

## BIO-DATA

**NAME:** DR.ARUP KUMAR MITRA

**FATHER'S NAME:** Late Dr. Arun Kumar Mitra.

### ADDRESS

**RESIDENCE:** Gyaner Abha, 1A Milan Park, 1<sup>st</sup> Floor, Kolkata 700 084.  
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**COLLEGE:** St. Xavier's College, 30 Park Street, Kolkata 700 016.

Tel.: 91-33-22551276, 91-33-22551295

**DATE OF BIRTH:** 29<sup>th</sup> March 1966.

### EDUCATIONAL QUALIFICATIONS:

**SECONDARY:** From South Point High School in 1981 in 1<sup>st</sup> Division.

**H.S.** : From Birla College of Science and Education in 1983 in 2<sup>nd</sup> Division.

**B.Sc (Part I):** From Scottish Church College in 1985 with 1Q.

**B.Sc (PartII):** From the same college (C.U) with Botany (Hons.) in 1986 in 1<sup>st</sup> Class.

**M.Sc.** : From University of Calcutta in Botany with special paper Mycology  
And Plant Pathology in 1988, in 1<sup>st</sup> Class (IV).

**Ph.D:** Awarded from University of Calcutta in April 1995 under Prof.R. P.

PurkayasthaPh.D (Lond), FNASC.F.A.A.S.F.N.A.

Title of thesis: Studies on the uptake of heavy metal pollutants and  
Its effect on their growth, productivity and mammalian system.

**DIPLOMA:** Environmental monitoring and Assessment from South Bank  
University, London.U.K. in 1997.

### PROFESSIONAL QUALIFICATIONS:

- Passed German language course G I from Max Muller Bhavan, Kolkata in 1987.
- Passed 2 certificate courses in computer applications from L.C.C, Kolkata in 1992.
- Passed GATE examination (IIT) in 1991.
- Passed NET examination for UGC lectureship in Dec.90 and UGC fellowship in June 1991 conducted by CSIR-UGC.
- Participated in the Orientation programme for innovative teaching in Serampore College in 1995, sponsored by AIACHE.

- Participated in the Natl.Level workshop on Environmental pollution management at J.U. in 1997.
- Attended a UGC sponsored refresher course on Mathematics of Biomolecules at Sivatosh Mookerjee Science Centre, Kolkata between Dec.1998 to Jan.1999.
- Participated in a Natl. level workshop on Bio informatics and its applications in the Biotechnology Department of IIT Kharagpur in March 2000.
- Participated in 2 UGC sponsored seminars on environmental education at college level in Sept 2000 and Feb.2001.
- Completed a 4-month training programme on computer applications at St.Xavier's Computer Center in 2000.
- Attended a Natl. Symposium on Tropical Mycology at Calcutta University in Feb.2001.
- Attended a UGC sponsored orientation programme between July 2001 and August 2001. Organized by Academic Staff College, University of Calcutta.
- Attended a UGC sponsored refresher course on Environmental Studies between Oct.2002 and Nov.2002. at University of Calcutta.
- Attended a professional development programme for tertiary level teachers at Bangalore in May 2004 organised by All India Institute for Human Resource Development.
- Completed a training programme on Stem Cell Culture from Reliance Life Sciences, Navi Mumbai in Feb.2006.
- Completed a 6-month certificate programme in entrepreneurship teaching from ISB, Hyderabad in 2007.

#### **AWARDS:**

- Recipient of P.R.Das Memorial Medal and Book prize from Scottish Church College and the National Merit Scholarship from Govt.of India in 1986 for B.Sc. (Hons.) results.
- Recipient of best paper award in Mycology section of the 21st conference of Indian Botanical Society at Ujjain in 1998.
- Received the Rotary International Citation for outstanding contributions towards community service in 2004 as President of Rotary Club of Calcutta South West.
- Recipient of special certificate on best e content on Cultivation of edible mushroom on behalf of EMMRC, St. Xavier's College, Kolkata in the annual competition, 2015-16 from UGC-CEC, MHRD, Govt. of India.
- Received the Award for Excellence for imparting Education from St. Xavier's College, Calcutta Alumnae Association in 2023.
- Received Swami Vivekananda National Award for Excellence Educator in the Field of Research in 2024.

#### **PhD Guide:**

Eight students are presently registered for their PhD degree in the Department of Botany, University of Calcutta and Department of Microbiology, St. Xavier's College.

#### **Ph.D Awarded:**

1. Dr. Saurav Sett, Department of Marine Science, University of Calcutta in August, 2019. Title of the Thesis: Study on In vitro Antibacterial and anti-fungal activity of selected mangrove plant extracts from Indian Sundarbans.
2. Dr. Debanjana Sengupta, Department of Microbiology, St. Xavier's College, Kolkata in October,2021. Title of the Thesis: Studies on Arsenic sequestration by bacteria in arsenic contaminated soil.
3. Dr. Puja Agnihotri, Department of Microbiology, St. Xavier's College, Kolkata in April,2022. Title of the Thesis: Understanding Arsenic bioremediation through interaction between *Azolla microphylla* and bacterial consortia.
4. Dr. Suhana Datta, Department of Botany, University of Calcutta in May, 2022. Title of the thesis: Evaluation of biochemical and biological activity of *Calocybe indica* P&C
5. Dr. Tamanna Sultana, Department of Microbiology, St. Xavier's College, Kolkata in June, 2022. Title of the thesis: Mangrove Plants: A solution to bacterial, fungal and cancerous growth.
6. Dr. Meenakshi Mukhopadhyay Department of Microbiology, St. Xavier's College, Kolkata in December, 2023. Title of the thesis: Microbial Augmentation of Low Productive Soil Towards Increased Productivity in Organic Farming of Soybean Plants.
7. Dr. Debjani Dutta, Department of Microbiology, St. Xavier's College, Kolkata in February, 2024. Title of the Thesis: Characterization and Prevention of Microbial Spoilage of Some Selected Indian Spices

## **EXPERIENCE :**

1. Assisted the Professor-in charge in conducting practical classes in Botany, C.U. for 4 yrs.
2. Joined St. Xavier's College in October 1994, presently working as Associate Professor & Head, Post Graduate Dept. of Microbiology
3. Experienced in counseling students at St. Xavier's College.
4. Conducted two 4-month training programmes in Ecology and Environmental Studies for I.S.C school teachers.
5. Served as resource person on student counseling in the Orientation programme of University of Calcutta.(2001-2003)
6. Served as a Guest lecturer in Environmental Management at I.M.T. (Ghaziabad) Kolkata branch between 2002and 2009.
7. Worked as a consultant for Rasoi Vanaspaties Limited in 2004.
8. Organized a two day National Seminar on Pollution in Urban Industrial Environment in collaboration with Institute of Ecotoxicology and Environmental Sciences in December,2005
9. Acted as a resource person for ICFAI Resource Centre between 2006-2008.

10. Organized a National Seminar on Environmental Pollution of the Biosphere and its management in collaboration with ICFAI University and Government of West Bengal in June, 2008.
11. Served as a consultant for M/s Chemico process Pvt.Ltd and Calcutta Laminating industries from 2009 onwards.
12. Serving as the co-coordinator Entrepreneurship Development Cell, St.Xavier's College since 2009.
13. Participated in a two day training program in Environment Leadership development organized by the Science Association of Bengal in June, 2009.
14. Participated in the 2<sup>nd</sup> International Conference on Ecotoxicology and Environmental Sciences, organized by Institute of Ecotoxicology and Environmental Sciences during December 14-16, 2009.
15. Participated in UGC sponsored National Symposium entitled Recent Trends in Microbiological Research, organized by Barrackpore Rastraguru Surendranath College on February, 13<sup>th</sup> and 14<sup>th</sup>, 2010.
16. Started the Post Graduate Department of Microbiology since August,2010.
17. Participated in a symposium entitled Challenges of teaching Microbiology in Undergraduate Colleges organized by Centre for Modern Biology, University of Calcutta on September 25, 2010.
18. Participated in the Fourth International Conference on Plants and Environmental Pollution organized by NBRI, Lucknow in December8-11, 2010.
  
19. Participated in UGC sponsored National Seminar entitled Advances in Environmental Science and Technology organized by Vivekananda College in February 5<sup>th</sup> and 6<sup>th</sup>, 2011.
20. Reviewer in Saudi Journal of Biological Sciences ([mmyaseen@ksu.edu.sa](mailto:mmyaseen@ksu.edu.sa)) [elseviersciences](http://elseviersciences) in 2010.
21. Elected as a member of the Environment Science Committee of ISCA in 2011-12.
22. Selected as a mentor in the DST INSPIRE program from 2011.
23. Participated in a UGC sponsored seminar entitled Present scenario and future prospects of Microbiology and Plant Biotechnology at Ashutosh College, Kolkata on 9<sup>th</sup> and 10<sup>th</sup> March, 2011.
24. Organized the "St Xavier's Global Earth Summit, An International Conference on A Sustainable Earth, Nihil Ultra" on March 11<sup>th</sup> and 12<sup>th</sup>, 2011 at St.Xavier's College, Kolkata.
25. Participated in a UGC sponsored National Level Seminar, entitled Microbiology, Development and Challenges in Basic and Applied Research at Belur Ramakrishna Mission Vidyamandira in collaboration with Bose Institute, Kolkata on 6<sup>th</sup> and 7<sup>th</sup> April, 2011.
26. Participated and presented a paper in UGC sponsored National Seminar on Organic Agriculture and Bio-safety, organized by Gurudas College in collaboration with Bidhan Chandra Krishi Viswa vidyalaya, Kalyani on Nov.18<sup>th</sup>,2011.
  
27. Participated and presented a paper in 3<sup>rd</sup> International conference on Ecotoxicology and Environmental Sciences, Goa on Nov.28<sup>th</sup>-30<sup>th</sup>, 2011.

28. Participated in National Symposium on Plant diversity and resources: evolution, analyses, stress and challenges and paleophytodiversity: its aspects and prospects. Organized by Botanical Society of Bengal in collaboration with Department of Botany and CAS in Botany, University of Calcutta on Dec.20<sup>th</sup>-22<sup>nd</sup>,2011
29. Organized the “Second St Xavier’s Global Earth Summit, An International Conference on “The Environmental Migrant-The Human face of climate change” on March 29<sup>th</sup> and 30<sup>th</sup>, 2012 at St.Xavier’s College, Kolkata.
30. Editing the College Research Journal “Aviskaar-A Xaverian Journal of Science” (ISSN No. 2277 8411) since 2009, till date.
31. Chaired a technical session in the National Seminar on Plant and Microbial Resources: Utilization and Conservation held at Visva Bharati University on March 15-16, 2017.
32. Selected as a Resource Faculty by MHRD in the SAYAM program to deliver an e course on Introductory Microbiology through the SAYAM portal in September to November, 2017.
33. Chaired a session on Microbial Biotechnology, in an international seminar entitled BIOSPECTRUM organized by University of Engineering and Management on 25<sup>th</sup> August, 2017.
34. Selected as a Resource Faculty by MHRD in the SAYAM program to deliver an e course on Medical Microbiology through the SAYAM portal in March to May, 2018.
35. Selected as a Resource Faculty by MHRD in the SAYAM program to deliver an e course on Advanced Microbiology through the SAYAM portal in August to October, 2018.
36. Serving as Assistant Controller of Examinations since April, 2018, St. Xavier’s College (Autonomous) under University of Calcutta.
37. Selected as a Resource Faculty by MHRD in the SAYAM program to deliver an e course on Food Microbiology through the SAYAM portal in February to April, 2019.
38. Served as Sectional Recorder of Environmental Science Section of Indian Science Congress Association 2021-2024.
39. Serving as Controller of Examinations, St. Xavier’s College, Kolkata since May 10<sup>th</sup> till date.

#### **RESOURCE PERSONS AND INVITED TALK:**

1. Acted as a resource person in the preparation of electronic study material for Environmental Sciences for engineering student under West Bengal University of Technology in 2006.
2. Served as a resource person in a seminar entitled Journey of Microbiology: Evolution to its modern age application, organized byTDHCK Jalan College on 22<sup>nd</sup> January, 2011.

3. Delivered a lecture as an invited speaker in the Environmental Science section of the 99<sup>th</sup> section of the Indian Science Congress Association at Bhubaneswar in 2012.
4. Delivered a lecture as an invited speaker in the Environmental Science section of the 101<sup>st</sup> section of the Indian Science Congress Association at Jammu in 2014.
5. Acted as a key note speaker in the International Seminar on Sustainability in Gaedu College of Business Studies, Royal University of Bhutan in 2014.
6. Acted as a resource Person in the Refresher Course on Environmental Science at Academic Staff College, Ranchi University in 2014.
7. Delivered a lecture as an invited speaker in the Environmental Science section of the 102<sup>nd</sup> section of the Indian Science Congress Association at Mumbai in 2015.
8. Delivered a Plenary Lead lecture in the National Symposium organized jointly by the Department of Botany, Ranchi University and Indian Phytopathological Society at Ranchi in January, 2015.
9. Acted as a resource person and coordinator of a UGC lecture series program on the UGC model syllabus on Microbiology for the UGC Educational channel made by the EMMRC, St. Xavier's College between 2012 and 2015.
10. Delivered an invited lecture on Bio-entrepreneurship in the International Seminar entitled "Relooking at Nations: Reenergizing and Reforming Strategies for Sustainable Development" organized Gaeddu College of Business Studies, Bhutan, Institute of Management Studies, Kolkata and The Institute of Cost Accountants of India on August 18 and 19, 2015.
11. Delivered an invited talk entitled 'Characterization of novel bacterium causing degradation of complex organic substrate' in the 39<sup>th</sup> All India Conference of the Indian Botanical Society, held in Ranchi University between October 21 and 23, 2016.
12. Delivered an invited talk in the UGC sponsored National level conference on 'Conservation, cultivation, diseases and therapeutic importance of medicinal and aromatic plants' entitled "Antifungal activity.....fungi *Mycovellosiella*" organized by TNB college and Bhagalpur University on November 21 and 23, 2016 at Bhagalpur.
13. Delivered an invited talk in the DBT sponsored National level conference on 'Airborne Bioaerosols: Impact on Human Health and agriculture' entitled "Interaction of airborne.....Disease Development" organized by Indian Aerobiological Society and Bose Institute on December 9<sup>th</sup> to 11<sup>th</sup>, 2016 at Bose institute, Kolkata.
14. Delivered a lecture entitled Plant fungi interaction..... from contaminated site as an invited speaker in the Environmental Science section of the 104<sup>th</sup> session of the Indian Science Congress Association at S.V. University, Tirupati in January, 2017.
15. Delivered an invited talk in the UGC sponsored National level seminar on 'Biotechnology: A remedy for Eco restoration' entitled "Industrial effluent as a repository for bio-remediating bacteria" organized by the PG.Dept.of Zoology, Raja N.L.Khan Women's College and SBSS Mahavidyalaya, Paschim Medinipur, West Bengal on January 18<sup>th</sup> and 19<sup>th</sup>, 2017.
16. Delivered an invited talk entitled "Microbial degradation of common industrial dye" and chaired a technical session in a national seminar entitled "National

conference on progresses in bioengineering and environmental management”(NCEPBM) organized by Techno University, Kolkata on April 20<sup>th</sup> and 21<sup>st</sup>, 2017.

17. Delivered a lecture on Mushroom as Nutraceuticals in Mushroom Cultivation Workshop in Scottish Church College during Feb.2018.
18. Acted as a resource person in a National Seminar entitled “ Recent Trends in Plant Disease Management “ organized by the Department of Botany, LN. Mithila University, Darbhanga, Bihar in March, 2019.
19. Acted as a resource person in the International Seminar entitled ‘Climate Change, Precision Agriculture and innovative disease control strategies for sustainable agriculture at Bhagalpur University in February 2020.
20. Delivered an invited talk on ‘Impact of sequential cyclones on the inhabitants of Sundarbans’ organized by Shobit University on June 5, 2020.
21. Delivered an invited talk on ‘ Covid 19: Mitigation and Management’ organized by Department of Botany, Pingla Thana Mahavidyalaya on June 19, 2020.
22. Delivered an invited talk in an Online Workshop ‘ MOOCOLLOQUIUM on challenges, prospects and Development of MOOC. On 27<sup>th</sup> September, 2020.
23. Acted as a Resource Person in a UGC sponsored Refresher Course on Environmental Science and Disaster Management organized by HRDC, Ranchi University, in December, 2020.
24. Delivered an invited talk on Wasteland to Productive land through organic amendment organized by th Department of Environmental Studies, Raghampur Campus on March 9<sup>th</sup>, 2021.
25. Delivered an invited talk in a webinar on Loss of Biodiversity: Global Environment & Health Challenges, on “Induction of Post Covid Mycoses in West Bengal” on June 5, 2021.
26. Acted as a Panelist in an International Webinar entitled ‘Climate Change and Mobility’ organized by Global Fellows Consulting, New York on 21<sup>st</sup> September, 2021.
27. Delivered an invited talk on ‘ Adhar Periyel Alor Khoje’ in a webinar organized by Department of History, St. Xavier’s College, Raghampur Campus on 5<sup>th</sup> October, 2021.
28. Delivered an invited talk on ‘ Recent Applications of Bacteria and Fungi ‘ in a webinar entitled “Applications of Phycology, Mycology and Microbiology” organized by Department of Botany, Vidyasagar College.
29. Delivered an Invited Talk on Student based Projects in Microbiology in “Bio Nexus: A new axis for advanced Biological Sciences” organized by Department of Biotechnology, Neotia University on 27<sup>th</sup> April, 2022.
30. Delivered an invited talk on Climate change migration in Ghoramara, organized by NYU Migration Network, NYU, USA on 4<sup>th</sup> May, 2022.
31. Delivered an invited Lecture on Medicinal Importance of Mangrove Plants in the Genetics, Biotechnology and Civilization Symposium organized by JIS Institute of Advanced Studies and Research, JIS University on 6<sup>th</sup> August, 2022.
32. Delivered an invited lecture on development of Biological Science in Independent India in a National Seminar entitled”Revisiting the Intellectual History of India’s struggle for Independence: Decoding the Debates and Discourses emphasizing the

Importance of thoughts and Action” organized by Maulana Abul Kalam Azad Institute for Asian Studies and Department of Education, St. Xavier’s College On August 13, 2022.

33. Delivered an invited talk on The Ghoramara Project in the International Conference on Climate Change: Global Cooperation organized by St. Xavier’s College, on 27<sup>th</sup> August, 2022.
34. Delivered an invited talk on “Chances to fly: Project Funding Opportunities organized by Department of Zoology and IQAC, Serampore College in association with Adamas University on 31<sup>st</sup> January,2023.
35. Delivered an invited talk in an International Seminar entitled Strategies and challenges in Agricultural and Life Sciences for food Security and Sustainable Environment on As pollution and its mitigation at Himachal Pradesh University.
36. Conducted a workshop in Durgapur Government College on August 10th on Research and Development.

#### **SEQUENCES SUBMITTED:**

1. *Exiguobacterium indicum* Strain DSAM 62 NCBI Accession Number MH819520 Date of Submission 01.09.2018 (S6C2).
2. *Bacillus cereus* Strain DSAM01 NCBI Accession Number MH915673 Date of Submission 16.09.2018 (C-7).
3. *Bacillus subtilis* Strain DSAM 02 NCBI Accession Number MH978625 Date of Submission 26.09.2018 (A-2).
4. *Bacillus* sp NCBI Accession Number MH819519. Date of Submission: 07.09.2018.
5. *Bacillus cereus*. NCBI Accession Number SUB5434081 P1 MK774799. Date of Submission: 15.04.2019
6. *Enterobacter* sp. NCBI Accession Number SUB5434081 P2 MK774800. Date of Submission: 15.04.2019.
7. *Enterobacter tabaci*. NCBI Accession Number SUB5434081 P3 MK774801. Date of Submission: 15.04.2019.
8. Whole Genome Sequence submitted and published *Exiguobacterium indicum* Str. DSAM62; SRA SRS5131771. Accession No. PRJNA555453. ID 555453. Published on 19.07.2019.
9. *Exerohilum rostratum* BDAM\_SXC. NCBI Accession Number SUB190421seq\_48287 MN337265 Date of Publication: 26.08.2019.
10. *Bacillus zhangzhouensis* MMAM strain S3 consensus seq 16S ribosomal RNA gene, partial sequence. GenBank: MT185655.1. Date of Publication: 17.03.2020.
11. *Enterobacter hormaechei* strain. NCBI. GenBank Accession No.: MT672707.1. Date of Publication: 03.07.2020
12. *Bacillus vallismortis* strain TR01K 16S ribosomal RNA gene, partial sequence. GenBank: MT672714.1. Date of Publication: 03.07.2020.
13. *Bacillus subtilis* strain BRAM\_G1 16S ribosomal RNA gene, partial sequence GenBank: MW006633.1. Date of Publication 20.9.2020.



14. *Bacillus subtilis* strain BRAM\_G2F 16S ribosomal RNA gene, partial sequence  
GenBank: MT998278.1. Date of Publication: 19.9.2020
15. *Bacillus subtilis* strain BRAM\_G3 16S ribosomal RNA gene, partial sequence  
GenBank: MT998617. Date of Publication: 20.9.2020
16. *Mesobacillus subterraneus* strain BRAM\_Y2 16S ribosomal RNA gene, partial  
sequence. GenBank: MW002419.1 Date of Publication: 20.9.2020.
17. *Brevibacillus parabrevis* strain BRAM\_Y3 16S ribosomal RNA gene, partial  
sequence. GenBank: MW081864.1. Date of Publication: 13.10.2020.
18. *Bacillus paramycooides* strain BDBA\_SXCM4 16S ribosomal RNA gene, partial  
sequence. Gene Bank: MW917244.1. Date of Publication: 13.04.2021.
19. *Bacillus paramycooides* strain DBBA\_P1, 16S ribosomal RNA gene, partial  
sequence. Gene Bank: MZ227489.1. Date of Publication: 24.05.2021.
20. *Bacillus paramycooides* strain DBBA\_K1, 16S ribosomal RNA gene, partial  
sequence. Gene Bank: MZ227495.1. Date of Publication: 24.05.2021.
21. *Bacillus wiedmannii* bv. *thuringiensis* strain BDBA\_BM1, 16S ribosomal RNA gene,  
partial sequence. Gene Bank: MZ229894.1. Date of Publication: 24.05.2021.
22. *Bacillus luti* strain DBBA\_BT, 16S ribosomal RNA gene, partial sequence. Gene  
Bank: MZ229975.1. Date of Publication: 24.05.2021.
23. *Acinetobacter baumannii* strain CHO2. Gene Bank No. MZ902933. Date of  
Publication: 30.08.2021.
24. Soil Metagenome of *Zea mays*. Data volume 284 Mbases. Accession:  
PRJNA764188 ID: 764188. Published on 16.10.2021.
25. Sample 1: Corn Field (Reclaimed Wetland of East Kolkata) Soil Metagenome,  
Submission Id: SUB10393473, BIOPROJECT ID: PRJNA764188, BIOSAMPLE:  
SAMN21474479, SRA: SRR15931637, SRX: 12221735, Published on: 16/10/2021
26. Soil Sample Metagenome: Pumpkin Field (Reclaimed Wetland of East Kolkata) Soil  
Metagenome, Submission Id: SUB10889729, BIOPROJECT ID: PRJNA793422,  
BIOSAMPLE: SAMN24537899, EXP.: SRR17395637, Release date: 31/01/2022.
27. Soil Sample Metagenome: Tea Rhizosphere, N.B.U. BIOPROJECT ID:  
PRJNA796758, TAXONOMIC ID: 939928, BIOSAMPLE: SAMN24911669, EXP.  
SRX13768407, =RUN: SRR17599596. Release Date: 14.01.2022.
28. *Aspergillus flavus* strain SpiceF\_DDBA. Gene Bank Accession No.: ON159746.  
Published on April 12, 2022.
29. *Bacillus subtilis* strain DWG1. Gene Bank Accession No. ON369373. Date of  
Publication: 03.05.2022.
30. *Bacillus anthracis* strain JWK\_3. Gene Bank Accession No. ON375335. Date of  
Publication: 03.05.2022.
31. *Bacillus cereus* strain JPG\_2. Gene Bank Accession No. ON369556. Date of  
Publication: 03.05.2022.
32. *Bacillus velezensis* strain DPPB\_SGAM\_SXC. Gene Bank Accession No.  
ON384543. Date of Publication: 05.05.2022.

33. *Cupriavidus necator* strain DCPA\_SGAM\_SXC. Gene Bank Accession No. ON384541. Date of Publication: 05.05.2022.
34. Soil Metagenome Project of Cucurbita maxima (Peak) SRA Accession ID. PRJNA839190. Accession No. SAMN28513088 Date of Publication: 18.05.2022.
35. *Priestia megaterium* strain No.SDBBA. Gene Bank Accession No. OP410984. Published on 10.9.2022.
36. *Bacillus subtilis* strain No. SBDBA. Gene Bank Accession No.OP410980. Published on 10.9.2022.
37. Soil metagenome of *Zea mays* (peak) Accession No. SAMN31008114. Published on 25.09.2022.
38. Soil metagenome of *Zea mays* (Intercrop) Accession No. SAMN31008163. Published on 25.09.2022.
39. Wastewater metagenome of municipal waste (Khardah) bio-sample. Accession No. SAMN31668062. Published on 15.11.2022.
40. *Bacillus altitudinis* strain OS1\_BSSA\_SXC. Gene Bank Accession No.OQ220312. Published on 16.01.2023.
41. *Bacillus albus* strain SF2\_BSSA\_SXC. Gene Bank Accession No.OQ220321. Published on 16.01.2023.
42. *Bacillus subtilis* strain TDS2\_BSSA\_SXC. Gene Bank Accession No. OQ217006.1. Published on 16.01.2023.
43. *Priestia megaterium* strain TDS3\_BSSA\_SXC. Gene Bank Accession No. OQ217022. Published on 16.01.2023.
44. *Glutamicibacter arilaitensis* strain CLS1\_BSSA\_SXC. Gene Bank Accession No. OQ216887. Published on 16.01.2023.
45. *Lasiodiplodia theobromae* strain SGSSAM\_SXC. Gene Bank Accession No. OQ26879.1 Published on 16.01.2023.
46. *Bacillus cereus* strain DPP(A)\_SGAM\_SXC. Gene Bank Accession No. OQ216888. Published on 16.01.2023.
47. *Bacillus cereus* strain DCI(D)\_SGAM\_SXC. Gene Bank Accession No. OQ217005.1 Published on 16.01.2023.
48. *Stenotrophomonas maltophilia* strain DPP(C)\_SGAM\_SXC. Gene Bank Accession No. OQ217020.1. Published on 16.01.2023.
49. *Exophiala spinifera*. Gene Bank Accession No.OQ927326. Published on 05.05.2023.
50. Wastewater metagenome of municipal waste (Khardah) bio-sample. Accession No. SAMN35779353. Published on 05.07.2023.
51. *Curvularia aeria* strain MC1 18S ITS spacer, under GenBank accession number OR101252.1. Published on 11.08.2023
52. *Fusarium proliferatum* strain TP1 18S ITS spacer, under GenBank accession number OR101701.1. Published on 11.08.2023
53. *Fusarium proliferatum* isolate TP4 18S ITS spacer, under GenBank accession number OR426467.1 Published on 11.08.2023
54. *Fusarium fujikuroi* isolate TP2 18S ITS spacer, under GenBank accession number OR426452.1. Published on 11.08.2023
55. *Fusarium fujikuroi* isolate MC2 18S ITS spacer, under GenBank accession number OR426451.1. Published on 11.08.2023.

56. Rhizobacteria with Holistic Plant Growth Promoting Traits: *Bacillus vallismortis*.  
Accession No: PRJNA1018243 . Date of publication: 22.09.2023
57. Rhizobacteria with Holistic Plant Growth Promoting Traits: *Bacillus subtilis*.  
Accession No: SAMN37429407. Date of publication: 22.09.2023
58. Polyextremophilic bacteria *Bacillus subtilis*, whole genome. Accession No.  
SAMN37432400 BRAM\_G1 Date of publication: 22.09.2023
59. Rhizobacteria with Holistic Plant Growth Promoting Traits: *Bacillus subtilis*.  
Accession No: PRJNA1018306. Date of publication: 22.09.2023
60. Polyextremophilic bacteria *Bacillus thuringiensis*. Whole Genome Accession  
No.SAMN37432401 BRAM\_G2 Date of publication: 22.09.2023
61. Polyextremophilic bacteria *Bacillus tequeliensis*. BRAM G3, Whole Genome  
Accession No.SAMN37432402 Date of publication: 22.09.2023
62. Polyextremophilic Bacteria *Mesobacillus thioparans*. Whole Genome. Accession No.  
SAMN37432403 BRAM\_Y2 Date of publication: 22.09.2023
63. Polyextremophilic Bacteria. *Brevibacillus parabrevis* Accession No.  
SAMN37432404 BRAM\_Y3. Date of Publication. 22.09.2023
64. *Bacillus subtilis* Str. MP\_3SAASS\_SXC. Accession No. OR632649.1. Date of  
Publication. 09.10.2023
65. *Bacillus velezensis* Str. NMP\_2 SAASS\_SXC. Accession No. OR632694.1. Date of  
Publication. 09.10.2023
66. *Bacillus licheniformis* Str. NMP\_3 SAASS\_SXC. Accession No. OR632713.1. Date  
of Publication. 09.10.2023
67. *Bacillus altitudinis* Str. NMP\_6 SAASS\_SXC. Accession No. OR632997.1. Date of  
Publication. 09.10.2023
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Date of Publication. 09.10.2023.
69. *Bacillus licheniformis*. Str.SGAKMRBAMAC\_AC1. Accession No.PB658431.1.  
Date of Publication: 20.04.24.
70. *Alcaligenes faecalis*. Str.SGAKMRBAMAC\_AC2. Accession No.PB658432.1. Date  
of Publication: 20.04.24.
71. *Bacillus subtilis*. Str.SGAKMRBAMAC\_AM\_N\_SXC. Accession No.PB658445.1.  
Date of Publication: 20.04.24.
72. *Brucellapseudintermedia*. Str.SGAKMRBAMAC\_AM\_N2\_SXC. Accession  
No.PB658447.1. Date of Publication: 20.04.24.
73. *Peribacillus frigorigerans*. Str. SH2\_SGAKMAC\_SXC. Accession No.  
PB907788.1. Date of Publication. 19.06.2024.
74. *Bacillus pseudomycooides*. Str. SH1\_SGAKMAC\_SXC. Accession No. PB907755.1.  
Date of Publication. 19.06.2024.

**PATENTS FILED/GRANTED:**

1. PATENT APPLICATION PUBLICATION (21) Application No.201931008079  
A, INDIA

Date of filing of Application :01/03/2019 (43) Publication Date : 29/03/2019

Title of the invention : HUMECTANT HAND AND SURFACE SANITIZER AND  
PROCESS OF PREPARING THE SAME

International classification :A01N25/22

Name of Applicant : Satwik Majumder, Arup Kumar Mitra

Name Of Inventor : Satwik Majumder, Arup Kumar Mitra, Aditi Das, Anish Pyne, Anwit Sadhukhan, Twisha Chatterjee, Vidhi Agarwal.

2. PATENT PUBLISHED: No. 202031029308. Dated 10.07.2020. Subject : Exocaria agallocha is a natural important source of Bergenin. Published on 14.01.2022. Name of the Inventor: Tamanna Sultana, Arup Kumar Mitra and Satadal Das.
3. PATENT PUBLISHED: No.202431005360A. Date: 02.02.2024. Subject: A Novel Plant-Microbial Consortium Combination for In-Situ Arsenic Remediation. Name of Inventor: Puja Agnihotri, Arup Kumar Mitra and Prashant Shukla.
4. PATENT PUBLISHED: No.202431016997. Date: 10.05.2024. Subject: A Bio-active Mechanized Aerobic Composter. Name of Inventor: Agnik Ghosl, Arup Kumar Mitra, Bikram Dhara, Sanjana Ghosh, Debapriya Maitra, Bedaprana Roy, Rishab Dugar, Sahil Choudhury, Prashant Toshniwal.
5. PATENT PUBLISHED: No.202431043575. Date: 05.07.2024. Subject: Design of a novel bacterial bio-fertilizer for enhancing crop productivity at varying agro-climatic conditions. Name of Inventor: Bikram Dhara, Arup Kumar Mitra, Debapriya Maitra, Bedaprana Roy.

## **PROJECTS:**

1. Studies on Substrate... Polluted Mushroom, 1994-95, CSIR, Rs. 1, 00,000/-, completed.
2. Cultivation and Popularization... Edible Mushroom, 2003-04, UGC, Rs. 50,000/-, completed.
3. Metal Interaction, Disease Development... Control, 2006-08, UGC, Rs. 95,000/-, completed.
4. Skill set Training in Advanced Lab. Technology and other Fields of Science and Technology, 2007-09, DST NIMAT, Rs. 4,91,000/-, completed.
5. Disease Development in Leafy Vegetable and its Control (as a Co-Investigator), 2009-10, UGC, Rs. 1, 00,000/-, completed.
6. Impact of Sponge Iron Effluents... Statistical Modeling, 2011-2013, UGC, Rs. 1, 32,000/-, completed
7. EDI Grant ( For running EAC) – Rs 54,000/-
8. Skill set training in Science and Technology Grant. DST, Rs.5, 00,000/- DST. 2011-2013.
9. DBT star college grant for interdisciplinary research and project Rs.36 Lakhs 2015-2018.
10. WBDST sponsored project on 2017, on plant microbe interaction on arsenic remediation (No.794 (Sanc.)ST/P/S&T/1G-7/2015), Rs.19 lakh six thousand.
11. WBDST sponsored project on 2018 entitled Mangrove plants: A solution to bacterial, fungal and cancerous growth. No.71(Sanc.)-BT/ST/P/S&T/2G-45/2017 Sanctioned amount: 14 lakhs 44 thousand.
12. DBT Star College Grant: 2019-2022. Rs.62 Lakhs for the Department of Physics, Chemistry and Microbiology, St Xavier's College.

13. DBT, GOI, Development of Biological Control Technology for invasive species, *Polyalthia suberosa*, Hamjam, in Wild Life Sanctuary of Bethuadahari, West Bengal- (BT/PR39375/FCB/125/51/2020) as Co-investigator.
14. DBT,GOI (2021-2026) Biology and Applications of Polyextremophilic Micro-organisms under the DBT Builder –St. Xavier’s College (Autonomous). Kolkata, Department of Microbiology &Biotechnology-Interdisciplinary Life Science Programme for Advanced Research and Education” Duration 5 years from 2021. Total Amount Sanctioned. Rs. 2 Crore 67 lakhs 26 thousand 826 only. Sanction No. BT/INF/22/SP41296/2020.
15. DST-GOI: (2020-2023)Estimation of the potential impact on human health of cyanobacteria..... a comparative assessment between India and Poland".  
**Indo Polish Call for Proposal 2019 reg.**
16. WBPCB: (2024-2026) Urban Bio-aerosol over lentic ecosystem in urban backdrop. Rs. 10 Lakh. No.0488/2024/UB/1/C.Lab.

#### **MEMBERSHIP & FELLOWSHIP:**

- Member and Past President – Rotary Club of Calcutta South West, R.I.District 3290 since 1994.
- Life Member - Indian Science Congress Association since 1992.
- Life Member – Indian Mycological Society since 1993.
- Life Member – National Botanical Society since 1994.
- Life Member – Indian Mushroom Society since 1995.
- Life Member – Indian Botanical Society since 1996.
- Life Member – International Society for conservation of Nature since 1998.
- Fellow of the INDIAN BOTANICAL SOCIETY (F.B.S) since 1998.
  
- Fellow of the INTERNATIONAL SOCIETY FOR CONSERVATION OF NATURE (F.N.R.S) since 2000.
  
- Fellow of the Society of Applied Biotechnology, Mangalore, Karnataka University (FSAB) since 2011.
  
- Fellow of Institute of Ecotoxicology and Environmental Sciences since 2022.

#### **Consultant:**

1. Rasoi Vanaspatis Ltd.
2. Chemico Process Ltd.
3. Analytics India Ltd.
4. Organic Agro India Ltd.
5. CMS Limited (Ongoing)
6. Hindustan Gums and Chemicals Ltd. (Ongoing)

#### **PAPERS PRESENTED IN SEMINARS (ABSTRACTS PUBLISHED):**

1. A.K.Mitra and R.P.Purkayastha (1993) Impact of heavy metal toxicity on edible mushroom. Proc. 80<sup>th</sup> session of ISCA, Goa.
2. A.K.Mitra and R.P.Purkayastha (1994) pH dependent Cd uptake by edible fungi under submerged growth. Proc. 81<sup>st</sup> session ISCA, Jaipur.
3. A.K.Mitra and R.P.Purkayastha (1995) Uptake and toxicity of metal contaminated edible mushrooms after oral administration to albino rats. Proc. 82<sup>nd</sup> session of ISCA, Kolkata.
4. A.K.Mitra (1996) Uptake of heavy metals and production of sporocarps by *Calocybe indica*-edible milk white mushroom.Proc.83<sup>rd</sup> session of ISCA, Patiala.
5. A.K.Mitra (1998) Uptake and subsequent displacement of lead in a Pb-tolerant fungal species from Kent, U.K.Proc. of the 85<sup>th</sup> session of ISCA,Hyderabad.
6. R.Chakraborti and A.K.Mitra (1998) Displacement of mycelial lead by other heavy metals in a lead tolerant fungal species from U.K. Proc.21<sup>st</sup> I.B.S conference, Ujjain.
7. A.K.Mitra (1999) Uptake and displacement of lead by other metals in *Poa annua* L. Proc.Natl.Symp. on Frontiers of research in Plant Sc. Natl Bot.Soc.Kolkata.
8. A.K.Mitra (2000) Perils of lead exposure to human beings.Proc.87<sup>th</sup> session of ISCA, Pune.
9. D.Banerjee and A.K.Mitra (2000) Impact of industrialization on the agricultural fields around Falta free export zone, West Bengal.Proc.23<sup>rd</sup> Botanical Conference of I.B.S, Meerut.
10. A.K.Mitra (2001) Comparison of industrial effluent and mixed sewage in the agricultural fields of South 24 Paraganas, West Bengal.Proc. 88<sup>th</sup> session of ISCA, New Delhi.
11. A.K.Mitra (2002) Uptake and subsequent displacement of lead in lead tolerant fungal species from Kent, U.K. Natl.Seminar cum workshop on Env.Pollution and its management, J.U. and I.E.E.S Kolkata.
12. A.K.Mitra (2003) Enhancement of biological efficiency of oyster mushrooms using non-conventional additives Proc. 90<sup>th</sup> session of ISCA, Bangalore.
13. A.K.Mitra (2003) Effect of zinc on uptake and biological efficiency of oyster mushrooms. Natl Symp.Current trends in res.on microorganism. Ind Mycol.Soc.
14. Mitra, A.K and Banerjee, D (2003) Impact of Industrial pollution in the agricultural fields around Falta Industrial Zone, West Bengal.Natl. Seminar on

- Pollution in Urban Industrial Environment organized by IEES and NML, Jamsedhpur.
15. A.K.Mitra (2005) Uptake of calcium and its interaction with other heavy metals on growth and productivity of *Pleurotus sajar-caju*. Proc. 92nd session of ISCA, Ahmedabad.
  16. Himani,D,Chaudhuri,Chakrabarti,A,Saraogi,N, Banerjee,S.K and Mitra,A.K. (2007) Effect of Nicotine on the micro-organisms of the buccal cavity. 94<sup>th</sup> Session of the Indian Science Congress Association.Annamalainagar.
  17. Basu,H.,Nath,C.,Ghosh,E.,Ganguly,S,Agarwal,P.and Mitra,A.K.(2008) Synergistic action of *Alternaria solani* and *Ralstonia solanacearum* in *Solanum tuberosum*. 95<sup>th</sup> Session of the Indian Science Congress Association, Vizag.
  18. Chakraborty, A., Burman, S., Sinha, P. and Mitra, A.K (2008) Effect of PAHs and BTEX on petrol pump workers in Kolkata. National Conference on Environmental Pollution of Biosphere and its Management, Kolkata.
  19. Saha, D and Mitra,A.K.(2008) Isolation and characterization of a metal tolerant bacteria growing in urban backdrop.31<sup>st</sup> All India Botanical Conference and International Symposium on Plant Biology and Environment: Changing Scenario. Organized by I.B.S and University of Allahabad Allahabad.
  20. Pal,J, Lahiri,M,Mundhra,S,Basu,H and Mitra A.K.(2009) Novel water filtration units for removal of heavy metals and microbial contaminants. 96<sup>th</sup> Session of the Indian Science Congress Association at North Eastern Hill University, Shillong.
  21. Bal, J., Rai, R., Chang, V and Mitra, A.K. (2009) Suppression of leaf blight infection by rust pathogen in roadside coffee plantations.2<sup>nd</sup> International Conference on Ecotoxicology and Environmental Sciences. at Jadavpur University, Kolkata.
  22. Mukherjee; Das,B;Nandi,S;Saha,A;Sinharoy,S; Islam,R and Mitra, A.K.(2010)Impact of Banning old vehicles from the streets of Kolkata.97<sup>th</sup> Session of the Indian Science congress Association at Kerala University, Tiruvananthapuram.
  23. Upadhyay,S.K;Mukherjee,I;Saha,G; Goswami,S;Naskar,P;Ghosh;A;Basu,S.M and Mitra,A.K. (2010) Isolation and Characterization of metal tolerant bacteria from heavy metal contaminated soil in the vicinity of a sponge iron plant 97<sup>th</sup> Session of the Indian Science congress Association at Kerala University, Tiruvananthapuram.
  24. Sil,P,Dutta,S,Baishya,R,Basu,D,Saha,S and Mitra, A.K. (2011) Microbial removal of Hexavalent chromium from railway locomotive effluents in Liluah,

West Bengal. 98<sup>th</sup> Session of Indian Science Congress Association at SRM University, Chennai.

25. De, P., Dhar, S., Vasan, V., and Mitra, A.K. (2011) Isolation and characterization of food grown contaminants isolated from packed food. UGC sponsored National Seminar on Advances in Environmental Science and Technology, Vivekananda College, Kolkata.
26. Halder, G., Adhikari, A., Gupta, A.K., Dey, R., Dhar, S. and Mitra, A.K. (2011) Sulphur dioxide sensitivity and antimicrobial role of a crustose lichen isolated from the bark of *Mangifera indica* L. In 3<sup>rd</sup> International conference on Ecotoxicology and Environmental Sciences, Goa .
27. Mukherjee, S., Paul, I., Mandal, S., Chandra, D., Shadhukhan, S., Chatterjee, G., Bhattacharya, A., Das, T., Sen, P. and Mitra, A.K. (2011) Antagonistic action between phyllosphere organisms leading to the reduction of leaf spot disease in rice. In UGC sponsored National Seminar on Organic Agriculture and Bio-safety, organized by Gurudas College in collaboration with Bidhan Chandra Krishi Viswa vidyalaya, Kalyani.
28. Basu, A., Bhattacharya, P., Mishra, R., Chatterjee, A., Chatterjee, S., Majumdar, T and Mitra, A.K. (2011) Microbial reduction of toxicity of sponge iron effluents from unorganized sector. In National Symposium on Plant diversity and resources: evolution, analyses, stress and challenges and paleophytodiversity: its aspects and prospects. Organized by Botanical Society of Bengal in collaboration with Department of Botany and CAS in Botany, University of Calcutta.
29. Mitra Arup Kumar (2012) Co-ordinated action of macrophytes and microbes on bio-remediation of industrial effluents. Invited speech in the Section of Environmental Science at the 99<sup>th</sup> Session of the Indian Science Congress Association held at Bhubaneswar, Odisha.
30. Bannerjee, V, Mandal, A, Thomas, N, Mandal, S, Biswas, S, Ghosh, S and Mitra, A.K. (2013) Gall formation in Mango leaf in presence of associated pathogen. Proceedings of Environmental Science Section of the 100<sup>th</sup> session of the Indian Science Congress Association, Kolkata.
31. Sengupta, D, Shyamchoudhury, S and Mitra, A.K. (2013) Utilization of Microbes in mitigating arsenic menace. In a UGC sponsored National Conference on “Inclusive Growth, Business and Environment in India’s Emerging Economy”. Organized by St. Xavier’s College (Autonomous) and Shri Shikshayatan College.
32. Sett, S, Kundu, S, Das, S, Mitra, A, Banerjee, A and Mitra, A.K. (2013) Phytochemical importance of some potential mangrove plants from the Indian Sundarbans. In a UGC sponsored State level seminar on “Biochemical diversity encompassing advanced sustainable development”. Organized by Vivekananda College and Asutosh College.



33. Mitra, A.K.(2014) Impact of environmental stress on urban extremophilic bacteria. Invited speech in the Section of Environmental Science at the 101<sup>st</sup> Session of the Indian Science Congress Association held at Jammu, Jammu and Kashmir.
34. Chakrabarti,N, Kaur,P and Mitra,A.K (2014) Anthropogenic factors affecting the vegetation in and around the TajMahal. In the 4<sup>th</sup> International Conference on Ecotoxicology and Environmental Sciences. Organized by the Institute of Ecotoxicology and Environmental Sciences.
35. Mitra, A.K. and Chakraborty, R. (2014) Organic farming: A pathway towards environmental sustainability. Confluence: Master Minds Meet – 2014. Organized by Gaeddu College of Business Studies, Royal University of Bhutan in June,2014.
36. Mitra,A.K (2015) Dynamism of airborne *Aspergillus* sp. Invited speech in the Section of Environmental Science at the 102<sup>nd</sup> Session of the Indian Science Congress Association held at Mumbai University, Mumbai.
37. Mitra, A.K. (2015) *Calocybe indica*: A journey towards prominence. In the National Symposium “Advances in Phytopathological Research in Globalized Era with reference to Eastern Region” organized jointly by Department of Botany, University of Ranchi and Indian Phytopathological Society.
38. Upadhyay,R;Varghese,J.M; Chakraborty,A;Marathe,N;Pan.S;Gaine,R and Mitra,A.K. (2015) A unique phyllosphere interaction resulting in the control of lemon scab pathogen. 3<sup>rd</sup> India Biodiversity Meet: An International Conference organized by Agricultural and Ecological Research Unit, I.S.I, Kolkata and Biomathematical Society of India.
39. Mitra, A.K (2016) Decolourization of Azo dye by potential bacteria from industrial effluent Invited speech in the Section of Environmental Science at the 103<sup>rd</sup> Session of the Indian Science Congress Association held at Mysore University, Mysore.
40. Kar,D;Chakraborty,R;Maity,T;Datta,A;Kundu,S and Mitra,A.K.(2016)Study of phyllosphere interaction in disease incidence of *Raphanus sativus*. National Symposium on Microbial diversity and its impact. Organized by Indian Mycological Society and Department of Botany, University of Calcutta, Kolkata.
41. Nambier,A; Joshi,S; Datta,S; Ganguly, S and Mitra,A.K (2016) Antimicrobial activity of a unique synthetic Ni(II) Hydrazone complex and its ligand.National Symposium on Facets of Chemistry in Biology organized by Department of Chemistry, St. Xavier’s College, Kolkata.

42. Mitra, A.K (2017) Plant –fungi interaction in the removal of heavy metal from contaminated site. Invited speech in the Section of Environmental Science at the 104th Session of the Indian Science Congress Association held at Tirupati University, Tirupati.
43. Giri, M, Mitra,M, Ghosh,A, Chakraborty, D,Angrish,R, Mal, S and Mitra,A.K. (2017) Study of phyllosphere interaction of microbes isolated from infected Taro leaves. RUSA funded International Level Seminar on Recent trends in Microbiology organized by Department of Microbiology, Ramakrishna Mission Vidyamandira, Belur math, Howrah, West Bengal.
44. Sengupta, D, Mitra, A.K and Shyamchowdhury,S (2017) Isolation, characterization and bio-sorption study of arsenophilic microbes from its contaminated zone at a two day national seminar on Scientific devices, Technology applications and community linkage organized by Centre for research in nanoscience and nanotechnology, University of Calcutta on March 18 and 19, 2017.
45. Mitra, A.K (2018) Treatment of tannery effluents by residual bacterial microflora. Invited speech in the Section of Environmental Science at the 105th Session of the Indian Science Congress Association held at Manipur University, Imphal.
46. Puja Agnihotri, Debanjana Sengupta, Bikram Dhara,Sudeshna Shyam Chowdhury, Madhumita Maitra and Arup Kumar Mitra (2018) Arsenic (As) tolerant bacteria isolated from the rhizosphere of *Azolla microphylla*. International Conference entitled, Frontiers in Biological Sciences organized by Post Graduate Department of Microbiology, St. Xavier's College, Kolkata.
47. Mitra, A.K and Tamanna Sultana (2019) Multifaceted role of PGPR in reducing pollution and augmenting plant productivity. Invited speech in the Section of Environmental Science at the 106th Session of the Indian Science Congress Association held at Lovely Professional University, Jalandhar.
48. Mitra,A.K. (2020) Water quality and natural protective microbes in a holy water body in Punjab. Invited speech in the Section of Environmental Science at the 107th Session of the Indian Science Congress Association held at University of Agriculture, GKVK campus, Bangalore.
49. Mitra, A.K (2020) Multidimensional Role of Mycorrhizae in preventing soil degradation. Invited lecture in the International Conference entitled Climate Change, Precision Agriculture & Innovative Disease Control Strategies for Sustainable Agriculture at the Department of Botany, T.M. Bhagalpur University, Bhagalpur, Bihar.
50. Mitra,A.K. and Bidisha Chatterjee (2023) Environmental conflict of human surviving in the sinking island of Ghoramara. Invited speech in the Section of

Environmental Science at the 108th Session of the Indian Science Congress Association held at RTM Nagpur University, Nagpur.

**BOOKS WRITTEN/EDITED/CHAPTERS CONTRIBUTED:**

1. A.K.Mitra (1999) Ed. Environmental Science-Question and Answers by S.Sanyal.Paramount Publishing, Calcutta.Pp.55.
2. A.K.Mitra, S.Guha and S.Chanda (2000) Higher Secondary Biology Vol-I Book Syndicate Pvt.Ltd, Kolkata Pp.1056.
3. A.K.Mitra and A.Chowdhury (2001) Eds.Sure Success in Life Science by Ten Teachers East west Publishing Pvt.Ltd.Kolkata.Pp.230.
4. A.K.Mitra and D.Mitra (2001) I.S.C Environmental Science Vol I Books and Allied Pvt.Ltd.Kolkata Pp.181.
5. A.K.Mitra (2001) Bastumukhi Udvidbidya.Book Syndicate Pvt.Ltd.KolkataPp.235.
6. A.K.Mitra, S.Guha and S.chanda (2001) Higher Secondary Biology Vol.II Book Syndicate Pvt.Ltd.Kolkata.Pp1384.
7. A.K.Mitra, D.Mitra and R.Sen (2002) I.S.C.Environmental Science Vol.II Books and Allied Pvt.Ltd.Kolkata.Pp.286.
8. A.K.Mitra and D.Chattopadhyay (2002) Joint Entrance Biology. Book Syndicate Pvt.Ltd.Kolkata Pp.1130.
9. Datta,S.K; Mitra, A.K and Chattopadhyay,D (2003) Elements of General Science, Vol. I (For Class VI). Bengal Book Syndicate Pvt.Ltd. Pp.114.
10. Mitra, A.K. and Chattopadhyay, D (2003) Elements of Life Science. Vol. II(For Class VII). Bengal Book Syndicate Pvt.Ltd. Pp. 88.
11. Mitra, A.K. and Chattopadhyay, D (2003) Elements of Life Science. Vol. III (For Class VIII). Bengal Book Syndicate Pvt.Ltd. Pp. 89.
12. Mitra, A.K., Guha, S and Chanda, S (2004) A textbook of Biology (Vol.I). Book Syndicate Pvt.Ltd.Kolkata. Pp.638.
13. Mitra, A.K., Dutta, S and Rath, N.R. (2004). Elements of Life Science for Classes IX and X. Bengal Book Syndicate Pvt. Ltd., Kolkata. Pp. 294.

14. Dutta, S and Rath, N.R. and Mitra, A.K. (2004). Jiban Vigyan for Classes IX and X New Book Syndicate Pvt. Ltd., Kolkata. Pp. 294.
15. Mitra, A.K., Guha, S. and Chanda, S (2005) A Text Book of Biology (Vol.II). Book Syndicate Pvt.Ltd. Pp.1379.
16. Dutta, S., Rath, N.R and Mitra, A.K. (2005) Jiban Bigyan for Tripura Board of Secondary Education. (Class IX). New Book Syndicate.Kolkata. Pp.211
17. Mitra, A. K. (2006) Perils of Urban Pollution(Ed) St Xavier's College, Kolkata, Pp.202.
18. Mitra, A.K., Chattopadhyay, D and Datta, D (2007) Joint Entrance Biology. Book Syndicate, Kolkata. Pp.571.
19. Mitra, A.K., Chattopadhyay, D and Datta, D (2007) Joint Entrance Biology (In Bengali). Book Syndicate, Kolkata. Pp.590.
20. Mitra, A. K., Bhattacharya, S. and Saha, D (2007) Environmental Studies St . Xavier's College and Edutech Solutions Pvt. Ltd, Kolkata Pp.304.
21. Mitra, D and Mitra A.K. (2009) Environmental pollution on biosphere and its management. (Ed) Volume I. ICFAI University Press, Hyderabad. Pp.241.
22. Mitra, D and Mitra A.K. (2009) Environmental pollution on biosphere and its management. (Ed) Volume II. ICFAI University Press, Hyderabad. Pp.256.
23. Dutta, S.C, Rath, N.R. and Mitra, A.K. (2011) Jib Bigyan Parichay, Volume I Book Syndicate Pvt. Ltd. Kolkata, Pp.1450.
24. Mitra, A.K., Chattopadhyay, D and Chanda, S (2013) A Text Book of Biology. Book Syndicate Private Limited, Kolkata. Pp.2016.
25. Mitra,A.K. and Sarkar,K (2013) Practical Manual of Modern Microbiology. Himalaya Publishing House. New Delhi. Pp.221.
26. Mitra, A.K (2014) Better Orientation for Undergraduate Students. In Science Education Beyond High School, CARE publication, SINP, Kolkata.Pp.56.
27. Mitra,A.K. (2014) Applied Plant Physiology.Book Syndicate Pvt.Ltd, Kolkata. Pp.358. ISBN978-81-89019-79-2.
28. Mitra,A.K and Chattopadhyay,D (2014) Life Science and Environment for Class IX. New Book Syndicate Pvt.Ltd. Pg.144.

29. Dutta,S.C; Rath,N.R and Mitra, A.K. (2015) Jib Bigyan Parichay, Volume I Book Syndicate Pvt. Ltd. Kolkata, Pp.1438.ISBN978-81-89019-61-7.
30. Mitra,A.K, Chattopadhyay,Chandra,S.(2015) A Text Book of Biology,Volume II. Book Syndicate Pvt. Ltd. Kolkata, Pp.594.ISBN 978-81-89019-84-6.
31. Mitra,A.K and Chattopadhyay,D (2015) Life Science and Environment for Class X. New Book Syndicate Pvt.Ltd. Pp.135.
32. Mitra,A.K and Chattopadhyay,D (2016) Fundamentals of Life Science Life Science. New Book Syndicate Pvt.Ltd. Pp.285.
33. Sett,S; De,T.K; Mitra,A. K and Mondal, N. B (2016) Antifungal activity of purified *Aegialitis rotundifolia* extract against pathogenic fungi *Mycovellosiella*. In “Conservation, cultivation, diseases and therapeutic importance of medicinal and aromatic plants” Ed. H.K.Chourasia and A.K.Roy, published by Today & Tomorrow’s Printers and Publishers, New Delhi. Pp510. ISBN81-7019-554-X (India); ISBN1-55528-409-4(USA).
34. Sultana,T and Mitra, A.K. (2018) PGPR in plant development: A biotechnological approach. In Plant Systematics and Biotechnology: Challenges and Opportunities. Ed.H.K Chourasia and D.P.Mishra, published by Today & Tomorrow’s Printers and Publishers, New Delhi.Pp.604.ISBN 81-7019-608-9.
35. Mitra,A.K, Dutta, D and Roy, L (2018) Comprehensive Microbiology. Current Books International, Kolkata. Pp.822. ISBN: 978-93-85274-05-3.
36. Mitra A.K., Arpan Chatterjee Ujjyani Ghosh, Ishani Banerjee, Sreeja Saha, Monalisa Barman, Debjani Dutta (2018) On line 2019 Petroleum Biodegrading Property of Microbial Consortia from a Contaminated Site. In: Kumar V., Kumar M., Prasad R. (eds) Microbial Action on Hydrocarbons. Springer, Singapore DOI [https://doi.org/10.1007/978-981-13-1840-5\\_24](https://doi.org/10.1007/978-981-13-1840-5_24).
37. Mitra, A.K and Chattopadhyay , D (2020) Fundamentals of Life Science. Ed. J. Dasgupta . New Book Syndicate. Kolkata. Pp.372
38. Mukhopadhyay, M, Biswas, S, Ghosal,M, Basu, S, Ghosh,S.K, Shyamchowdhury,S and Mitra,A.K. (2020) Improvement of Soybean production in low productive soil by the utilization of native microbial flora. In Precision Agriculture and Sustainable Crop Production. Eds. H.K.Chourasia, K.Acharya and V.K.Singh.Today and Tomorrow’s Printers and Publishers, New Delhi. Pp.631. ISBN 9788170196679.
39. Maitra, D, Dhara, B, Sultana, S, Chakraborty, Mitra, A.K and Shyamchowdhury, S. (2020) Mycorrhizal Association in Agriculture and their role in preventing climate change. In Precision Agriculture and Sustainable Crop Production. Eds.

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