

Satarupa Dey, M.Sc, Ph.D

Contact Information:

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Educational qualification:

Exam / Degree	Year of passing	University	Subject
Ph.D.	2012	University of Calcutta	Botany (Microbiology) Ph.D. Thesis title: “Reduction of hexavalent chromium by bacteria isolated from chromite mining environment”

Research interest:

- Bioremediation of chromite mine waste
- Growth promoting ability of rhizospheric microbiota from tea garden
- Microplastic pollution and its bioremediation

Work experience:

Present engagement:

Teaching engagements

1. **Assistant Professor** at Shyampur Siddheswari Mahavidyalaya, Botany department, Howrah under the *University of Calcutta* from 2nd **September, 2019** – till date.

Past engagements:

a) **Research engagements**

1. **Research Fellow** in Microbiology laboratory, Department of Botany, University of Calcutta in a DBT sponsored project entitled “Diversity of metallophilic in eastern Ghats: exploration and exploitation in metal prospecting and bioremediation” from June 2007-June 2012.

2. **Visiting Scientist**, Agricultural and Ecological Research unit, Indian Statistical Institute, Kolkata, India from December 2016- August 2018. Worked in a West Bengal DBT sponsored project entitled “**Changes in the pattern of irrigation cultivation agriculture and livelihood of rural bengal: The experience of Jamalpur Block of Bardhaman**”
3. **DST WOS A Women Scientist fellowship**, Agricultural and Ecological Research unit, Indian Statistical Institute, Kolkata, India from March 2019 till August, 2019.

Teaching engagements

1. **Adjunct faculty** at Netaji Nagar College for Women, Botany department, Under graduate (honours and pass) studies under the *University of Calcutta* from **January, 2019 to May 2019**.
2. **Adjunct faculty** at Jogamaya Devi College, Botany department, Under graduate (honours and pass) studies under the *University of Calcutta* from **August, 2018 to May 2019**.
3. **Adjunct faculty** at Scottish Church College, Botany department, Post graduate studies under the *University of Calcutta* from **February, 2017 – till March 2019**.
4. **Adjunct faculty** at Lady Braboune college, Microbiology department, Post graduate studies under the *University of Calcutta* from **September, 2017-till March 2019**.

List of Publication:

Post-Ph.D. publications in peer reviewed refereed journals

1. Nishita Ivy, Sayan Bhattacharya, **Satarupa Dey**, Kaushik Gupta, Abhijit Dey, Prabhakar Sharma (2023). Individual and Synergistic/antagonistic effects of microplastic and arsenic in soil-plant environment: Toxicological and environmental health perspectives. *Chemosphere*. (Impact 8.943) 338, 139542.
2. Uttpal Anand, **Satarupa Dey**, Elza Bontempi, Stefania Federici, A. Dick Vethaak, Abhijit Dey. Biotechnological methods to remove microplastics: a review. *Environmental chemistry letters*. (Impact 13.615). Published online 8th February 2023. <https://doi.org/10.1007/s10311-022-01552-4>
3. Satwik Majumdar, Bikram Dhara, A.K. Mitra, **Satarupa Dey**. Applications and implications of carbon nanotubes for the sequestration of organic and inorganic pollutants from wastewater *Environmental Science and Pollution Research*. (IF 5.03). <https://doi.org/10.1007/s11356-023-25431-9>
4. Uttpal Anand, **Satarupa Dey**, Dipannita Parial, Stefania Federici, Serena Ducoli, Nanthi S. Bolan, Abhijit Dey, Elza Bontempi. Algae and bacteria consortia for wastewater decontamination and transformation into biodiesel, bioethanol, biohydrogen, biofertilizers and animal feed: a review *Environmental chemistry letters*. Accepted on 20th Dec 2022. (IF 13.65) <https://doi.org/10.1007/s10311-023-01562-w>
5. **Satarupa Dey**, Uttpal Anand, Vineet Kumar, Sunil Kumar, Mimosa Ghorai, Arabinda Ghosh, Nishi Kant, S. Suresh, Sayan Bhattacharya, Elza Bontempi, Sartaj Ahmad Bhat, Abhijit Dey.

2023. Microbial Strategies for Degradation of Microplastics generated from COVID 19 health care waste. *Environmental Research*. (Impact 8.4) 216(Pt 1):114438. doi: 10.1016/j.envres.2022.114438.
6. **Satarupa Dey**. Indigenous microbial population and their role in natural attenuation of abandoned mining sites. *Archives of Microbiology*. 204. 251. 2022 <https://doi.org/10.1007/s00203-022-02861-6> (Impact 2.55). Springer Nature.
 7. V. Ragul, K.S. Vinayaka, J. Madhusudhanan, P. Srinivasan, A. Shanmugarathinam, **S. Dey**, M.I. Niyas Ahamed. Bactericidal And Radical Scavenging Activity Of Natural Wood And Chitosan Based Novel Nanocomposite. *Turkish Online Journal of Qualitative Inquiry (TOJQI)*. Volume 12(7) 2021:12818–12829 E-ISSN:1309-659
 8. **Satarupa Dey**. Microbial resources of alkaline bauxite residue and their possible exploitation in remediation and rehabilitation. *Geomicrobiology*. 2021. (Impact 2.3) doi. 10.1080/01490451.2021.1977433
 9. **Satarupa Dey** and A. K. Paul. Evaluation of physio-biochemical potentials of alkaliphilic bacterial diversity in bauxite processing residues of diverse restoration history. *Environmental Sustainability*. 2021, 1-15. <https://doi.org/10.1007/s42398-020-00152-8>
 10. **Satarupa Dey** and A. K. Paul. Immobilized chromate reducing bacteria and their enzymes in bioremediation of hexavalent chromium. *Journal of Advanced Microbiology*. 2020 4(2): 106-121.
 11. **Satarupa Dey**, Swagata Bhattacharya, Rajyasri Ghosh and Shampa Bhattacharyya. Biosorption of hexavalent chromium by *Aspergillus fumigatus* S101 isolated from coal mining environment. *Environmental and Experimental Biology*, 2019. 17: 97-105.
 12. **Satarupa Dey** and A. K. Paul. Magnesium induced biofilm development in *Arthrobacter* sp. SUK 1201 and removal of hexavalent chromium. Soil and sediment contamination. An International Journal, 2018. 27 (5): 1-10. (Impact Factor: 1.2) (ISSN: 1532-0383) Taylor and Francis Publication
 13. **Satarupa Dey** and A. K. Paul. Influence of metal on biofilm formation by *Arthrobacter* sp. SUK 1205 and evaluation of its Cr(VI) removal efficacy. *International Biodeterioration and Biodegradation*, 2018. 132: 122-131. (Impact Factor: 4.907) Elsevier (ISSN 0964-8305)
 14. **Satarupa Dey** and A. K. Paul (2016). Assessment of heavy metal tolerance and hexavalent chromium reducing potential of *Corynebacterium paurometabolum* SKPD 1204 isolated from chromite mine seepage. *AIMS Bioengineering*. 3(3): 337-351.(ISSN 2375-1495)
 15. **Satarupa Dey** and A. K. Paul (2016). Evaluation of chromate reductase activity in the cell-free culture filtrate of *Arthrobacter* sp. SUK 1201 isolated from chromite mine overburden. *Chemosphere*. 156: 69-75. (Impact Factor: 4.208), (ISSN 0045-6535) Elsevier

16. **Satarupa Dey** and A. K. Paul (2015). Hexavalent Chromate Reduction During Growth and by Immobilized Cells of *Arthrobacter* sp. SUK 1205. Science, Technology and Development 34 (3): 158-168 (ISSN 0254-6418)
17. **Satarupa Dey**, Baishali Pandit and A. K. Paul (2014). Reduction of hexavalent chromium by viable whole cells of chromium resistant bacteria isolated from chromite mining environment. Journal of Mining. <http://dx.doi.org/10.1155/2014/941341>.
18. **Satarupa Dey** and A. K. Paul (2014). *In-vitro* bioreduction of hexavalent chromium by viable whole cells of *Arthrobacter* sp. SUK 1201. Journal of Microbiology, Biotechnology and Food Sciences. 4(1), 19-23. (ISSN 1338-5178) (Impact Factor: 0.9801)
19. **Satarupa Dey** and A. K. Paul (2014). Reduction of hexavalent chromium by immobilized viable cells of *Arthrobacter* sp. SUK 1201. Bioremediation Journal. 18(1), 1-11. (ISSN 1088-9868) (Impact Factor: 1.098) Taylor and Francis Publication
20. **Satarupa Dey** and A. K. Paul (2013). Hexavalent chromium reduction. by aerobic heterotrophic bacteria indigenous to chromite mine overburden. Brazilian Journal of Microbiology. 44 (1), 307-315. (ISSN 1517-8382) (Impact Factor: 1.091) Elsevier
21. **Satarupa Dey** and A. K. Paul (2013). Evaluation of *in vitro* Reduction of Hexavalent Chromium by Cell-Free Extract of *Arthrobacter* sp. SUK 1201. British Microbiology Research Journal, 3(3), 325-338. (ISSN 2231-0886)

Pre- Ph.D. publications in peer reviewed referred journals

22. **Satarupa Dey** and A. K. Paul (2012). Optimization of chromate reduction by whole cells of *Arthrobacter* sp. SUK 1205 isolated from metalliferous chromite mine environment. Geomaterials, 2, 73-81. (ISSN 2161-7546)
23. **Satarupa Dey** and A. K. Paul (2012). Optimization of cultural conditions for growth associated chromate reduction by *Arthrobacter* sp. SUK 1201 isolated from chromite mine overburden. Journal of Hazardous Material. 213-214, 200-206. (ISSN 0304-3894) (Impact Factor: 6.065) Elsevier
24. **Satarupa Dey** and A. K. Paul (2010) Occurrence and evaluation of chromium reducing bacteria in seepage water from chromite mine quarries of Orissa, India. Journal of Water Research and Protection. 2, 380-388. (ISSN 2152-2219)
25. **Satarupa Dey**, Amrita Biswas and A. K. Paul (2006) Isolation and Characterization of Moderately Halophilic Bacteria from Saltern Ponds, Journal of Botanical Society of Bengal 60(2): 126-129. (ISSN 0971-2976)

Edited Books:

- **Satarupa Dey** and Biswaranjan Acharya. “Recent Advancements in Bioremediation of Metal Contaminants” IGI global publisher, ISBN13: 9781799848882

- **Biswaranjan Acharya, Satarupa Dey and Mohammed Zidan “IoT based Smart Waste Management for Sustainable Environment”, CRC press. ISBN 9781032013916. Published.**
- **Maulin P. Shah and Satarupa Dey “Extremophiles: A paradox of nature and its implication” De Greuters. Germany. <https://doi.org/10.1515/9783110788488> Published.**
- **Satarupa Dey, Abhijit Dey and Ashok Kumar Nadda. “Biohydrometallurgical Processes: Metal Recovery and Remediation” CRC press. Submitted.**
- **Maulin P. Shah and Satarupa Dey, “Trends in Biotechnology of Polyextremophiles”. Springer Nature. Ongoing.**

Reviewer of referred journals:

- Bioremediation Journal, Taylor and Francis
- Journal of advances in Microbiology, Science domain
- Folia Microbiologica, Springer
- Environmental Pollution, Elsevier
- World journal of Microbiology and Biotechnology, Springer
- Ecotoxicology and Environmental Safety, Elsevier

Awards:

- Jogamaya Devi College award 2002 for highest marks in Botany Honours under the University of Calcutta, India.
- Second best oral presentation award at Advancement in plant sciences: An insight, held at September 30th, 2019.
- Third Best presentation at A Two Day Virtual Conference On **CURRENT GLOBAL PANDEMIC AND ONGOING CLIMATE CHANGE**, Organized by Shri Shikshayatan college, KOLKATA and SHYAMPUR SIDDHESWARI MAHAVIDYALAYA held on June 2020.
- Invitation from 10th International Congress on Industrial and Applied Mathematics (ICIAM 2023) will be held on August 20th to August 25th, 2023 at Waseda University, Tokyo, Japan.

Other Qualifications:

- Studied German from Max Mueller Bhavan (Goethe Institute, Kolkata)
- Worked as a German interpreter for Crish Creations Pvt Ltd, P-48 Transport Depot Road, Kolkata 700088
- Certified translator (German to English) of Max Mueller Bhavan, (Goethe Institute, Kolkata)