh S.N) Springer, Germany. pp. 149-162. **ISBN: 978-3-319-01082-3**
6. **D. K. Malik**, Bhatia D, Akashi and P Goyat 2014 plant growth-promoting bacteria: a potential tool for plant growth promotion. In: *Microbes in the service of mankind tiny bugs with huge impact* (Ed. Nagpal A, Kumar A and Singh Randhir) JBC Press, New Delhi, India. Pp. 234-253. **ISBN: 978-93-8155-8850**
7. S. S. Sindhu, N. Verma, **D. K. Malik**, D. Chaudhary and S. Goyal 2014 Microbial degradation of pesticides: biochemical and molecular aspects. In: *Microbes in the service of mankind tiny bugs with huge impact* (Ed. Nagpal A, Kumar A and Singh Randhir) JBC Press, New Delhi, India. Pp. 525-583. **ISBN: 978-93-8155-8850**
8. Rathi M, Gupta A, Bhardwaj V, **Malik D. K**, N Gaur 2014 Phytoremediation of heavy metals. In: Environmental Studies (Ed. Dr. Amrit Singh) Acharya Acadmy Bharat, Laat printing press Pratap Chowk, Rohtak. Pp 186-192. **ISBN: 978-93-5104-321-8.**
9. D. K. Malik, Bhatia D and **Rathi M** 2014 Bacterial degradation of some organophosphate compounds (chlorpyrifos, parathion, glyphosate, coumaphos, monocrotophos and malathion. *Microbial Diversity and Biotechnology in Food Security*. (Ed. Kharwar R), Springer India (Pvt) Ltd., New Delhi. **ISBN: 9788132218005**
10. Mehra. A, Sharma. A and D. K. Malik 2018 Green Synthesis of copper nanoparticals and its application as antimicrobial agent. *Emerging Trends and challenges in Biosciences*. (Ed. Singh. R. P), Astral international Pvt. Ltd., New Delhi. **ISBN: 978-93-5124-988-7(HB)**
11. Bhatia D, Saini Ritu, Saini Harneek and D. K. Malik 2020 Microbes as a source of Therapeutic Natural products. *Microbes for human mankind and applications* (Ed. Deepak Kumar Malik, Meenu Rathi, Rajesh Kumar, Divya Bhatia), Astral International Publisher .**ISBN: 978-93-89569-01-8(HB)**.
12. Bhatia D and D. K. Malik 2021 An Insight into the Potential Role of Artificial Intelligence in Bioinformatics. *Advanced AI Techniques and Applications in Bioinformatics (1st ed)* (Ed. Gaur, L.,

Solanki, A., Wamba, S.F., & Jhanjhi, N.Z. CRC Press. ISBN9781003126164.
<https://doi.org/10.1201/9781003126164>

13. Sood Yashika, Bhatia Divya, Saini Harneek and D. K. Malik 2022. Microbial Degradation of Organophosphate compounds: *Microbes for humanity and applications* (Ed. Deepak Kumar Malik, Meenu Rathi, Divya Bhatia, Shika Jaggi), Astral International Publisher. ISBN: 978-93-5461-397-5 (HB).

Books

1. Editor of a book “Microbes for human mankind and applications” Editors (Deepak Kumar Malik, Meenu Rathi, Rajesh Kumar, Divya Bhatia) of Astral International Publisher in 2020. ISBN: 978-93-89569-01-8(HB).
2. Editor of a book “Microbes for humanity and applications” Editors (Deepak Kumar Malik, Meenu Rathi, Divya Bhatia, Shika Jaggi) of Astral International Publisher in 2022. ISBN: 978-93-5461-397-5 (HB).

Coordinator and organizer of events

1. Coordinated and organized a six week “Technology based Entrepreneurship development program on development of bio-diagnostic kits” from 18th July – 28th August 2012 sponsored by National science and Technology entrepreneurship Development Board, DST, Gov. of India.
2. Organizer in National conference on “NexGen Biotechnology: Amalgamating science and Technology” Organized by UIET, KUK on November 23-24, 2012.
3. Member of organizing committee in TEQUIP-II Sponsored workshop on Bioprospecting microbes for industrial applications organized by, UIET, KUK on 27th to 28th Mar 2017.
4. Member of organizing committee in the TEQUIP III sponsored three day lecture series/ seminar organized by, UIET, KUK held during 7th March to 9th March 2018.
5. Member of organizing committee of TEQUIP III sponsored short-term course on “Sustainable Renewable Energy Organized UIET, KUK held during 19th -25th March 2018.
6. Co-coordinator of two days’ workshop on proteomic in life science Research from 27th to 28th Aug 2019 organized by UIET with GE Healthcare.
7. Organize photography competition on the theme of impact of Covid 19 on education/ social behavior/ health sector on 26th August 2020 as convener.
8. Work as member of organizing committee in TEQUIP III Sponsored one-week FDP on “Opportunities and challenges in different sector of biotechnology Post pandemic” at the department of Biotechnology, UIET, KUK from 8 to 12th March 2021.

Students completed PhD under my super vision - 04

Students completed M. Tech under my super vision - 20