

## RESEARCH COMMUNICATIONS

### Published Articles

1. Sewage Treatment in a Single Pond System at East Kolkata Wetland, India (2010). **Sarkar S,** Ghosh PB, Mukherjee K, Sil AK, Saha T. Water Science and Technology. 60 (9):2309-17. **IF: 2.43.**
2. Assessment of Heavy metal pollution in Sewage-fed fishery pond surface sediments of East Kolkata Wetland, a Ramsar site in India (2011). **Sarkar S**, Ghosh P. B, Sil A.K and Saha T. Environmental Earth Sciences: 6(5): 915-924. **IF: 3.119.**
3. Heavy metal contamination in leaves of Mangifera indica around a coal fired thermal power plant in India (2011). Sengupta S., Chatterjee T., Ghosh P. B., **Sarkar S** and Saha T. Journal of Ecology and the Natural Environment. 3(14): 446-454.
4. Isolation of a novel Pseudomonas sp from soil that can efficiently degrade polyethylene succinate(2011). Prosun Tribedi, **Subhasis Sarkar**, Koushik Mukherjee and Alok K. Sil. Environmental Science and Pollution Research. 18 (1): 2115–2124. **IF: 5.19.**
5. Environmental Assessment in terms of Salinity Distribution in the Tropical Mangrove forest of Sundarban, North East Coast of Bay of Bengal, India (2013). **Subhasis Sarkar**, Phanibhusan Ghosh, Tulsi Prasad Das Mahapatra, Shrabani Som Mazumdar and Tapan Saha. Archives of Applied ScienceResearch, 5 (6):109-118.
6. Suspended Particulate Matter Dynamics act as a driving force for Single Pond Sewage Stabilization System (2014). **Subhasis Sarkar**, Phani Bhusan Ghosh, Alok Kumar Sil, Tapan Saha. Ecological Engineering, 69: 206–212. **IF: 4.379.**
7. Saha, M., Sarkar, S., Sarkar, B., Sharma, B. K., Bhattacharjee, S., & Tribedi, P. (2016). Microbial siderophores and their potential applications: a review. Environmental Science and Pollution Research, 23, 3984-3999. **IF: 5.19**
8. Gupta, P., **Sarkar, S.**, Das, B., Bhattacharjee, S., & Tribedi, P. (2016). Biofilm, pathogenesis and prevention—a journey to break the wall: a review. Archives of microbiology, 198, 1-15. **IF: 2.667.**
9. Environmental variability of some edaphic components from virgin areas of tropical mangrove forest of Sundarban, India (2015). S Mukherjee, P Ghosh, **S Sarkar**, T Saha. Indian Journal of GeoMarine Science.
10. Sequential changes of microbial community composition during biological wastewater treatment in single unit waste stabilization system (2016). **Subhasis Sarkar**, Prosun Tribedi, Phanibhusan Ghosh, Tapan Saha, Alok Kumar Sil. Waste and Biomass Valorization 7:483-493. **IF:3.449.**
11. 3-Amino-4-Aminoximidofurazan derivatives: small molecules possessing antimicrobial and antibiofilm activity against *Staphylococcus aureus* and *Pseudomonas S*. Das, M. C., Paul, S., Gupta, P., Tribedi, P., Sarkar, S., Manna, D., & Bhattacharjee. Journal of Applied

Microbiology.120:842-859. . **IF:4.059.**

**12.** Phosphorous dynamics of the aquatic system constitutes an important axis for waste water purification in natural treatment pond(s) in East Kolkata Wetlands (2016). Anirban Das Gupta, **Subhasis Sarkar**, Phanibhusan Ghosh, Tapan Saha, Alok Kumar Sil. Ecological Engineering. 90:63-67. **IF:4.379.**

**13.** Microbial Functional Diversity Decreases with Sewage Purification in Stabilization Ponds (2016). **Subhasis Sarkar**, Prosun Tribedi, Anirban Das Gupta, Tapan Saha, Alok Kumar Sil. Waste and Biomass Valorization.7:1-7. **IF:3.449**

**14.** Nitrogen Dynamics of the aquatic System is an important driving force for efficient sewage purification in single pond natural treatment wetlands at East Kolkata Wetland (2016). Anirban Das Gupta, **Subhasis Sarkar**, Jayprakash Singh, Tapan Saha, Alok Kumar Sil. Chemosphere 164:576- 584. **IF: 8.943.**

**15.** Exploration of strategies to increase the nitrogen and phosphate content of solid waste landfill soil (2020). Poulomi Chakraborty, Rakshita Dave, Payel Paul, Sutirtha Dutta & **Subhasis Sarkar** & Prosun Tribedi. Environ Monit Assess. 192:245. **IF: 3.0.**

**16.** Cuminaldehyde exhibits potential antibiofilm activity against *Pseudomonas aeruginosa* involving reactive oxygen species (ROS) accumulation: a way forward towards sustainable biofilm management (2021). S Chatterjee, P Paul, P Chakraborty, S Das, RK Sarker, **S Sarkar**, A Das, P Tribedi. 3 Biotech 11 (11), 1-12) (**IF: 2.893**).

**17.** Bioaugmentation of *Enterobacter cloacae* AKS7 causes an enhanced degradation of low-density polyethylene (LDPE) in soil (2021): a promising approach for the sustainable management of LDPE waste. (RK Sarker, P Chakraborty, **S Sarkar**, MM Ghosh, P Tribedi. Archives of Microbiology 204 (1), (1-12). (**IF: 2.667**)

**18.** Metabolic dynamics of soil microorganisms of the aquatic ecosystem is a key component for efficient sewage purification in single pond natural treatment wetlands at East Kolkata Wetland (2022). A Das Gupta, **S Sarkar**, J Singh, T Saha, AK Sil. Waste and Biomass Valorization, 1-14. **IF:3.449.**

**19.** Laha, A., **Sarkar, S.**, Sengupta, S., Das, A., Paul, S., & Bhattacharyya, S. (2024). Unraveling the potential of *Acinetobacter calcoaceticus* for arsenic resistance and plant growth promotion in contaminated lentil field. *South African Journal of Botany*, 168, 61-70.

**20.** Ghosh, A., Naskar, P., Dey, S., Mukherjee, S., Biswas, S., Das, R., Sarkar, S., Ghosh, S., Ghosh, B., Sarkar, S. The Key to A Sustainable Future - Algal Biofuel, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6395-6400.

**21.** Nayak, S., Chakraborty, S., Roy, S., Roy, S., Ghosh, K., Ghorui, A., Sarkar, S., Ghosh, B., Ghosh, S., Sarkar, S. The Role of Plant Hormone on Root Development, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6401 – 6407.

**22.** Ghosh, S., Ghosh, B., Ghosh, M., Paul, S., Pal, A., Dey, T., Sarkar, S., Ghosh, S., Ghosh, B., Sarkar, S. Phytoremediation- Friendlier and Affordable Approach to Remediate Heavy

Metal Pollution, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6291-6296.

**23.**Pal, N., Das, P., Dutta, R., Sarkar, S., Mukherjee, S., Devi, P., Mukherjee, M., Dhar, S., Ghosh, S., Sarkar, S., Sarkar, S., Ghosh, B. Water Reclamation Through Nano-remediation & Bioremediation: A Weal Against Conventional Chemical Techniques, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6297-6305.

**24.**Banerjee, D., Sadhu, P., Das, S., Pal, S., Mitra, S., Ghosal, A., Sarkar, S., Ghosh, B., Ghosh, S., Sarkar. S. Phosphate Solubilizing Bacteria: A potential biotic component for solubilizing phosphate in soil and its application as Biofertilizer: A Review. Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6306-6315.

**25.**Biswas, D., Chourasia, A., Sasmal, A., Santra, S., Panigrahi, S., Kundu, M., Sarkar, S., Ghosh, B., Ghosh, S., Sarkar, S. Mycoremediation is a Potential Strategy for Environmental Clean-up of Heavy Metal: A Review, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6316- 6327.

**26.**Sen, A., Mondal, I., Das, S., Roy, S., Mondal, M., Roy, R., Sarangi, S., Banerjee, S., Sarkar, S., Ghosh, B., Sarkar, S., Ghosh, S. Analytical approach of micro-RNA interaction study in ovarian cancer, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6328- 6335.

**27.**Chakraborty, B., Gosai, R., Saha, D., Nayek, B., Biswas, P., Das Gupta, A., Ghosh, R., Ghosh, B., Sarkar, S., Sarkar, S., Ghosh, S. Structural and functional relationship study in plant salinity stress, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6336- 6343.

**28.**Dalalthankur, S., Singh, P., Singh, S., Sasmal, A., Deb, T., Karmakar, S., Dasgupta, T., Sarkar, S., Sarkar, S., Ghosh, B., Ghosh, S. Role of pathogenesis-related (PR) proteins in plant microbes defense mechanism, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6344- 6352.

**29.**Noor, S., Mondal, M., Singh, S., Sadhu, P., Chourasia, S., Patra, S., Ghosh, K., Pal, S., Sarkar, S., Sarkar, S., Ghosh, S., Ghosh, B. Scavenging of Waste Water Using Oyster Mushrooms, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6364- 6371.

**30.**Saha, S., Devi, P., Das, S., Roy, S., Sing, P., Mitra, S., Banerjee, S., Mallick, J., Sarkar, S., Sarkar, S., Ghosh, S., Ghosh, B. Study About the Absorption Pattern of Soil Chromium By Perennial Flowering Herbs, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6372- 6377.

**31.**Sharma, P., Das, S., Sadhu, P., Pal, S., Mitra, S., Ghoshal, A., Biswas, S., Roy, S., Sarkar, S., Ghosh, B., Ghosh, S., Sarkar, S. Therapeutic Role of Probiotics In Managing Various Diseases, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6378-6380.

**32.**Ghoshal, A., Saha, P., Mallick, J., Sarkar, S., Chakraborty, M., Sarkar, S., Ghosh, B., Ghosh, S., Sarkar, S. Phytoremediation: A Way Forward Towards Heavy Metal Management, Journal of Survey in Fishery Sciences. Vol. 10 No. 1S (Special issue 1), 6381-6394.

- 33.**Bidisha Ghosh, Monoswita Chakraborty, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Genetic Basis And Clinical Perspectives Of Breast Cancer. *Journal of Advanced Zoology*, 44(S6). <https://doi.org/10.53555/jaz.v44iS6.3708>
- 34.**Santanu Biswas, Subhajit Pal, Sayani Das, Soumili Banerjee, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Microbial Plastic Degradation: Nature's Solution for Sustainable Waste Management. *Journal of Advanced Zoology*, 44(S6), 2315–2321. <https://doi.org/10.53555/jaz.v44iS6.3720>
- 35.**Abhishek Ghoshal, Joydev Mallick, Suranjana Sarkar, Semanti Ghosh, Bidisha Ghosh, & Subhasis Sarkar. (2023). Efflux Pumps In Antimicrobial Resistance: Mechanism, Regulation And Therapeutic Implications. *Journal of Advanced Zoology*, 44(S5), 2575–2580. <https://doi.org/10.53555/jaz.v44iS5.3282>
- 36.**Dipti Das, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Recombinant Protein Production: Advancements And Applications. *Journal of Advanced Zoology*, 44(S6), 2236–2242. <https://doi.org/10.53555/jaz.v44iS6.3706>.
- 37.**Sayantani Chakraborty, Sampanna Roy, Aayushee Chatterjee, Falguni Pal, Ritu Das, Puja Sadhu, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Exosomal RNA: Interplay and Therapeutic Potential. *Journal of Advanced Zoology*, 44(S6), 2309–2314. <https://doi.org/10.53555/jaz.v44iS6.3718>.
- 38.**Puja Sadhu, Suranjana Sarkar, Aritri Laha, Semanti Ghosh, Bidisha Ghosh, & Subhasis Sarkar. (2023). Oncolytic Viral Nanoparticles: A Combination Of Targeted And Immunotherapeutic Approach For Cancer Treatment: A Review. *Journal of Advanced Zoology*, 44(S5), 2537–2550. <https://doi.org/10.53555/jaz.v44iS5.3277>.
- 39.**Sulagna Mitra, Suranjana Sarkar, Debjit De, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar. (2023). MANAGEMENT OF MICROBIAL BIOFILM USING NANO PARTICLE: A REVIEW. *Journal of Advanced Zoology*, 44(S6), 2070–2080. <https://doi.org/10.17762/jaz.v44iS6.2696>.
- 40.**Prity Singh, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Application Of Genetic Engineering In Crop Improvement. *Journal of Advanced Zoology*, 44(S6), 2301–2308. <https://doi.org/10.53555/jaz.v44iS6.3717>.
- 41.**Sourav Banerjee, Suranjana Sarkar, Subhasis Sarkar, Bidisha Ghosh, & Semanti Ghosh. (2023). Biofertilizer and their importance in sustainable agriculture. *Journal of Advanced Zoology*, 44(S5), 2526–2529. <https://doi.org/10.53555/jaz.v44iS5.3222>.
- 42.**Sayani Da, Suranjana Sarkar, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar. (2023). GUT MICROBIOME AND HUMAN HEALTH: A REVIEW. *Journal of Advanced Zoology*, 44(S6), 2062–2069. <https://doi.org/10.17762/jaz.v44iS6.2695>.
- 43.**Sayani Das, Sulagna Mitra, Monalisa Mallik, Soumili Banerjee, Subhajit Pal, Abhijit Kumar, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Advancing Biomedical Frontiers: Unveiling The Potential Of 3d Bioprinting In Organ Regeneration. *Journal of Advanced Zoology*, 44(S5), 2488–2493.

<https://doi.org/10.53555/jaz.v44iS5.3210>.

**44.** Tilatoma Dasgupta, Bidisha Ghosh, Suranjana Sarkar, Subhasis Sarkar, & Semanti Ghosh. (2023). Tuberculosis - A multisystemic disease and antimicrobial resistance in *Mycobacterium tuberculosis*. *Journal of Advanced Zoology*, 44(S5), 2641–2645. <https://doi.org/10.53555/jaz.v44iS5.3304>.

**45.** Ankit Pal, Shreyoshi Pal, Saikat Manna, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Unlocking The Potential of Phytochemicals in Anti-Diabetic Therapy: Mechanisms, Challenges, And Future Prospects. *Journal of Advanced Zoology*, 44(S6), 2284–2289. <https://doi.org/10.53555/jaz.v44iS6.3713>.

**46.** Sahely Roy, Semanti Ghosh, Srijani Karmakar, Subhasis Sarkar, Suranjana Sarkar, & Bidisha Ghosh. (2023). Immunity Risk Associated with Cytomegalovirus Infection After Organ Transplantation. *Journal of Advanced Zoology*, 44(S5), 2451–2456. <https://doi.org/10.53555/jaz.v44iS5.3202>.

**47.** Srijani Karmakar, Sahely Roy, Suranjana Sarkar, Bidisha Ghosh, Subhasis Sarkar, & Semanti Ghosh. (2023). Genetic Diagnosis of Texas Syndrome: A New Rare And Deadly Autoinflammatory Disorder In Adults. *Journal of Advanced Zoology*, 44(S5), 2636–2640. <https://doi.org/10.53555/jaz.v44iS5.3302>.

**48.** Anwesha Das, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Recombinant Hormones: Applications And Challenges. *Journal of Advanced Zoology*, 44(S6), 2279–2283. <https://doi.org/10.53555/jaz.v44iS6.3712>.

**49.** Deeti Das, Sudipta Chakraborty, Moumita Mukherjee, Susoma Garai, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar, & Suranjana Sarkar. (2023). Revolutionizing the Biological Landscape: the Power of Genome Editing. *Journal of Advanced Zoology*, 44(S5), 2446–2450. <https://doi.org/10.53555/jaz.v44iS5.3199>.

**50.** Satabdi Dey, Semanti Ghosh, Bidisha Ghosh, Subhasis Sarkar and Suranjana Sarkar.(2024) Analysis of pathogenic genes in dengue virus. *Zoological and Entomological Letters* 2024; 4(1): 67-70.

## Book Chapter

1. Phani Bhushan Ghosh, **Subhasis Sarkar**, Tapan Saha (2010). Some useful methods for the assessment of Environmental health of an aquatic system. In: Environmental Concerns. Agrobios (India): pp 315-323.
2. Pal, P., **Sarkar, S.** 2022. "Is there any impact of Human Papilloma Virus infection in oral carcinoma?" Multidisciplinary Review Book. Taurean Publications, New Delhi; ISBN- 978-93-91074-40-1.
3. Pal, P., **Sarkar, S.** 2022. "Probiotics are highly effective against Viral Infections: Towards illustrating the contributions of probiotics in combating with the viral pathogen" Multidisciplinary Review Book.Taurean Publications, New Delhi; ISBN- 978-93-91074-40-1.
4. Koushik Mukherjee, Subhasis Sarkar, Banhi Das (2024).Prospects and challenges in

Microbial biodiesel production. Taylor & Francis (CRC Press). DOI: 10.1201/9781003350606.

5. Semanti Ghosh, Suranjana Sarkar, Bidisha Ghosh, Subhasis Sarkar. RECENT ADVANCEMENTS ON COMPUTATIONAL ENZYME DESIGNING: RATIONAL TO DE NOVO. FRONTIERS IN BIOTECHNOLOGY: EMERGING APPROACHES AND STRATEGIES ISBN: 978-93-5980-245-9.
6. Bidisha Ghosh, Subhasis Sarkar, Suranjana Sarkar, Semanti Ghosh. RECENT ADVANCES IN THE SENSING OF PESTICIDES AND ANTIBIOTICS IN WATER THROUGH FLUORESCENT QUANTUM DOTS. FRONTIERS IN BIOTECHNOLOGY: EMERGING APPROACHES AND STRATEGIES ISBN: 978-93-5980-245-9.
7. Sabyasachi Ghosh, Aritri Laha, Santanu Paul, Subhasis Sarkar. NANOBIOTECHNOLOGY: A POTENTIAL HOPE FOR FOOD PACKAGING. FRONTIERS IN BIOTECHNOLOGY: EMERGING APPROACHES AND STRATEGIES ISBN: 978-93-5980-245-9.
8. Sanatnu Paul, Aritri Laha, Subhasis Sarkar, Sabyasachi Ghosh. INTRODUCTION OF INTUITIVE WORLD OF MICROBIOLOGY. "Microbiome: Principles and Explorations. ISBN - 978-93-5980-246-6.
9. Subhasis Sarkar, Aritri Laha, Sabyasachi Ghosh. Santanu Paul. MICROBES IN AIR: THEIR EXISTENCE AND HEALTH ISSUES. "Microbiome: Principles and Explorations. ISBN - 978-93-5980-246-6.
10. Subhasis Sarkar, Bidisha Ghosh, Suranjana Sarkar, Semanti Ghosh. ADVANCES IN WASTEWATER TREATMENT TECHNOLOGY."Microbiome: Principles and Explorations. ISBN - 978-93-5980-246-6.
11. Aritri Laha, Sabyasachi Ghosh, Sanatanu Paul, Subhasis Sarkar. BIOREMEDIATION OF HEAVY METALS BY MICROORGANISMS. "Microbiome: Principles and Explorations. ISBN - 978-93-5980-246-6.
12. Suranjana Sarkar, Bidisha Ghosh, Semanti Ghosh, Subhasis Sarkar. BEYOND THE PLATE: ADVANCES AND FUTURE FRONTIERS IN FOOD MICROBIOLOGY. "Microbiome: Principles and Explorations. ISBN - 978-93-5980-246-6.