RESUME

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Educational Qualifications

Degree	Specialization	University
Ph.D	Environmental Engineering, Civil Engineering	IIT Kanpur, 1998
M.Tech	Environmental Engineering, Civil Engineering	IIT Kanpur, 1993
B.Tech	Civil Engineering	M.G.Univ, Kottayam, Kerala,1990

Professional Experience

Professor, Department of Civil Engineering, Indian Institute of Technology, Madras.
(Since March 2009)

Associate Professor, Department of Civil Engineering, Indian Institute of Technology, Madras.
(Jan 2004- March 2009)

Assistant Professor, Department of Civil engineering, Indian Institute of Technology, Madras
(Jan 2001-Jan 2004)

Assistant Professor, Department of Civil Engineering, Indian Institute of Technology, Kharagpur
(May 1999 to Dec. 2000)

Visiting Faculty, Department of Civil Engineering, Indian Institute of Technology, Kharagpur (May 1998 to May. 1999)

Senior Project Engineer, UNICEF sponsored project on Defluoridation of Water in Rural Areas Using Activated Alumina Technology, Department of Civil Engineering, IIT Kanpur (Aug 1997-May 1998)

Research Publications

In Refereed International Journals

2026

1. Maanashi Tripathi, S Murty Bhallamudi, and **Ligy Philip** (2026) "Broad spectrum mitigation of disinfection by-products in treated water via a novel magnetite-glass powder-activated carbon composite" Journal of Water Process Engineering, Volume: 89, 110269, DOI: https://doi.org/10.1016/j.jwpe.2026.110269 **(IF- 6.7 ; Q1)**

2. Subham Meher, Asit Kumar Pradhan, **Ligy Philip** (2026) " Mechanistic elucidation of free nitrous acid–derived reactive nitrogen species along with synergistic pretreatment approaches for improved volatile fatty acid production from sludge" Journal of Environmental Chemical Engineering, Volume 14, Issue 3 ,Article: 122560 DOI: https://doi.org/10.1016/j.jece.2026.122560 **(IF- 7.2; Q1)**

3. Vaishali Choudhary, **Ligy Philip** (2026) " Tackling Challenges in Pharmaceutical and Personal Care Product Management: From Analysis to Action" Current Opinion in Environmental Science & Health, Article: 100728 DOI: https://doi.org/10.1016/j.coesh.2026.100728 **(IF- 6.6; Q1)**

4. Bhesh Kumar Karki and **Ligy Philip** (2026) "Evaluating the efficacy of biochar columns for two pharmaceuticals, methyl paraben and nutrient removal in constructed floating wetlands" Science of The Total Environment, Volume 1020, Article : 181573 DOI: https://doi.org/10.1016/j.scitotenv.2026.181573 **(IF- 8.0; Q1)**

5. Maanashi Tripathi, S Murty Bhallamudi, and **Ligy Philip** (2026) "Immobilised native bacterial consortia for algal toxin removal: Towards sustainable in-situ remediation" Chemosphere,Volume394,144783,DOI:https://doi.org/10.1016/j.chemosphere.2025.144783 **(IF- 8.1 ; CI ; Q1)**

6. Akash Saha and **Ligy Philip** (2026) "Sustainable phosphate recovery via self-cleansing direct filtration with LDH/rGO hybrid electro-conductive membrane" Journal of Environmental Chemical Engineering, Volume 14, Issue 1, Article : 121105 DOI: https://doi.org/10.1016/j.jece.2026.121105 **(IF - 7.2 ; Q1)**

2025

7. Yogita Gupta and **Ligy Philip** (2025) " Mechanistic insights and resistance profiling of chlorophyta–proteobacteria–cyanobacteria dominated consortia in removing antibiotic mixtures and nutrients from synthetic and real municipal wastewater" Journal of Environmental Chemical Engineering, Volume 14, Issue 1, Article : 121004, DOI: https://doi.org/10.1016/j.jece.2025.121004 **(IF - 7.2 ; Q1)**

8. Subham Meher and **Ligy Philip** (2025) "Optimization of free nitrous acid pre-treatment conditions for enhancing short-chain fatty acid recovery from sludge: role of nitrite fate in fermentation pathways" Environmental Science Water Research & Technology, Volume 11, Article : 2665, DOI: 10.1039/d5ew00400d **(IF- 3.1 ; Q1)**

9. Athira Marath Karthikeyan , Sarathi Ramanujam and **Ligy Philip** (2025) " Exploring the synergy of plasma and titanium dioxide-based catalyst photoexcitation for the radical driven degradation of methylparaben" Journal of Environmental Chemical Engineering, Volume 13, Issue 6, Article : 119451, DOI: https://doi.org/10.1016/j.jece.2025.119451 **(IF -7.2 ;CI- 1; Q1)**

10. Subham Meher and **Ligy Philip** (2025) "Valorization of organic wastes to high-value biochemicals: Performance, economic and environmental impact assessment of free nitrous acid, heat, and sonication pretreatment strategies" Biomass and Bioenergy Volume 202, Article: 108252 DOI: https://doi.org/10.1016/j.biombioe.2025.108252 **(IF -5.8 ; CI- 1 ; Q1)**

11. Akshaya Kumar Verma , Damiana Diaz Reck , Vishnu Vardhan Akula , **Ligy Philip**, Jack Gilron , Yoram Oren , Zeev Ronen (2025) "Denitrification performance of fixed bed bioreactor under multiple biofilm carriers" Journal of Water Process Engineering, Volume 77, Article : 108548, DOI: https://doi.org/10.1016/j.jwpe.2025.108548 **(IF- 6.7 ; CI- 2 ; Q1)**

12. Yogita Gupta and **Ligy Philip** (2025) "Accelerated bioremediation of antibiotics and nutrients in complex matrices using self-acclimatized, cost-effective microalgae-bacteria consortia: a comprehensive comparison with standalone systems"

Environmental Science and Pollution Research, Volume 32, pages 21020–21040, DOI: 10.1007/s11356-025-36895-2 **(IF- 5.4 ; CI- 2 ; Q1)**

13. Vishnu Vardhan Akula and **Ligy Philip** (2025) "Enhanced phosphorus reclamation from secondary effluent through Donnan dialysis and vivianite crystallization" Water Reuse , Volume 15, Issue 3, pp 575–590, DOI: 10.2166/wrd.2025.060. **(IF- 3.3 ; CI- 1; Q1)**

14. Bhesh Kumar Karki and Ligy Philip (2025) " Identifying appropriate low-cost adsorbents from organic waste derived modified biochars for the removal of pharmaceuticals, personal care products, and residual nutrients in engineered natural systems" Environmental Science and Pollution Research, Volume 32, pages 18132–18155, DOI: https://doi.org/10.1007/s11356-025-36722-8 **(IF-5.4 ; CI- 1; Q1)**

15. Sharad K Jain, Manabendra Saharia, S Murty Bhallamudi and **Ligy Philip** (2025) "Climate resilient development for sustainable water security for India" Current Science, Volume : 128, Issue 10, (00113891), DOI: 10.18520/cs/v128/i10/969-986 **(IF- 1.1 ; CI ; Q2)**

16. Akash Saha and **Ligy Philip** (2025) "Energy Self-Sufficient Direct Membrane Filtration of Municipal Wastewater: Impact of Biological Pre-Treatment". Advanced Sustainable System, Volume :9, Issue 8, DOI: https://doi.org/10.1002/adsu.202500088 **(IF- 6.1 ; CI- 2; Q1)**

17. Fathima Iqbal, Boby George and **Ligy Philip** (2025) "Stain and Color Interference Correction in Nitrite Sensing for Enhanced Continuous Water Quality Monitoring", IEEE Sensors Journal**,** Volume : 25, Issue 13**,** DOI: 10.1109/JSEN.2025.3568266 **(IF- 4.5 ; CI- 1; Q1)**

18. Sumit Kumar, Arkaprabha Giri, G Shreeraj, Abhijit Patra, **Ligy Philip** (2025) "Functionalized Triptycene-based Porous Polymer Networks for Pharmaceuticals Removal: Unveiling Role of Ultrasound in Adsorption", Journal of Environmental Chemical Engineering**,** Volume 13, Issue 2, Article: 115811, DOI: https://doi.org/10.1016/j.jece.2025.115811 **(IF- 7.2 ; CI- 6; Q1)**

19. Sumit Kumar, Chetna Tewari, **Ligy Philip**, Nanda Gopal Sahoo (2025) "Enhanced physicochemical properties of Himalayan Weeping Bamboo-biochar for rapid multicomponent textile dyes uptake under classical and ultrasound irradiation: A comparative study", **Next Sustainability,** Volume 5, Article No: 100089, DOI: https://doi.org/10.1016/j.nxsust.2024.100089 **(IF ; CI- 4)**

2024

20. **Ligy Philip** (2024) "Water, sanitation, and health are inseparable — poor planning risks contaminating water sources and sowing the seeds of long-term health crises.", **Nature Water,** Volume 2, Issue 11, pp. 1042-1043, DOI: 10.1038/s44221-024-00337-z **(IF- 24.1 ; CI- 2; Q1)**

21. Bhesh Kumar Karki, **Ligy Philip**, · Kajiram Karki, Anish Ghimire (2024) "Insight into Urban River Water Quality Using Ecological Risk Assessment Based on Risk Quotient" **Water Conservation Science and Engineering**, Volume 9, Article No: 56, DOI: https://doi.org/10.1007/s41101-024-00289-1 **(IF- 1.9 ; CI- 8; Q2)**

22. Mohammed Iqbal Thayyil , **Ligy Philip**, (2024) "Attached growth microalgae-bacteria consortia: A sustainable option for in-situ remediation of contaminated open drains" **Journal of Environmental Chemical Engineering**, Volume 12, Issue 5, Article No:113837, DOI: https://doi.org/10.1016/j.jece.2024.113837 **(IF- 7.2 ; CI- 3; Q1)**

23. Ritik Anand, **Ligy Philip**, (2024) "Catalytic Pulse Plasma Treatment for Organic Micro pollutants: Unveiling the Synergistic Role of Photocatalysts in Radical Generation and Degradation Mechanisms" **Environmental Science Water Research & Technology,** Volume: 10, Article No:1809**, DOI**: 10.1039/D4EW00167B. **(IF- 3.1 ; CI- 1; Q1)**

24. Mohammed Iqbal Thayyil , **Ligy Philip**, (2024) "Z Sustainable treatment scheme for in-situ remediation of contaminated drains using engineered natural systems" **Chemosphere**, Volume :361, Article No: 142469, DOI: https://doi.org/10.1016/j.chemosphere.2024.142469 **(IF- 8.1 ; CI- 5; Q1)**

25. Pinakshi Biswas, Bhanu Prakash Vellanki, Manthiram Karthik Ravichandran, Absar Ahmad Kazmi, and **Ligy Philip** (2024) "Widespread Surveillance of Emerging Contaminants in the Yamuna River Basin: Evaluation of Surface Water, Sediments, Groundwater, and Aquatic Plants"**ACS EST Water**, Volume: 4, pp: 2044 – 2056, DOI: https://doi.org/10.1021/acsestwater.3c00627 **(IF- 4.3 ; CI- 7; Q1)**

26. Hyeon Tae Kim, **Ligy Philip**, Andrew McDonagh, Md Johir, Jiawei Ren, Ho Kyong Shon, Leonard D. Tijing (2024) "Recent Advances in High-Rate Solar-Driven Interfacial Evaporation" **Advance Science**, Volume 11, Article No:2401322, DOI: https://doi.org/10.1002/advs.202401322 **(IF- 14.1 ; CI- 88; Q1)**

27. Vaishali Choudhary and **Ligy Philip**, (2024) "Zn-Co layered double hydroxide-based capacitive systems for removal and recovery of phosphate from aqueous environments"

Colloids and Surfaces A: Physicochemical and Engineering Aspects, Article No: 133815, DOI: https://doi.org/10.1016/j.colsurfa.2024.133815 **(IF- 5.4 ; CI- 7; Q1)**

28. Vishnu V Akula, Gayathri Ramalingam, Akshaya Kumar Verma, Zeev Ronen, Yoram Oren, Jack Gilron,**Ligy Philip**, (2024) "Performance evaluation of pilot scale ion exchange membrane bioreactor for nitrate removal from secondary effluent" **Journal of Cleaner Productio**, Volume 442,Article No: 141087, DOI: https://doi.org/10.1016/j.jclepro.2024.141087 **(IF- 10 ; CI- 16; Q1)**

29. Bhesh Kumar Karki, **Ligy Philip**,(2024) "Fate of pharmaceuticals and personal care products like metronidazole, naproxen, and methylparaben and their effect on the physiological characteristics of two wetland plants" **Chemical Engineering Journal**, Volume: 483, Article No: 149180, DOI:https://doi.org/10.1016/j.cej.2024.149180 **(IF- 13.2 ;CI- 17; Q1)**

30. Pragadeesh Subramani,Milan Basil, Praveen Rosario, Dijin Ramachandran Jalaja, Vaishali Choudhary, Jayakumar Renganathan, **Ligy Philip**, Kangwoo Cho, Claire Welling, Sonia Grego and Clèment Cid, (2024) "Water recycling public toilets based on onsite electrochemical wastewater treatment" **Environmental Science: Water Research and Technology**, Volume 10, Page 157-167,DOI: https://doi.org/10.1039/D3EW00454F **(IF- 3.1 ; CI- 5; Q1)**

2023

31. Vishnu V Akula, **Ligy Philip**, (2023) "Removal of harmful oxyanions from contaminated water by Donnan dialysis" **Journal of Water Process Engineering**, Volume 55, Article No:104085, DOI: https://doi.org/10.1016/j.jwpe.2023.104085 **(IF- 6.7; CI- 1; Q1)**

32. Choudhary, V., Boukhvalov, D.W., **Ligy Philip,** (2023) "Role of inner-sphere complexation in phosphate removal by metal-organic frameworks: experimental and theoretical investigation" **Environmental Science: Water Research and Technology**, Volume 9, Issue-2, Page 572 – 585, DOI: 10.1039/d2ew00636g **(IF- 3.1 ; CI- 15; Q1)**

2022

33. Areekath, L., Lodha, G., Kumar Sahana, S., Boby George, **Ligy Philip** and Mukhopadhyay, S.C. (2022) "Feasibility of a Planar Coil-Based Inductive-Capacitive Water Level Sensor with a Quality-Detection Feature: An Experimental Study" **Sensors**, Volume22, Issue-15, Article No:5508, DOI: 10.3390/s22155508 **(IF- 3.5 ; CI- 11; Q1)**

34. Ravichandran M.K,and **Ligy Philip** (2022) "Fate of carbamazepine and its effect on physiological characteristics of wetland plant species in the hydroponic system" **Science**

of the Total Environment, Volume 846, Article Number: 157337, DOI: 10.1016/j.scitotenv.2022.157337 **(IF- 8.0 ; CI- 25; Q1)**

35. Ravichandran M.K,and **Ligy Philip** (2022) "Assessment of the contribution of various constructed wetland components for the removal of pharmaceutically active compounds" **Journal of Environmental Chemical Engineering**, Volume 10, Issue – 3, Article Number: 107835, DOI: 10.1016/j.jece.2022.107835 **(IF- 7.2 ; CI- 25; Q1)**

36. Kumar, S., Tewari, C., Sahoo, N.G., **Ligy Philip**. (2022) "Mechanistic insights into carbo-catalyzed persulfate treatment for simultaneous degradation of cationic and anionic dye in multicomponent mixture using plastic waste–derived" **Journal of Hazardous Materials**, Volume 435 Article Number: 128956, DOI: 10.1016/j.jhazmat.2022.128956 **(IF- 11.3 ; CI- 38; Q1)**

37. Vellingiri, K., Choudhary, V., Kumar, S, **Ligy Philip**. (2022) "Sorptive removal versus catalytic degradation of aqueous BTEX: a comprehensive review from the perspective of life-cycle assessment" **Environmental Science: Water Research and Technology**, Volume 8, Issue-7, pp:1359-1290, DOI: 10.1039/d1ew00918d **(IF- 3.1 ; CI- 10; Q1)**

38. Vellingiri, K., Choudhary, V., Boukhvalov, D.W., Ligy Philip,. (2022) "Overview of Catalytic Removal of Parabens from Water and Wastewater" **ACS ES and T Water**, Volume 2, Issue-9, pp:1475 - 1499, DOI: 10.1021/acsestwater.2c00037 **(IF- 4.3 ; CI- 11; Q1)**

39. Choudhary, V and **Ligy Philip** (2022) "Sustainability assessment of acid-modified biochar as adsorbent for the removal of pharmaceuticals and personal care products from secondary treated wastewater" **Journal of Environmental Chemical Engineering**, Volume 10 , Issue 3, Article No: 107592, DOI: 10.1016/j.jece.2022.107592 **(IF- 7.2 ; CI- 71; Q1)**

40. Nippala N, Kamaraj Ramakrishnan and **Ligy Philip** (2022) "Enhanced degradation of complex organic compounds in wastewater using different novel continuous flow non – Thermal pulsed corona plasma discharge reactors" **Environmental Research**, Volume 203, Article No:111807**,** DOI: 10.1016/j.envres.2021.111807 **(IF- 7.7; CI- 43; Q1)**

2021

41. Ravichandran M.K, Yoganathan.S and **Ligy Philip** (2021) "Removal and risk assessment of pharmaceuticals and personal care products in a decentralized greywater treatment system serving an Indian rural community" **Journal of Envionmental Chemical Engineering**, Volume 9, Issue – 6, Article No: 106832, DOI: 10.1016/j.jece.2021.106832 **(IF- 7.2 ; CI- 34; Q1)**

42. Choudhary, V and **Ligy Philip** (2021) "Stable paper-based colorimetric sensor for selective detection of phosphate ion in aqueous phase" **Microchemical Journal**, Volume 171, Article No:106809, DOI: 10.1016/j.microc.2021.106809 **(IF- 5.1 ; CI- 26; Q1)**

43. Jayakumar Renganathan, Insamam Ul Huq S, Kamaraj Ramakrishnan, Ravichandran M.K, and **Ligy Philip** (2021) "Spatio-temporal distribution of pharmaceutically active compounds in the River Cauvery and its tributaries, South India" **Science of The Total Environment**, Volume 800, Article Number: 149340, DOI: 10.1016/j.scitotenv.2021.149340 **(IF ; CI- 34; Q1)**

44. Ravichandran M.K, and **Ligy Philip** (2021) "Insight into the uptake, fate and toxic effects of pharmaceutical compounds in two wetland plant species through hydroponics studies" **Chemical Engineering Journal**, Volume 426, Article Number: 131078, DOI: 10.1016/j.cej.2021.131078 **(IF- 13.2; CI- 44; Q1)**

45. Choudhary, V., Vellingiri, K., **Ligy Philip** (2021) " Potential nanomaterials-based detection and treatment methods for aqueous chloroform" **Environmental Nanotechnology, Monitoring and Management**, Volume 16, Article number 100487, DOI: 10.1016/j.enmm.2021.100487 **(IF ; CI- 4; Q1)**

46. Krithika, D, Sharon, H, Reddy, K.S and **Ligy Philip**, (2021) "Performance evaluation of solar thermal systems as an alternative for human waste treatment" **Sustainable Energy Technologies and Assessments**, Volume 47, Article Number: 101393, DOI: 10.1016/j.seta.2021.101393 **(IF- 7 ; CI- 5; Q1)**

47. Choudhary, V., Vellingiri, K., Thayyil, M.I., **Ligy Philip** (2021) " Removal of antibiotics from aqueous solutions by electrocatalytic degradation" **Environmental Science: Nano**, Volume 8, Issue 5, Pages 1133 – 1176, DOI: 10.1039/d0en01276a **(IF- 5.1 ; CI- 91; Q1)**

48. Jerin Jose**,** and **Ligy Philip** (2021) " Continuous flow pulsed power plasma reactor for the treatment of aqueous solution containing volatile organic compounds and real pharmaceutical wastewater" **Journal of Environmental Management,** Volume (286) Article No:112202, DOI: 10.1016/j.jenvman.2021.112202 **(IF- 8.4 ; CI- 36; Q1)**

49. Manthiram Karthik.R, and **Ligy Philip** (2021) "Sorption of pharmaceutical compounds and nutrients by various porous low-cost adsorbents" **Journal of Environmental Chemical Engineering**, Volume 9(1) Article No:104916, DOI: 10.1016/j.jece.2020.104916 **(IF- 7.2 ; CI- 58; Q1)**

50. Jerin Jose**,** and **Ligy Philip** (2021) " Comparative study of degradation of toluene and methyl isobutyl ketone (MIBK) in aqueous solution by pulsed corona discharge plasma" **Journal of Environmental Sciences (China),** Volume (101) Page No:382-396, DOI: 10.1016/j.jes.2020.09.003 **(IF- 6.3 ; CI- 22; Q1)**

2020

51. Jerin Jose**,** and **Ligy Philip** (2020) " Effect of various electrolytes and other wastewater constituents on the degradation of volatile organic compounds in aqueous solution by pulsed power plasma technology" **Environmental Science: Water Research and Technology,** Volume 6(8) , pp: 2209-2222, DOI: 10.1039/d0ew00388c **(IF- 3.1 ; CI- 8; Q1)**

52. Mukherjee.S, Shah.M, Chaudhari.K, Jana.A, Sudakar.C, Srikrishnarka.P, Islam.M.R., **Ligy Philip**, and Pradeep.T (2020) "Smartphone-based Fluoride-specific Sensor for Rapid and Affordable Colorimetric Detection and Precise Quantification at Sub-ppm Levels for Field Applications", **ACS Omega**, Volume 5(39), pp:25253-25263, DOI: 10.1021/acsomega.0c03465 **(IF- 4.3 ; CI- 58; Q1)**

53. Nippala N, and **Ligy Philip** (2020) "Electrochemical process employing scrap metal waste as electrodes for dye removal" **Journal of Environmental Management**, Volume 273(1), Article No:111039**,** DOI:10.1016/j.jenvman.2020.111039 **(IF- 8.4 ; CI- 35; Q1)**

54. Ambrose, H.W, **Ligy Philip**, Suraishkumar, G.K., Karthikaichamy, A., Sen, T.K.(2020) " Anaerobic co-digestion of activated sludge and fruit and vegetable waste: Evaluation of mixing ratio and impact of hybrid (microwave and hydrogen peroxide) sludge pre-treatment on two-stage digester stability and biogas yield" **Journal of Water Process Engineering,** Volume 37, Article No:101498, DOI: 10.1016/j.jwpe.2020.101498 **(IF- 6.7 ; CI- 55; Q1)**

55. Krithika, D and **Ligy Philip**, (2020) "Characterization of segregated greywater from Indian households: part A—physico-chemical and microbial parameters" **Environmental Monitoring and Assessment**, Volume 192(7), Article No:428, DOI: 10.1007/s10661-020-08369-0 **(IF- 3 ; CI- 26; Q2)**

56. Krithika, D and **Ligy Philip**, (2020) "Characterization of segregated greywater from Indian households—part B: emerging contaminants" **Environmental Monitoring and Assessment**, Volume 192(7) Article No:432, DOI: 10.1007/s10661-020-08370-7 **(IF- 3 ; CI- 9; Q2)**

57. **Ligy Philip**, Kalaivani.K, Rosario.P, Krishna.V, Sri Shalini.S (2020) "Performance evaluation of anaerobic baffled biodigester for treatment of black water" **Current Science**, Volume 118(8), pp: 1265-1274, DOI: 10.18520/cs/v118/i8/1265-1274 **(IF- 1.1 ; CI- 2; Q2)**

58. A.R.Thomas, Martin Kranert and **Ligy Philip** (2020) "Fate and impact of pharmaceuticals and personal care products during septage co-composting using an in-vessel composter"

Waste Management, Volume 109(15) , pp:109-118, DOI: 10.1016/j.wasman.2020.04.53 **(IF- 7.1 ; CI- 17; Q1)**

59. Swathy Jakka Ravindran, Shantha Kumar Jenifer, Jayashree Balasubramanyam, Sourav Kanti Jana, Subramanian Krishnakumar, Sailaja Elchuri, **Ligy Philip** and Thalappil Pradeep (2020) "Arsenic Toxicity: Carbonate's Counteraction Revealed", **ACS Sustainable Chemistry and Engineering,** Volume 8(13), pp:5067-5075, DOI: 10.1021/acssuschemeng.9b06850 **(IF- 7.3 ; CI- 2; Q1)**

60. Mukherjee.S, Ramireddy.H, Baidya. A, Amala, A.K, Sudakar.C, Mondal.B, **Ligy Philip**, Pradeep.T (2020) "Nanocellulose-Reinforced Organo-Inorganic Nanocomposite for Synergistic and Affordable Defluoridation of Water and an Evaluation of Its Sustainability Metrics", **ACS Sustainable Chemistry and Engineering**, Volume 8, Issue 1, pp:139–147, DOI: 10.1021/acssuschemeng.9b04822 **(IF- 7.3 ; CI- 34; Q1)**

61. Nippala N, and **Ligy Philip** (2020) "Performance evaluation of a novel electrolytic reactor with rotating and non-rotating bipolar disc electrodes for synthetic textile wastewater treatment." **Journal of Environmental Chemical Engineering**, Volume 8(2) Article number 103462, DOI**:** 10.1016/j.jece.2019.103462 **(IF- 7.2 ; CI- 16; Q1)**

62. Herald Wilson Ambrose, CalvinTse-LiangChin, EugeneHong, **Ligy Philip**, G.K.Suraish kumar,Tushar Kanti Sen, Mehdi Khiadani (2020) " Effect of hybrid (microwave-H2O2) feed sludge pretreatment on single and two-stage anaerobic digestion efficiency of real mixed sewage sludge" **Process Safety and Environmental Protection**, volume 136, Pages 194-202, DOI: 10.1016/j.psep.2020.01.032 **(IF- 7.8 ; CI- 39; Q1)**

63. A.R.Thomas, P.A.Arulraj,Martin Kranert and **Ligy Philip** (2020) "Investigation on greenhouse gas emissions and compost dynamics during in-vessel co-composting of septage and mixed organic wastes", **International Journal of Environmental Science and Technology**, Volume (17) , pp: 1675 – 1690, DOI: 10.1007/s13762-019-02450-z **(IF- 3.4 ; CI- 15; Q1)**

64. Nippatlapalli, N, **Ligy Philip** (2020) "Assessment of novel rotating bipolar multiple disc electrode electrocoagulation-flotation and pulsed plasma corona discharge for the treatment of textile dyes", **Water science and technology: a journal of the International Association on Water Pollution Research,** Volume 81(3), pp:564-570, DOI: 10.2166/wst.2020.137 **(IF- 2.6 ; CI- 14; Q2)**

65. Sharon, H, Reddy, K.S, Krithika, D and **Ligy Philip**, (2020) "Viability assessment of solar distillation for desalination in coastal locations of Indian sub-continent – Thermodynamic, condensate quality and enviro-economic aspects" **Solar Energy**, Volume 197, pp: 84-98, DOI: 10.1016/j.solener.2019.12.080 **(IF- 6.6 ; CI- 25; Q1)**

66. Sharon, H, Reddy, K.S, Krithika, D, Drupad Chand, Belmin Benny and **Ligy Philip**, (2020) "Thermal modeling, characterization, and enviro-economic investigations on inclined felt

sheet solar distiller for seawater desalination" **Environmental Science and Pollution Research**, Volume 28, pp: 63572–63588, DOI: https://doi.org/10.1007/s11356-020-10831-y **(IF- 5.4 ; CI- 15; Q1)**

2019

67. **Ligy Philip**, Jerin Jose (2019) " Degradation of chlorobenzene in aqueous solution by pulsed power plasma: Mechanism and effect of operational parameters" **Journal of Environmental Chemical Engineering**, Volume 7(6) Article No:103476, DOI: 10.1016/j.jece.2019.103476 **(IF- 7.2; CI- 53; Q1)**

68. **Ligy Philip**,Bhallamudi.S.M (2019) Editorial Perspectives: Innovation needs for the water sector in India to achieve sustainable development goals. **Environmental Science: Water Research and Technology**. Vol 5(7), pp: 1200-1201, DOI: 10.1039/c9ew90026h **(IF- 3.1; CI- 1; Q1)**
69. Jakka Ravindran,S, Mahendranath, A,Srikrishnarka, P, AnilKumar,A, Islam,M.R, Mukherjee,S, **Ligy Philip**, Pradeep,T, (2019) "Geologically Inspired Monoliths for Sustainable Release of Essential Minerals into Drinking Water" **ACS Sustainable Chemistry and Engineering**, Vol 7(3), pp: 11735-11744, DOI:10.1021/acssuschemeng.9b01902 **(IF- 7.3; CI- 10; Q1)**

70. Vellingiri,K., Choudhary,v., **Ligy Philip**,(2019) "Fabrication of portable colorimetric sensor based on basic fuchsin for selective sensing of nitrite ions", **Journal of Environmental Chemical Engineering,** Vol 7(5), Article No: 103374, DOI: 10.1016/j.jece.2019.103374 **(IF- 7.2; CI- 25; Q1)**

71. Mukherjee, S., Kumar, A.A., Sudhakar, C., **Ligy Philip**, Pradeep, T.(2019) Sustainable and Affordable Composites Built Using Microstructures Performing Better than Nanostructures for Arsenic Removal. **ACS Sustainable Chemistry and Engineering.** Volume:**7**(3), pp. 3222-3233, DOI: 10.1021/acssuschemeng.8b05157 **(IF- 7.3; CI- 35; Q1)**

72. Velligiri, K., Boukhvalov, D.W., Kim.K.H and **Ligy Philip** (2019) Validation of lock and key Mechanism of a metal organic framework in selective sensing of trimethylamine. **RSC Advances,** Volume 9(14), pp7818-7825, DOI: 10.1039/C8RA10637A **(IF- 4.6; CI- 18; Q1)**

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73 Raj Kamal Singh, **Ligy Philip**, R.Sarathi. **(2016)**"Disinfection of water using atmospheric pulse corona discharge: Effect of system parameters and mechanistic study", IWPEEA - 2016, Aug 21-24, Liverpool, UK.

74 Madumathi, **Ligy Philip**, S. and MurtyBhallamudi. **(2016)** "Effect of humic acid on transport of bacteria in saturated porous media", Interfaces against Pollution, Sept 3 -7, 2016, Lleida, Spain.

75 Akashdeep Singh Oberoi and **Ligy Philip. (2016) "**Acute toxicity assessment during the biodegradation of heterogeneous phenolic compounds using *E.coli* based bacterial bioassay", in Society for Environmental Toxicology & Chemistry (SETAC) Asia Pacific 2016 Conference, Sep 16th-19th, NUS Singapore.

76 Anu Rachel Thomas, Praveen Rosario A, **Ligy Philip**, and Martin Kranert. **(2016)** "Performance Evaluation of In-vessel system for Co-composting of Septage", The 6th International Conference on Solid Waste Management (6th IconSWM 2016), Jadavpur University, Kolkata, West Bengal, India on November 24- November 26, 2016 on the topic titled. The paper has been shortlisted for publication in the book, "*Waste Management and Resource Circulation*" to be published by Springer (India) Private Limited under the discipline of Environmental Sciences.

77 Anu Rachel Thomas, Praveen Rosario A, **Ligy Philip**, and Martin Kranert. **(2016)** "Sustainable Septage Management through In-vessel Co-composting", The Asia- Pacific Conference on Biotechnology for Waste Conversion 2016 (BioWC 16), Hong Kong Baptist university, Kowloon Tong,Hong Kong SAR, China, December 6 - 8, 2016. "**Best poster award"**

78 Arya V, **Ligy Philip** and S MurtyBhallamudi, **(2016)** "Natural attenuation of pharmaceuticals in river bank filtration- pilot scale study",Non-target screening of organic chemicals for a comprehensive environmental risk assessment**,**Congressi Stefano Franscini, Monte Verità, Ascona, Switzerland, 2016.

79 Vineeth Pothanamkandathil, Raj Kamal Singh, **Ligy Philip** and SarathiRamanujam. **(2016)** "Water Treatment adopting Pulsed Power Technique: Effect of Recycling ROS on Dye Degradation", 18th Asian Conference on Electrical Discharges, December 8-10, 2016, IIT Madras, Chennai, India. "**Best paper presentation award"**

80 Ramprasad, C. and **Ligy Philip**, **(2016)** "Greywater treatment and Reuse using a Baffled constructed wetland", Seventh *International conference on sustainable built environment,* 16-18th December, 2016, Earl's Regency Hotel, Kandy, Sri Lanka.

81 Anupama Surenjan, **Ligy Philip** and T. Pradeep, **(2016)** "Low cost treatment of PhaCs using visible light induced photocatalysis in a LED-based reactor",Fourth international conference on advanced oxidation processes – Dec 17-20, 2016at BITS Pilani, Goa, India.

82 Raj Kamal Singh, **Ligy Philip** and R. Sarathi.**(2016)** "Rapid Removal and Mineralization of 2-4- D in Pulsed Corona Discharge Treatment: Effect of System Matrices and Degradation Pathway", Fourth International conference on Advanced Oxidation Process (AOP) – 2016, Dec 17-20, 2016, Goa, India. "**Best oral presentation award"**

83 Anu Rachel Thomas, Praveen Rosario A, **Ligy Philip**, and Martin Kranert. **(2017)** "Decentralized Treatment Strategies for Septage Management", in The 4th International Faecal Sludge Management Conference (FSM4), ITC Grand Chola,Chennai, Tamil Nadu, India on February 19 - 23, 2017.

84 Krithika D and **Ligy Philip**. **(2017)** "Effective recycling and reuse of household bathroom wastewater". 4th 3R International scientific conference on materials cycle and waste management. 8-9th March, 2017, New Delhi, India (Accepted).

85 Krithika Delhiraja, Nisha A.KU and **Ligy Philip** (2017) paper entitled on "Removal of emerging pharmaceuticals from domestic wastewater using Novel composite adsorbent "International conference on "Recent Trends in Environmental Science and Engineering"16th December 2017, APS College of Engineering, Bangalore, India.

86 Krithika Delhiraja, H.Sharon, K.S.Reddy, **Ligy Philip** (2018) oral presentation on "An experimental study on performance and quality aspects of solar domestic wastewater

distillation for reuse and resource conservation" European desalination society (EDS) conference-Desalination for the environment clean water and energy, Divani Caravel Hotel, Athens, Greece, 3-6 September 2018.

87 A. Surenjan, T. Pradeep, and **Ligy Philip** (2018) "Visible-light driven degradation of emerging contaminants using LED based fixed bed Photoreactor". 11th International Conference on Challenges in Environmental Science and Engineering- 2018, Bangkok, Thailand, November 4-8, 2018

88 Anu Rachel Thomas, Martin Kranert and **Ligy Philip** (2019) "Application of mixed organic waste for effective septage treatment through In-vessel co-composting". The Thirty-Fourth International Conference on Solid Waste Technology and Management, Annapolis, MD (Washington, DC area), USA, March 31 – April 3, 2019

89 **Ligy Philip** (2019) "Development of Low-Cost Colorimetric Sensor for the detection of aqueous nitrite ion". ACS Fall 2019 National Meeting & Exposition in San Diego, California, USA, August 25-29, 2019

90 Krithika Delhiraja, Sanjeev Chhetri and **Ligy Philip** (2019) oral presentation on "Recycling and reuse of bathroom greywater using modified polyethersulfone ultrafiltration membrane and composite graphene oxide adsorption system", The 12th CESE Conference, 3rd – 7thNovember 2019, Kaohsiung, Taiwan.

91 Anu Rachel Thomas and **Ligy Philip** "Transfer of pharmaceutical and personal care product during in-vessel co-composting of septage and mixed organic wastes", The 12th CESE Conference, 3rd – 7th November 2019, Kaohsiung, Taiwan.

92 Jerin Jose and **Ligy Philip** (2019)" An insight into the degradation pattern of chloroform and methyl isobutyl ketone (MIBK) in pulsed discharge plasma system". 12th International Conference on the Challenges in Environmental Science and Engineering (CESE-2019) in Kaohsiung, Taiwan, Nov 3-7, 2019

93 Narasamma.N and **Ligy Philip**, (2019). Degradation of Harmful Anionic and Cationic Dyes using High Pulsed Power Plasma Discharge. The 12th International Conference on the Challenges in Environmental Science and Engineering: Part of Advanced Oxidation Process organized by National Kaohsiung University of Science & Technology, Kaohsiung city, Taiwan. (3-7 November 2019)

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Process for Industrial wastewater treatment organized by IWA committee, Colombo, Srilanka. (1-5 December 2019)

95 Manthiram Karthik Ravichandran and **Ligy Philip** (2020), "Occurrence, fate and risk assessment of PPCPs in wastewater from the rural community", The 2nd International Conference on Wastewater Technologies and Environmental Treatment (ICWTET-2020), Kuala Lumpur, Malaysia, 11th September 2020 (Online) and won **"Best video presentation award".**

96 Manthiram Karthik Ravichandran and **Ligy Philip** (2020), "Decentralized greywater treatment using baffled constructed wetland", The 13th International Conference on Challenges in Environmental Science and Engineering (CESE-2020), 7-8th November, 2020 (Online).

97 Vaishali Choudhary and **Ligy Philip** (2020), "'Assessment of competitive adsorption and sustainability for the removal of emerging contaminants using tailored waste as an adsorbent", The 13th International Conference on Challenges in Environmental Science and Engineering (CESE-2020), 7-8th November, 2020 (Online).

98 Vaishali Choudhary and **Ligy Philip** (2021), "Interpretation of the risk associated with emerging contaminants in the aquatic systems for BRICS Nations", World Environmental and Water Resources Congress 2021, 7-11 June, 2021 (Online).

99 Vaishali Choudhary, Vellingiri, K, and **Ligy Philip** (2021), "Colorimetric affordable test strips", Atal innovation mission and Innovation Centre Denmark water challenge, 2021 Next Generation Water Action initiative(Online).

100 Manthiram Karthik Ravichandran and **Ligy Philip** (2021), "Occurrence and fate of antimicrobial agents in a hybrid flow constructed wetland treating greywater ", Aqua 360 water for all – Emerging Issues and Innovations, 31st August – 2nd September 2021(Online).

101 Krithika Delhiraja, Prema Rajagopalan and **Ligy Philip** (2021), "Exploration of socio-economic factors affecting the implementation of zero liquid discharge system in peri-urban and rural households of metropolitan city ", Aqua 360 water for all – Emerging Issues and Innovations, 31st August – 2nd September 2021(Online).

102 Jayakumar Renganathan, Insamam UlHuqS,KamarajRamakrishnan, Manthiram Karthik Ravichandran and **Ligy Philip** (2021), "Spatial and temporal variations in the concentrations of pharmaceutically active compounds in a south Indian river ", Aqua 360 water for all – Emerging Issues and Innovations, 31st August – 2nd September 2021(Online).

103 **Ligy Philip**.(2021) "Bioremediation of contaminated soils and Aquifers". 4th International Symposium on Green and Sustainable Technology 2021, 3rd – 6th October 2021, Malaysia **(Key Note Address)**

104 Anu Rachel Thomas, Mohammed Iqbal Thayyil and **Ligy Philip** (2021) "Strategies for adaptation of solid waste management infrastructure in coastal areas to climate change", 26th International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO 2021 INTERNATIONAL) at SVNIT Surat, Gujarat, India during December 23-25, 2021

105 **Ligy Philip** (2021) "Wastewater Treatment". 1st International Conference on Circular Economy for Sustainable Water Management 2022, 23rd – 25th March 2022, IIT Madras **(Key Note Address)**

106 Mohammed Iqbal Thayyil, Arun, and **Ligy Philip**. (2022) "Investigation on The Performance of Microalgae-Bacteria Consortia in Nutrient Removal from Domestic Wastewater", 1st International Conference on Circular Economy for Sustainable Water Management 2022, 23rd – 25th March 2022, IIT Madras (Online)

107 Manthiram Karthik Ravichandran and **Ligy Philip**. (2022) "Attenuation and Fate of Pharmaceutically Active Compounds in the Baffled Constructed Wetland Treating Greywater", 1st International Conference on Circular Economy for Sustainable Water Management 2022, 23rd – 25th March 2022, IIT Madras (Online)

108 Sumit Kumar and **Ligy Philip**. (2022) "Ultrasound-Assisted Sorptive Removal of Textile Dyes Using Low Cost Bamboo-Derived Biochar", 1st International Conference on Circular Economy for Sustainable Water Management 2022, 23rd – 25th March 2022, IIT Madras (Online)

109 Vaishali Choudhary and **Ligy Philip**. (2022) "Sorptive removal of micropollutants from wastewater using Fenton's modified sewage sludge biochar", 1st International Conference on Circular Economy for Sustainable Water Management 2022, 23rd – 25th March 2022, IIT Madras (Online)

110 **Ligy Philip** (2022) "Decentralized Systems for Sustainable Wastewater Management in Developing Countries: Challenges and Way Forward". Industrial Ecology Gordon Research Conference 2022, 12^{th} – 17^{th} June 2022, Newry, Maine, USA **(Plenary Talk)**

111 Bhesh Kumar Karki , **Ligy Philip**,(2022) "Assessment of Water Quality of Selected Locations of Bagmati River Applying a Water Quality Index Model" in the 9th National Conference on Science and Technology "Science for Society and Innovation for Prosperity" June 26 - 28, 2022 NAST, Khumaltar, Lalitpur 44700, Organized by Nepal Academy of Science and Technology

112 **Ligy Philip** (2022) "Removal of Emerging contaminants from water environment". RSC-IITM Desktop Seminar on Environmental Sciences 2022, 11th – 12th October 2022, **(Online)**

113 **Ligy Philip and** Manthiram Karthik Ravichandran (2022) "Removal of Emerging Contaminants Using Engineered Natural Treatment Systems". First International Conference on "Water for Life 2022", IIT Madras, India, 15th – 17th December 2022.

114 Mohammed Iqbal Thayyil and **Ligy Philip**, (2022) "Investigation on the performance of attached growth biological system for instream treatment of municipal wastewater",23rd IAHR-APD Congress, IIT Madras, India, 14th -17th December 2022

115 **Ligy Philip** and M.R. Jaishankar, (2023) "Wastewater Recycling for Indirect Potable Reuse: Technologies and Approaches for Risk Reduction", 13th IWA International Conference on Water Reclamation and Reuse,Chennai, INDIA, 15th – 19th January 2023.

116 V. Choudhary and **Ligy Philip** "Risk Management Associated with Loading of Emerging Contaminants in Waterways", 13th IWA International Conference on Water Reclamation and Reuse,Chennai, INDIA, 15th – 19th January 2023.

117 M. K. Ravichandran and **Ligy Philip "**Performance of Pilot Scale Hybrid Constructed Wetland for Greywater Treatment", 13th IWA International Conference on Water Reclamation and Reuse,Chennai, INDIA, 15th – 19th January 2023.

118 Akula Vishnu Vardhan and **Ligy Philip** "Comparison of glycerol and raw wastewater as carbon sources for denitrification of nitrate rich effluent stream", Water Security and Climate Adaption Conference (WSCA) 2023, IIT Madras, India, 4th – 7th October 2023.

119 Ankit Kumar and **Ligy Philip** "Simultaneous removal of fluoride and perchlorate from groundwater", Water Security and Climate Adaption Conference (WSCA) 2023, IIT Madras, India, 4th – 7th October 2023.

120 Yogita and **Ligy Philip** "Simultaneous removal of antibiotics and nutrients using the microalgae based sustainable system", Water Security and Climate Adaption Conference (WSCA) 2023, IIT Madras, India, 4th – 7th October 2023.

121 Mohammed Iqbal and **Ligy Philip** "Performance evaluation of microalgae bacteria consortia for pollutant removal from municipal wastewater", Water Security and Climate Adaption Conference (WSCA) 2023, IIT Madras, India, 4th – 7th October 2023.

122 Ritik Anand and **Ligy Philip** "Catalytic Vs Non-Catalytic Pulse Plasma Treatment: Environment and Economics", Water Security and Climate Adaption Conference (WSCA) 2023, IIT Madras, India, 4th – 7th October 2023.

123 Pooja and **Ligy Philip** "Bioleaching of Municipal Sludge Through Sulfur Oxidising Bacteria", Water Security and Climate Adaption Conference (WSCA) 2023, IIT Madras, India, 4th – 7th October 2023.

124 **Ligy Philip** "RBF along with reactive barriers for the removal of emerging contaminants from drinking water", International Riverbank Filtration Conference, Dresden, Germany, 16th – 18th October 2023.

125 Vishnu Vardhan A, Gayathri R, Franco A Deepan, and **Ligy Philip**, "Effective Nitrate Removal from High-Nitrate Wastewater using Ion Exchange Membrane Bioreactor (IEMB) Technology", IWA International Conference on Water & Wastewater Management with special focus on Developing Countries (WWMDC 2023), Murdoch University, Perth, Australia, 3rd - 8th December 2023.

126 **Ligy Philip**, Programme Committee in IWA Water and Development Congress & Exhibition, Kigali Rwanda, 10th – 14th December 2023.

127 Vishnu Vardhan A and **Ligy Philip, "**Removal of Nitrate using Ion Exchange Membrane Bioreactor" SARASWATI 2.0 Final Consortium Meeting, Seville, Spain, 27th - 29th May 2024

128 Subham Meher and **Ligy Philip**, "Potential of Combined Nitrous Acid and Alkaline Fermentation in Volatile Fatty Acid Production Using Sludge from Wastewater Treatment Plants" 10th International Conference on Engineering for Waste and Biomass Valorisation, held in Tohoku University, Sendai, Japan, 22nd – 23rd August 2024.

129 Akash Saha and **Ligy Philip**, "Bio-hydrogen production from co-fermentation of sewage sludge and yard waste" 10th International Conference on Engineering for Waste and Biomass Valorisation, held in Tohoku University, Sendai, Japan, 22nd – 23rd August 2024.

130 **Ligy Philip** "Research Groups and Gist of Research Work Carried Out @IIT Madras in The Area of WASH and NSS", Africa-Asia Sanitation Research Network (AARN) Collaborative Workshop on Non-Sewered Sanitation (NSS), Organized by Isle Utilities, Bangkok, Thailand, 22 – 24 September 2024.

131 Yogita and **Ligy Philip**, "Microalgae-bacteria consortia: simultaneous removal of nutrients and majorly occurring antibiotics, revealing metabolic pathways and physiological responses." 7th International Conference on Challenges in Environmental Science and Engineering, Pula, Croatia. during 13th to 17th of October, 2024.

132 Bhesh Kumar Karki and **Ligy Philip**, "Assessing the Roles of Components (Plants and Biochar) Removing Methylparaben in Hybrid Constructed Floating Wetlands," 7th

International Conference on Challenges in Environmental Science and Engineering, Pula, Croatia. during 13th to 17th of October, 2024 **(Online)**

133 **Ligy Philip** "Sustainable Wastewater Management by Adopting Circular Economy Principles: Status and Challenges", Second International Conference on "Water for Life 2024", IIT Madras, India, 12^{th} – 14^{th} December 2024.

134 Mohammed Iqbal and **Ligy Philip** "Engineered Natural Systems for in-stream remediation of contaminated drains", Second International Conference on "Water for Life 2024", IIT Madras, India, 12^{th} – 14^{th} December 2024. (Poster Presentation)

135 Deepchandra Joshi and **Ligy Philip** "Statistical geospatial modeling and risk characterization of Per- and polyfluoroalkyl substances (PFAS) contamination in Chennai (India)", Second International Conference on "Water for Life 2024", IIT Madras, India, 12^{th} – 14^{th} December 2024. (Poster Presentation) **Best Poster Award**

136 Pooja and **Ligy Philip** "Comparison of Bioleaching of Heavy Metals from Different Types of Dewatered Sludge Combined with Metals Speciation", at AGU24 Annual Fall Meeting, held during 9-13 December, 2024 at Washington, D.C., USA. (Poster Presentation)

137 Maanashi Triapthi, S.M Bhallamudi,and **Ligy Philip** "Removal of Algal Cells and Microcystin-LR using Native Bacterial Consortia "IWA 21st International Conference on Diffuse Pollution & Eutrophication, December 11-14, 2024. The Empress Premier Hotel in Chiang Mai, Thailand.

138 Pooja, P. and **Ligy Philip**. "Bioleaching and Chemical Fractionation of Heavy Metals from Municipal and Industrial Dewatered Sewage Sludge, EGU General Assembly 2025, Vienna, Austria, 27 Apr–2 May 2025, EGU25-9260, https://doi.org/10.5194/egusphere-egu25-9260, 2025.

139. **Ligy Philip** "Sustainable Phosphorus Recovery from Secondary Wastewater: Integrating Donnan Dialysis and Vivianite Precipitation", 2nd European Congress on Recycling and Waste Management, Vienna, Austria, November 06-07, 2025.

140. **Ligy Philip** "Advancing Waste Valorisation: Performance, Economic, and Life Cycle Assessment of Free Nitrous Acid and Heat-Ultrasonic Strategies", 2nd European Congress on Recycling and Waste Management, Vienna, Austria, November, 06-07, 2025.

141 **Ligy Philip** "Circular economy in wastewater: Innovations in energy recovery, resource reuse, and sustainable treatment", IWA Water and Development Congress & Exhibition,Bangkok, Thailand, 8 – 12, December,2025.

142 Yogita Gupta and **Ligy Philip** "Development of microalgae-bacteria consortia for the tertiary treatment of wastewater", IWA Water and Development Congress & Exhibition,Bangkok, Thailand, 8 – 12, December,2025.

143 Subham Meher and **Ligy Philip** "Valorization of sludge: Enhancing performance & economics with wastewater by-product pretreatment", IWA Water and Development Congress & Exhibition,Bangkok, Thailand, 8 – 12, December,2025.

144 Athira and **Ligy Philip** "Surfactant-assisted nonthermal plasma degradation of PFAS: Insights into the synergistic effect and degradation mechanism", 12th International Conference on Environment and Renewable Energy (ICERE 2026) during February 28-March 2, 2026 in Nha Trang, Vietnam..

- ## Presented in National Conferences

1. **Ligy Philip**, Leela Iyengar and C. Venkobachar (1994). Immobilized Microbial (Pseudomonas aeruginosa) Reactor for Copper Removal and Recovery from Wastewater. Proceedings of the National Seminar on Clean Environment, Strategies, Planning and Management, Lucknow, India.

2. **Ligy Philip** and C. Venkobachar (1999). Water Quality: Present Scenario. Proceedings of the National Conference on "Water Resources Management for Sustainable Development" held at SV University, Thirupathy during 12-13 March, 1999

3. NDVNSM Krishna and **Ligy Philip** (1999). Biofiltration: An attractive alternative for the Abatement of Air Pollution from Industries. National Seminar on Waste Management, Sponsored by AICTE and held at Samrat Ashok Technological Institute on 26-27, 1999.

4. P.K. Ghosh, **Ligy Philip** and M. Bandyopadhyay (2001). Effect of Atrazine on Anaerobic Treatment of Wastewater. Proceedings of the National conference RAWM-2001 held in Banaras Hindu University, During 23-25, February, 2001

5. **Ligy Philip** and Deshusses, M.A (2002). Sulfur Dioxide Treatment from Flue gases using a Biotrickling filter 20th National Convention of IPHE on Environmental Engineering, Held in GITAM Engineering College, Visakha patnam-530 045 during 22-24 August, 2002. (**Invited Paper)**

6. **Ligy Philip** (2003). Biofiltration for the control of VOC's and Flue gases **(Invited Paper)**. National Seminar on Regional air Quality Monitoring and Policy Making held in Vellore Institute of Technology, Vellore during June 12-14, 2003.

7. Shihabudheen M.M, Venkatraman Srinivasan and **Ligy Philip** (2003). Performance evaluation of a biosystem treating BTX under substrate versatility condition. National

conference on advances in Environmental Science and Engineering, Dec. 2003, IIT Bombay.

8. Mathava kumar S and **Ligy Philip** (2004), " Endosulfan degradation by a mixed bacterial culture ", First CUSAT national conference on Recent Advances in Civil Engg (RACE-2004), 25-27, Mar, Kochi India.

9. Mathava kumar S and **Ligy Philip** (2004), " Leaching characteristics of Endosulfan contaminated Indian soils and possible immobilization techniques ", 11th National symposium on Hydrology with focal theme on water quality, 22-23, Nov, National Institute of Hydrology, Roorkee, India

10. Shihabudheen M. Maliyackal and Ligy Philip (2006). Removal of arsenic from drinking water using manganese oxide coated Alumina. Material Preparation and Characterization. National Conference on Environmental Management-Geospatial Technologies for Sustainable Development, Nov 16-18, 2006, Hyderabad.
11. Ligy Philip (2008). Bioremediation of Contaminated soil, water and Air. UGC sponsored national workshop on 'Save the environment, help mankind survive' held in St. Josephs College for Women, Vizhaghapatnam September 1-2, 2008. **(Key Note Address)**

12. Balasubramanian P, Ligy Philip and B S Murty.(2009) Biodegradation of chloroform by mixed pesticides enriched bacterial cultures, Advances in Environmental Engineering (AEE-09), Nov, 14 - 15, 2009, National Institute of Technology, Rourkela. ISBN: 978 -93-80043-45-6.

13. Priya Ragagopalan and Ligy Philip (2012). Interaction of Dichloromathane with other VOCs from Pharmaceutical Wastewater. Recent Advances in Civil Engineering (RACE 2012), November 29 - December 1 -2012. Organised by School of Engineering, Cochin University of Science and Technology, Kerala, India

14. Arya V. and Ligy Philip(2012). Development of an Environmentally Friendly Water Treatment System using N-doped TiO_2. Recent Advances in Civil Engineering (RACE 2012), November 29 - December 1 -2012. Organised by School of Engineering, Cochin University of Science and Technology, Kerala, India.

15. Ligy Philip (2012). "Bioremediation of Endosulfan Contaminated Soil and Water". LAKE 2012. National Conference on Conservation and Management of Wetland Ecosystems, 6-8 November, 2012. School of Environmental Science, Mahatma Gandhi University, Kottayam, Kerala **(Key Note Address)**

16. Priya V. S and Philip L.(2012) Interaction of Dichloromethane with other VOCs from Pharmaceutical Wastewater. National conference in Recent advances in civil engineering, 29-11-12 to 1-12-12 at Cochin University of science and technology.

17. Arya. V, Ligy Philip.(2012) Solar Photocatalytic Disinfection Using N-Doped Titanium Dioxide. Recent Advances in Civil Engineering-2012" organized by CUSAT, Kochi, Kerala.

18. Anupama S, Balaji S, Ligy Philip, T. Pradeep.(2015) Removal of Diclofenac from treated effluent. Seminar cum Workshop on Micropollutants in Water and their Hazards" Jan 12-13, 2015, IIT Madras, Chennai, India.

19. Arya. V, Ligy Philip, B. S. Murty.(2015) Fate of emerging contaminants in biological processes. Seminar cum Workshop on Micropollutants in Water and their Hazards" Jan 12-13, 2015, IIT Madras, Chennai, India.

20. Singh Raj Kamal, Philip L, Sarathi R.(2015) "Water treatment adapting pulsed power technology" Seminar cum Workshop on Micropollutants in Water and their Hazards" Jan 12-13, 2015, IIT Madras, Chennai, India.

21. Madumathi, **Ligy Philip**, and S. MurtyBhallamudi, (2016) "Co-transport of clay colloids with bacteria in saturated porous media". Clean Up India 2016, Dec 13 – 16, 2016, Coimbatore, India

22. Krithika Delhiraja, Sharon Nadar, **Ligy Philip** and Srinivas Reddy (2017) paper entitled on "Zero DischargeToilet- A Sustainable Approach For Toilet Technology" SANIVATION' 2017, 18th-19th November 2017, YASHADA,Pune,India.

23. Anu Rachel Thomas and **Ligy Philip (2017)** "NOWAH- No waste at Household: A novel, smart, sustainable and complete treatment technology for feacal sludge and organic waste management" (2017) SANIVATION 2017 YASHADA, Pune, India

24. Jose, J., **Ligy Philip**., Ramanujam, S., Sugai, T., Jiang, W.(2018) "Quantification of hydroxyl radical produced in aqueous phase by pulsed power plasma and electron beam irradiation and the applicability of electron beam for Indigo carmine degradation", Second National Power Engineering Research Scholars' Conference (NPERSC), IIT Madras, 24-25 February, 2018.

25. Narasamma.N and **Ligy Philip,** (2018) "Textile wastewater treatment using Hybrid Electrocoagulation-flotation/Pulsed power Plasma Technology". 1st Global Clean Up Congress: Part of Assessment, Remediation and Management of contaminated water (jointly organized by CRC CARE, TNAU) Coimbatore, India, October 21-22, 2018

26. Narasamma.N and **Ligy Philip**, (2019). "Pulsed Corona Discharge for the Treatment of Potentially Toxic dyes". Water and Waste Management (WWM) conference: Part of Industrial Wastewater Treatment (jointly organized by GHMC, AWW, NIRDP, Air India etc.) Hyderabad, India, February 19-20,2019

27. Jerin Jose, R.Sarathi, **Ligy Philip** (2019) "Pulsed corona discharge treatment for the degradation of chloroform and chlorobenzene" in National Environmental Conference 2019 organized by CESE, IIT Bombay, 31st Jan to 2nd Feb 2019

28. Jerin Jose, R.Sarathi, **Ligy Philip** (2019) "Comparison of treatment of toluene and chlorobenzene using pulsed power technology" in Indo-UK workshop on Wastewater treatment: Approaches, management and capacity building, in Punjab University, Chandigarh, July 3-5, 2019

29. Narasamma.N and **Ligy Philip,** (2019). Degradation of Emerging Contaminants using Batch and Semi continuous flow Pulsed power Plasma Technology. The National Symposium on Electrochemical Science and Technology NSEST-2019: Part of Electrochemistry organized by Indian Institute of Science (IISc) Bangalore, India. (19-20 July, 2019)

30. Vaishali Choudhar and **Ligy Philip** (2019). "The challenge was to develop an experience centre at Brapuhallah drain in Delhi." **Wetlab Challenge** - Oragnised By Wet skills Netherlands, DBT And BIRAC From October 5 -17 2019 In Delhi

31. Narasamma.N and **Ligy Philip**, (2019). Electrocoagulation-floatation assisted pulsed power plasma technology for the complete mineralization of potentially toxic dyes and real textile wastewater presented in Inter IIT Tech Meet 8.0; conducted by IIT Roorke, Uttarkhand, India (20-23 December 2019)

32. Vaishali Choudhary and **Ligy Philip** (2020). Influence of residual pollutants on the electrocatalytic degradation of nitrate associated with treated secondary effluent wastewater; P.K. Sinha Centre of Bioenergy and Bio recovery, Indian Institute of Technology Kharagpur, 26-27th February 2020

33. **Ligy Philip.** Sustainable Water Management through Circular Economy Concept. Institute Lecture, IIT Hyderabad, 5th June, 2021 **(Key Note Address)**

34. **Ligy Philip**. Translational Research related to sustainable water management and circular economy, Guest Lecture for VIT Faculty, 15th September, 2021**(Key Note Address)**

35. **Ligy Philip** Delivered multiple lectures on "Greywater treatment systems planning" during the training programs on "Sustainable grey water management and reuse at community level" organised by CSE, New Delhi for Jal Jeevan Mission **(Key Note Address)**

36. **Ligy Philip** delivered multiple lectures for the training program on Design of Sanitation Systems in Waste Management, Purwanchal Campus, Dharan, Nepal, during December, 4-8, 2021 **(Key Note Address)**

37. Bhesh Kumar Karki, Manthiram Karthik Ravichandran, **Ligy Philip**, "Constructed Wetlands for Wastewater Treatment in India: Insights from Recent Developments" Roorkee Water Conclave 2024, IIT Roorkee, 3^{th} – 6^{th} March 2024.

38. **Ligy Philip,** Distinguished Speaker in National Workshop on "Technology Readiness Assessment of Drinking Water Purification System 2.0" Organized by ICCW in IIT Madras Research Park during 22nd – 23rd August 2024.

39. **Ligy Philip**, Sumit Kumar and Saikumar. V, Exhibit Stall " DST - IIT Madras Water Innovation Centre (SUTRAM for EASY WATER) " in 8th India Water Week 2024 Organized by Ministry of Jal Shakti, Government of India during 17th – 19th September 2024.

40. **Ligy Philip**, Keynote Speaker "Sustainable Synergies Exploring the water – Food Technology Nexus "in FOOD SURE - 2024 Organized by Loyola College, Chennai on 9th October 2024.

41. **Ligy Philip** and Mr. Mohammed Iqbal T, "In-Situ Urban Drain Rejuvenation by Modular Biofilm-Phytoremediation: A Low-Energy Approach for Resource-Limited Settings", VRUTHI 2025 – The Clean Kerala Conclave, organized by the Government of Kerala, Local Self Government Department (LSGD), and Suchitwa Mission, 12 April 2025, Mascot Hotel, Thiruvananthapuram (Award for innovative idea in 'student category' in the liquid waste management (LWM) stream with a cash prize of Rs 25,000.)

42. Tripathi, M., Bhallamudi, S.M., and **Ligy Philip.** (2025). Prediction and control of algal toxins in water bodies and electrochemical removal of associated disinfection by –products from the treated water. PMRF symposium, March 16th and 17th, 2025, IIT Hyderabad, India.

43. Pooja, P and **Ligy Philip** "Bioleaching of Heavy Metals From Dewatered Sewage Sludge: Parameter Optimization, And Efficiency Assessment " in RECYCLE 2025, 5th International Conference on Waste Management, organised by Waste Management Research Group, Indian Institute of Technology Guwahati, Assam on 5th and 6th June, 2025.

44. Subham Meher, and Ligy Philip (2025). "Exploring the potential of free nitrous acid, heat, and combined pretreatment to enhance volatile fatty acid production from sludge and mixed substrates" 5th International Conference on RECYCLE 2025, 5- 6th June 2025, Indian Institute of Technology Guwahati, Guwahati, India**. (Selected for the best oral presentation award)**

45. Athira MK and Ligy Philip (2025). "Exploring the potential of free nitrous acid, heat, and combined pretreatment to enhance volatile fatty acid production from sludge and mixed substrates" 5th International Conference on RECYCLE 2025, 5- 6th June 2025, Indian Institute of Technology Guwahati, Guwahati, India**. (Selected for the best oral presentation award)**

46. Yogita and **Ligy Philip** (2025) "Enhanced removal of Amoxicillin and nutrients using microalgal-bacterial consortia: removal mechanisms and degradation pathway " 5th

International Conference on RECYCLE 2025, 5- 6th June 2025, Indian Institute of Technology Guwahati, Guwahati, India**.**

47. Yogita and **Ligy Philip** (2025) "Comprehensive comparison of biomass behavior and nutrient removal in microalgae, activated sludge, and consortia systems in the presence of antibiotics". ICNEEE-2025: 4th International Conference on New Frontiers in Chemical, Energy, and Environmental Engineering. 25th and 26th June, 2025.

48. Akash Saha and **Ligy Philip** (2025). Electrochemical removal and recovery of phosphate using Zn-Al based layered double hydroxides, 5th International Forum on Asian Water Environment Technology, 6-8 August 2025, Dehradun, India.

49. Tripathi, M., Bhallamudi, S.M., and **Ligy Philip**. (2025). Immobilized System for the Simultaneous removal of algal cells and Microcystin-LR. The 5th International Forum on Asian Water Environmental Technology (IFAWET 5), 6-8 August 2025, Dehradun, India.

50. Tripathi, M., Bhallamudi, S.M., and **Ligy Philip .** (2025). Integrated Bioremediation of Algal Biomass and Toxins via Immobilised Native Bacterial consortia. River Health: Assessment to Restoration (RHAR 2025), November, 2025, Varanasi India (**Best presentation award**)

51. Akash Saha, **Ligy Philip** (2026). Integrated management of domestic organic waste and wastewater to achieve circular economy concept and energy self-sufficiency, 4th National Prime Minister's Research Fellowship Annual Symposium, March 6-7, 2026, Guwahati, India.

- ## Technology Transferred to Industries/Agencies and Copy Rights.

1. **Ligy Philip,** Water analysis Kit for the technology knowhow, M/s: Weaver Technologies LLP, 13, Srisakthi Krishna Apartments, Manikandan Street, Aiyappa Nagar, Madipakkam, Chennai – 91, Agreement No: BM 242825 dt: 13th October 2017.

2. **Ligy Philip,** Technology Transfer Of Water Treatment System And Analysis Kits, M/s:Tanstia FNF Service Centre, B-22,Industrial Estate, Guindy, Chennai-32, Agreement No: BJ 548267 dt: 13th March 2017

3. **Ligy Philip,** Knowhow Process to Bioremediate Hexavalent Chromium Contaminated Aquifers, M/s: Shriram Pistons, 23,KG Marg , New Delhi, Agreement No: BG 687671 dt:23rd January 2017

4. **Ligy Philip,** Knowhow Process to Bioremediate Hexavalent Chromium Contaminated Aquifers, M/s: Munjal Showa Private Limited, 9-11, Maruti Industrial Area, Gurugram, Haryana – 122015, Agreement No: 5/2010 dt:3rd March 2010

5. **Ligy Philip,** Knowhow Process to Bioremediate Hexavalent Chromium Contaminated Aquifers, Anand Udyog, plot No:31, Sector -5(Pkt-1) Mujessar Railway Crossing, Faridabad, Haryana, Agreement No: AL172304 dt: 28th December 2012

6. **Ligy Philip**, Consulting Services Agreement with M/s: Greenvironment Innovation & Marketing India (P) Ltd, S-3, Second Floor, Door No: 14, Janakpuri 1st Street, Off 100" Road, TN Police Housing Colony, Velachery, Chennai – 600042

7. **Ligy Philip**, Memorandum of Agreement between IIT Kanpur and IIT Madras, Centre for Ganga River Basin Management and Studies (cGanga) supported by National Mission for Clean Ganga, Ministry of Jal Shakti, New Delhi, INDIA

8. Manual for Sustainable greywater recycling unit for households, **(Copyright)** Application No: 11234/2019- CO/L, **Prof. Ligy Philip**, Dr. Krithika D, Mr. Sanjeev Chhetri.

9. User manual on water quality analysis water quality test kit-15, **(Copyright)** Application No: 11762/2016-CO/L, **Prof. Ligy Philip**, Dr. R Elangovan, Prof. B S Murty, **Registration No: L-72366/2018**, dt: 13-01-2018.

10. **Ligy Philip,** Water analysis Kit for the technology knowhow, M/s: Greenvironment Innovation & Marketing India (P), C-507, 5th Floor, IIT Madras Research Park, Kanagam Road, Chennai - 600113, Agreement No: EF 414869 dt: 16th August 2024.

11. **Ligy Philip**, Wastewater Powered by Solar Energy, M/s: MU Sustainability Private Limited, No. 50, First Street, Srinivasa Nagar, Perungudi, Chennai, TN 600096. Agreement No: DH 996826, dt: 13th January 2025

12. **Ligy Philip**, Sustainable recycling unit for household greywater, M/s: MU Sustainability Private Limited, No. 50, First Street, Srinivasa Nagar, Perungudi, Chennai, TN 600096. Agreement No: DH 996828, dt: 13th January 2025

Book Published / Monographs/ Report

1. Book Title **"Technological Solutions for Water Sustainability: Challenges and Prospects: Towards a Water-secure India."**

Editor: Ligy Philip; Thalappil Pradeep; S. Murty Bhallamudi

Publisher: IWA Publishing
Publication date: November 2023

2. Report on Testing and Monitoring for Water Quality Parameters Recommendations provided to WQAC, Govt. of Odisha

3. Report on Assessment of Water Supply Systems of WATCO WQAC, Govt. of Odisha

4. Report on Suggestions to Improve the Water Supply System WQAC, Govt. of Odisha

5. Report on Development of state level water quality monitoring analytical reports for informed decision making WQAC, Govt. of Odisha

6. Report on Suggestions to Improve the Functioning of Water Quality Testing Laboratories, WQAC, Govt. of Odisha

7. Report on Water Quality Monitoring and Surveillance Manual, WQAC, Govt. of Odisha

8. Report on Standard Operating Procedure for Water Quality Incidence Management, WQAC, Govt. of Odisha

9. Report on A Manual for Preparation of Water Safety Plan, WQAC, Govt. of Odisha

10. Report on Water Safety Plan for Bhubaneswar City [Drinking Water Supply in Odisha], WQAC, Govt. of Odisha

11. Report on Standard Operational Procedure for Sample Collectors, WQAC, Govt. of Odisha

12. Report on Training Module for State Lab Technicians On 83 Parameters, WQAC, Govt. of Odisha

13. Report on Training Module for Divisional Lab Technicians On 31 Parameters, WQAC, Govt. of Odisha

14. Report on Water Quality Testing Protocol for Jalsathi, WQAC, Govt. of Odisha

15. Report on Training Module for State & Divisional Lab Technicians on Biological Parameters, WQAC, Govt. of Odisha

16. Report on data management sessions in the training program for the lab analysts, WQAC, Govt. of Odisha

17. Report on Software Requirements Specification for Lab Sample Analysis Data Portal, WQAC, Govt. of Odisha

18. Report on Software Requirement Specification Development and Maintenance of Jala Manak (Mobile and Web Application), WQAC, Govt. of Odisha

19. Report on Software Requirement Specification Development and Maintenance of Web Site of WQAC, Govt. of Odisha

20. Strategic Approach to Management of Endocrine Disrupting Chemicals in India, Ministry of Environment, Forest, and Climate Change.

21. Strategic Approach to Management of Environmentally Persistent Pharmaceutical Pollutants in India, Ministry of Environment, Forest, and Climate Change.

22. Strategic Approach to Management of E-waste in India, Ministry of Environment, Forest, and Climate Change.

23. Strategic Approach to Management of Lead in Paint in India, Ministry of Environment, Forest, and Climate Change.

24. Strategic Approach to Management of Pesticides in India, Ministry of Environment, Forest, and Climate Change.

25. Strategic Approach to Management of Perfluoroalkyl Substances in India, Ministry of Environment, Forest, and Climate Change.

26. Five Year Action Plan for the Manali-Ennore Region Under MERRC, Manali – Ennore Restoration & Rejuvenation Council

27.Report on "Roadmap for Tamil Nadu's Water Future" (2025–2035).Tamil Nadu State Planning Commission (TN SPC),

Book Chapters

1. Co-Authored the following chapters of the book Wastewater treatment technology Ed. R.K. Trivedy, 1998 by Enviromedia

    i. Removal of heavy metals from wastewaters
    ii. Treatment of Phenolic wastewaters
    iii. Biotechnology for wastewater treatment

2. Eldon, R.R., Shihabudheen, M.M., **Ligy Philip.,** Swaminathan, T. (2004) Substrate Versatility Studies on the Aerobic Degradation of BTX Compounds." **Soil and Sediment Contamination.** Taylor & Francis, Volume 13, Number 2 / March-April 2004.

3. Shihabudheen, M. Maliyekkal, T.Pradeep and **Ligy Philip.** (2009) **"**Simultaneous oxidation and removal of Arsenite from drinking water using Manganese oxide coated alumina". The 5th Edition of Southeast Asian Water Environment

4. **Ligy Philip** and Sanjeev Arjunagi**:** Novel Bioscrubbing Process for Complete Treatment of NOx from Flue Gases;**Integrated Air Quality,** CRC Press, Taylor and Francis Group, Ed: Nguyen Thi Kim Oanh (2012)

5. T. Swaminathan and **Ligy Philip: "**Removal of VOCs from Contaminated Gas Streams by Biofiltration" **Integrated Air Quality,** CRC Press, Taylor and Francis Group Ed: Nguyen Thi Kim Oanh (2012)

6. Nguyen Thi Kim Oanh, Prapat Pongkiatkul, Melliza Templonuevo Cruz, **Ligy Phillip**, Nghiem Trung Dung, Puji Lestari and Zhuang Guoshun, "Monitoring and Source Apportionment of Particulate Matter Pollution in Six Asian Cities"; **Integrated Air Quality,** CRC Press, Taylor and Francis Group Ed: Nguyen Thi Kim Oanh.(2012)

7. V. Arya, J.Senthilnathan and **Ligy Philip (**2014) "Modified TiO2-based photocatalytic systems for the removal of emerging contaminants from water" Book Name: **Aqua Nanotechnology**, Published in CRC Press

8. V. Arya and **Ligy Philip (**2016) "Removal of Pharmaceuticals from Water Using Adsorption" Book Name: **Trends in Asian Water Environmental Science and Technology**, Published in Springer International Publishing

9. **Ligy Philip** and Bhallamudi S Murty (2017) "Appropriate interventions and technologies for Providing Safe Drinking Water to Rural and Underprivileged communities" Book Name: **The Water-Food-Energy Nexus: Processes, Technologies, and Challenges**, Published in CRC Press

10. C. Ramprasad, D. Krithika, and **Ligy Philip** (2018) "Sustainable Wastewater Management Through Decentralized Systems: Case Studies" Book Name: **Water Scarcity and Ways to Reduce the Impact**, Published in Springer International Publishing

11. Naresh Kumar Sharma, **Ligy Philip** & B. S. Murty (2018) "Aerobic Degradation of Complex Organic Compounds and Cyanides in Coke Oven Wastewater in Presence of Glucose" Book Name: **Urban Ecology, Water Quality and Climate Change**, Published in Springer International Publishing

12. Aviraj Datta and **Ligy Philip** (2018) "Biodegradation Kinetics of Toluene, Ethylbenzene, and Xylene as a Mixture of VOCs" Book Name: **Urban Ecology, Water Quality and Climate Change**, Published in Springer International Publishing

13. V. Arya Shihabudheen M. Maliyekkal , **Ligy Philip (**2019) "Water Pollution And Treatment Technologies - Indian Perspective" Book Name: **Water Futures of India: Status of Science and Technology**, Indian National Science Academy (INSA), Delhi.

14. Muthu Pannirselvam, Li Shu, Gregory Griffin, **Ligy Philip**, Ashok Natarajan, Sajid Hussain (2019) "Management Strategies and Technologies for Zero Liquid Discharge and Future Smart Cities" Book Name: **Water Scarcity and Ways to Reduce the Impact**, published in Springer

15. Ambrose, H. and **Ligy Philip**, and Sen, T. and Suraishkumar, G. (2019). "The effect of combined microwave and hydrogen peroxide pretreatment on sludge characteristics and oxidation status of waste activated sludge". Book Name: **The Activated Sludge Processes: Methods and Recent Developments**, published in Nova Science Publishers Inc

16. Nippala N, and **Ligy Philip** (2021) "Advanced Oxidation Processes for Dye Removal" Book Name: **Advanced Removal Techniques for Dye-containing Wastewaters**, published in Springer

17. Kowsalya Vellingiri,Vanish Kumar, **Ligy Philip** (2022) "MOF-based materials as soil amendments" Book Name: **Advanced Materials for Sustainable Environmental Remediation**, Terrestrial and Aquatic Environments.

18. Jaganathan Senthilnathan and **Ligy Philip** (2022) "Persistent Toxic Substances Released from Uncontrolled E-waste Recycling and Action for the Future" published in Springer Nature for book '**Conversion of Electronic Waste into Sustainable Products**'.

19. Narasamma Nippatla, and **Ligy Philip** (2022) "Novel Rotating Disc Electrolytic Reactor based on Bipolar Electrochemistry for the Treatment of Industrial Wastewater" published in Springer International Publishing for book **Environmental Degradation: Monitoring, Assessment and Treatment Technologies**'.

20. B.S.Murty and **Ligy Philip** (2023) " Sustainable management of water" Published in IWA Publishing for book **Technological Solutions for Water Sustainability: Challenges and Prospects: Towards a Water-secure India.**

21. Syed Arwa A. Balkhi ; Bhesh Kumar Karki ; **Ligy Philip** (2023); Shihabudheen M. Maliyekkal "Water quality status and challenges in India and Nepal" Published in IWA Publishing for book **Technological Solutions for Water Sustainability: Challenges and Prospects: Towards a Water-secure India.**

22. Arya Vijayanandan ; Absar Ahmad Kazmi ; **Ligy Philip** (2023) " Domestic and industrial wastewater treatment: current status and challenges in India" Published in IWA Publishing

for book **Technological Solutions for Water Sustainability: Challenges and Prospects: Towards a Water-secure India.**

23. Jerin Jose; Raj Kamal Singh; **Ligy Philip** (2023) "Pulsed power technology for water and wastewater treatment" Published in IWA Publishing for book **Technological Solutions for Water Sustainability: Challenges and Prospects: Towards a Water-secure India.**

24. Vaishali Choudhary; Sumit Kumar; Chetna Tewari; Nandagopal Sahoo; **Ligy Philip** (2023) "Water pollution abatement using waste-derived materials: a sustainable approach" Published in IWA Publishing for book **Technological Solutions for Water Sustainability: Challenges and Prospects: Towards a Water-secure India.**

25. Vaishali Choudhary; Kowsalya Vellengiri; **Ligy Philip** (2023) "Low-cost colorimetric sensor for water quality monitoring" Published in IWA Publishing for book **Technological Solutions for Water Sustainability: Challenges and Prospects: Towards a Water-secure India.**

26. Manthiram Karthik Ravichandran; Mohammed Iqbal Thayyil; **Ligy Philip** (2023) "Application of engineered natural treatment systems for pollution abatement" Published in IWA Publishing for book **Technological Solutions for Water Sustainability: Challenges and Prospects: Towards a Water-secure India.**

27. Subham Meher, Akash Saha ,**Ligy Philip** (2025) "Biotechnological Innovation in Valorization of Sludge from Wastewater for Environmental Sustainability" Published in Springer for book **Smart Waste and Wastewater Management by Biotechnological Approaches.**

28. Mohammed Iqbal Thayyil, Navya Mathew, Anu Rachel Thomas, Krithika Delhiraja, Manthiram Karthik Ravichandran, **Ligy Philip (2026) "Innovations in decentralized waste treatment for climate-vulnerable coastal cities "published** in Springer Nature for book **Climate Change Impacts and Adaptation Strategies for Coastal Infrastructure, Water Resources, and Waste Management Along the Coasts**

Courses Taught

B.Tech

1. Engineering Drawing
2. Water and Wastewater Engineering
3. Design of Water and Wastewater Treatment Facilities
4. Industrial Wastewater Management
5. Environmental Engineering Lab
6. Environmental Engineering

M.Tech

1. Wastewater Management
2. Planning and Design of Water treatment Facilities
3. Planning and Design of Wastewater Treatment Facilities
4. Air Quality Management
5. Microbiology and Environmental Engineering Laboratory
6. Project Formulation and Appraisal
7. Environmental Chemistry and Microbiology
8. Water Quality and Treatment
9. Hazardous Waste Management
10. Environmental monitoring Laboratory

Thesis Guided/Guiding

a) **Ph.D**

1 Pranab Kumar Ghosh: Treatment of Pesticide bearing Wastewaters using Anaerobic Technology **(Completed)** on 23rd May **2003.** (Admin-guide- Prof. M. Bandhyopadhyay)

2 T. Shashidar: Development of a transport/biotransformation model for Chromium (VI) (**Completed, 2006**) (Co-guide: Dr. B.S. Murty)

3 Mathava Kumar: Bioremediation of Endosulfan contaminated soils **(Completed, 2006. Best thesis in Green Sciences/Biological systems)**

4 Shihabudheen M.M. Treatment of arsenic and fluoride contaminated water using novel adsorbents (**Completed,** 2008)

5 Rama Krishna K. Development of a biological system for the degradation of mixed pesticides (**Completed**, 2009)

6 R. Elangovan. Biotransformation and Biosorption of Cr (VI) from tannery wastewater. **(Completed, 2009,** Co-guide-T. Chandraraj, Dept. of Biotechnology)

7 **R. Ravi.** Treatment of VOCs contaminated air using rotating biological contactors (**Completed,** 2009**,** Co-guide: T. Swaminathan)

8 **Jay Sing J.** Remediation of Cr(VI) contaminated site in Ranipet, Tamilnadu using biological systems. (Sponsored candidate from Tamil Nadu Pollution Control Board, Co-guide: Dr. B.S. Murty, **Completed,** 2011)

9 **J. Senthil Nathan.** Advanced oxidation/photocatalytic degradation of pesticides from contaminated waters (**Completed,** May, 2011)

10 **Balasubramanium**. Biofiltration of VOCs from Pharmaceutical Industries (Co-guide: Dr. B.S. Murty, **Completed** 2012)

11 **Aviraj Dutta** . Treatment of VOCs from paint industries using advanced oxidation and biofiltration. (**GE award**, **Completed** May 2014)

12 **Priya V. Nair**. Treatment of pharmaceutical wastewater using membrane bioreactors(**Completed** April, 2015)

13 **Naresh Kumar.** Complete treatment of Coke-oven wastewater using hybrid systems (**Completed** August 2014, **Best thesis in Green Sciences/Biological systems**)

14 **Akashdeep Oberoi**: Biodegradation of various Heterocyclic and Homocyclic aromatic hydrocarbons by Enriched Bacterial Consortium (**Completed,** January, 2017)

15 **Raj kamal Singh**: Water Treatment Using Pulsed Power Technique (**Completed** February.2017, **Best research Award**) Co-guide: Dr.R.Sarathi

16 **V. Arya**: Fate of emerging contaminants in different water and wastewater treatment systems , (**Completed** June, 2017) Co-guide: Dr. B.S. Murty

17 **C. Ramprasad**: Greywater treatment using horizontal, vertical and hybrid flow constructed wetland (**Completed,** July, 2017).

18 **Madhumathi. M**: Transport of Bacteria through confined and unconfined aquifer (Co-guide: Dr. B.S. Murty) (**Completed**, December 2018)

19 **Anupama Rajendran**: Removal of pharmaceutically active compounds using heterogeneous photocatalysis under visible light (Co-guide: Dr. T.Pradeep) (**Completed**, December 2018)

20 **Swathy.** Nanotechnology application for water treatment (Main Guide –Prof.T. Pradeep) (**Completed**, September 2019)

21 **Krithika D:** Onsite household wastewater management for maximizing the reuse of treated water. (**Completed**, May 2020)

22 **Anu Rachel Thomas**: Septage management through composting and understanding the fate of emerging contaminants during the treatment. (**Completed**, August 2020)

23 **Jerin Jose**: Water and Wastewater Treatment by High Energy Electron Beam Irradiation and High Voltage Pulse Power Technology (**Completed**, March 2021)

24 **Nippatala Narasamma.** Application of Pulse power technology and pulse power coagulation for Tannery and textile wastewater treatment (**Completed**, April 2021, **Bhagyalakshmi and Krishna Iyengar Award 2020**, Best PhD Research))

25 **Sritama Muherjee**: Arsenic removal from Water through Nano Technology Application (Main Guide - Prof.T. Pradeep) (**Completed**, August 2021)

26 **Manthiram Karthik.** Removal of Pharmaceuticals and Personal Care Products using Engineered Natural Treatment Systems (**Completed**, September 2022)

27 **Vaishali Choudhary**, Integrated treatment systems for resource recovery from secondary treated effluent to attain closed-loop water management (**Completed** April 2023, **Best thesis in GE Ecomagination Excellence Award**)

28 **Vishnu Vardhan,** Removal of harmful oxyanions from wastewater using ion exchange membrane bioreactor and recovery of phosphorus as vivianite (**Completed**, November 2024)

29 **Sumit Kumar,** Industrial Wastewater treatment using value-added composites in a hybrid advanced oxidation process (AOP), (**Completed**, December 2024)

30 **Bhesh Kumar Karki**: Sustainable Wastewater Management using Engineered Natural Systems, (**Completed**, August 2025)

31 **Mohammed Iqbal Thayyil:** Climate Change Impacts on Coastal Infrastructure and Adaptation Strategies, (**Completed**, September 2025)

Ongoing

32 **Yogita Gupta:** Industrial wastewater treatment

33 **Athira M K:** Treatment of Paraben and Perfluorinated Compounds Contaminated Water using Pulsed Power Plasma Technology

34 **Maanashi Tripathi:** Control and removal of harmful algal bloom and algal toxin-Disinfection by products

35 **Subham Meher:** Sustainable Sludge Management and Resource Recovery

36 **Akash Saha:** Integrated management of domestic organic waste and wastewater to achieve circular economy

37 **Sohaib Rashid Rather**: Water, wastewater treatment &resource recovery.

38 **Approjit Ghoshal:** Understanding the occurrence, type and fate of microplastic pollution in freshwater/ ecosystems and developing control strategies by POU treatment systems

b) M.S

1.**S.Somasundaram**.Simultaneous treatment of Tannery and Electroplating industrial wastewaters (Co-guide: Prof. B.S. Murty, Completed, 2010)

2. **Ritik Anand:** Catalytic Pulse Power Technology for removal of Toxic Organic Contaminants **(**Completed, 2024**, Bhagyalakshmi and Krishna Iyengar Award for Best MS Thesis**)

3. Ankit Kumar: Integrated Approach for Simultaneous Removal of Fluoride and Nitrate from Groundwater: Ion Exchange Membrane Bioreactor Linked with Defluorination Unit (Completed, 2024)

c) M.Tech

Completed

1 R. N. Prabhu **(1999)** Development of a Portable Filter for the Removal of Arsenic from Aquatic Environment

2 N.D.V.S.S.Murali Krishna **(2000)** Development and Performance Evaluation of a Biofilter for NOx Removal (**Best thesis award**)

3 Prashant Mukherjee **(2001)** Development of a low-cost technology for as removal for Rural areas

4 Sanjay Lalan **(2001)** Performance evaluation of a Biofilter for Sulphur dioxide removal

5 R. Rama Krishna **(2003)** Studies on the ex situ bioremediation of chromium contaminated soils **(ISTE BEST THESIS AWARD)**

6 P. Srikiran Babu **(2003).** Bioremediation of atrazine contaminated soils

7 Shihabudheen M.M **(2003)** Performance evaluation of a bootlicking filter for treating BTXs

8 J. Dayalan **(2003).** Level of Pollution of Chennai Coastal Water due to Wastewater Disposal (Co-guide Dr. S. Neelamani,)

9 J. Jeyasingh **(2003).** Studies on the in-situ remediation of Chromium contaminated soils

10 V. Rohit Kumar **(2003).** Bioremediation of phenol; contaminated soils

11 Sanjay Bharman (**2005**). Chemical/Biological system for the treatment of Nox from Flue gases

12 Madhubabu **(2005)** Treatment of Carbofuran contaminated wastewater in anaerobic system

13 Giri **(2005)** Comparison of conventional and modified UASB reactors for the domestic wastewater treatment.

14 Sanjeev Arjunagi **(2007).** Development of a Novel biological system for the treatment of Nox from Flue gases

15 Shankar Lal **(2007).** Development and Performance Evaluation Of A Biological System For The Treatment Of Phenol, Ammonia and Cyanide Containing Wastewater

16 N. Sundareshan **(2007).** Development of a Biological System for the Treatment of Domestic Wastewater in Cold Climates

17 Lt.Col. Dinesh Kumar **(2008).** Development of a Household Unit for the Treatment of Contaminated Groundwater in Rural Areas of India

18 Koushal Madhav **(2009).** Treatment of Coke Oven Wastewater using Biological Systems

19 Lt. Maj. Raja Shekar **(2009)** Treatment of Domestic Wastewater Rich in Colloidal materials using Biological Systems in Cold Climates

20 Ms. Divya Chandran **(2011).** Experimental and modeling studies on export of contaminants from catchments (B.S. Murty, Co-advisor)

21 V. Arya **(2012).** Development of an environmentally friendly water treatment system.

22 Surya **(2012).** Estimation of METHANE Emissions from Rivers Receiving Partially Treated/Untreated Wastewaters

23 Krithika **(2013).** Biodegradation of waste generated from water-based Paint industries using microbial consortium.

24 Sumeet Makkad **(2014).** Onsite wastewater treatment system for recycling in urban residential areas

25 Aravind. **(2015).** River water quality monitoring and providing management strategies

26 Sanjeev Chhetri **(2019).** Sustainable Treatment and Reuse of low strength household Greywater

27 P.Kavitha **(2019).** Fate. Occurrence, and Removal of Pharmaceuticals in River Sediment by Biodegradation

28 N. Somasundaram **(2019)**. Effect and Removal of Heavy Metals during Industrial and sewage sludge composting

29 Nikhil PP **(2021).** Life Cycle Assessment of Advanced oxidation process for endocrine disrupting compounds for STPs in India.

30 **Sandeep Appana (2022)**. Study on most efficient and cost-effective Fecal Sludge Management Technology

31 **Baluguru Nithin Reddy (2023)**: A complete solution for the treatment of agricultural runoff using hydroponics and advanced oxidation technology

32 **Kaustav Ghosal (2023)**: Towards Carbon-neutral construction in rural areas using treated or partially treated wastewater

33 **Kajal Jain (2024):** Emerging treatment technologies for large Municipal Water Treatment Plants for optimized Capex, Opex & Footprint

34 **Ms.Buri Nichala (2026):** Precipitative recovery and valorization of iron from industrial effluents: A circular approach to resource management

35 **Mr.Abhishek Baitha (2026):** Co-Occurrence and Synergistic Fate of Pharmaceutical Micro-Pollutants and Antimicrobial Resistant Bacteria In on-Site Sanitation In Rural India

36 **Mr.Aishwarya Dwivedi (2026):** Online electrochemical methods for in-situ disinfection of contaminated streams.

B.Tech

1. **Krishnand Leihaorungbam (2025):** Removal of Dibromochloromethane And Bromodichloromethane From Water Using Natural Adsorbents

National and International Patents

Sl.No	Title	Inventors	Application No	Filed On	Granted On	Patent Award Number
1	Pulsed Power Technology based water treatment unit for the removal of pesticide, pharmaceutically active compounds and pathogens	Prof. Ligy Philip, Prof. Sarathi R, Dr.Raj Kamal Singh	201741039931	09/11/2017	13/10/2020	349146
2	Pulsed Power Technology based water treatment unit for the removal of pesticide, pharmaceutically active compounds and pathogens	Prof. Ligy Philip, Prof. Sarathi R, Dr. Raj Kamal Singh	PCT/IN2018/050727	09/11/2017	16/5/2019	WO/2019/092747 (International Patent)
3	A method and system for treatment of wastewater powered by solar energy	Prof. Ligy Philip, Prof. Boby George, Dr. Krithika D, Mr. Gaurav Lodha, Mr. Subham Kumar Sahana	201841039386	17/10/2018	18/4/2022	394888
4	A method of removing organic pollutants from water and wastewater	Prof. Ligy Philip, Dr. Senthil Nathan J	794/CHE/2011	16/03/2011	9/11/2018	303005

5	A paper-based sensor for detection of eutrophying nutrients in water and wastewater system	Prof. Ligy Philip, Dr. Vaishali Choudhary, Dr. Kowsalya Vellengri,	202141012240	22/03/2021	13/9/2022	406442
6	Renewable energy based closed loop sanitation system	Prof. Srinivasa Reddy K, Prof. Ligy Philip, Dr. Krithika.D, Dr.H.Sharon	201641018919	14/06/2016	8/1/2020	329105
7	Washing Machine with Rinse Water Treatment and Reuse	Prof. Ligy Philip, Prof. Bhaskar Ramamurthi, Prof. Boby George, Dr.C. Ramprasad, Dr.D. Krithika , Mr. R. Nandagopal	No:3387/CHE/2015	02/07/2015	31/7/2023	441978
8	A planar Coil based water level and quality monitoring system	Prof. Boby George, Prof.Ligy Philip, Dr Subhas Mukhopadhyay Mr.Gaurav Lodha,, Mr. Subham Kumar Sahana	201941021491	24/7/2019	4/1/2024	494379
9	A Continuous Automated System and Method for	Prof. Boby George, Prof.Ligy Philip, Fathima Iqbal	202341056058	21/8/2023	16/04/2024	533197

	Sensing of Nitrite in Water					
10	A System and Method for In-Situ Remediation of Contaminated Drains Using Engineered Natural Systems	Prof. Ligy Philip, Mr. Mohammed Iqbal Thayyil	202241062853	3/11/2022	17/4/2025	565260
11	Process and system for recovery of phosphate with layered double hydroxide	Prof. Ligy Philip and Dr. Vaishali Choudhary	202241066167	18/11/2022	8/9/2025	570456

Sponsored Research Projects a) Sponsored Research Projects

Sl. no	Duration of the Project	Title of the Project	Funded by	Value of the Project	Principal Investigator	Co – Principal Investigator
1	30-03-2001 To 30-04-2004	Bioremediation Of Endosulfan Contaminated Soils Using Bacterial Isolates From Contaminated Soils	Department of Science &Technology	Rs:8,28,906/-	✔	
2	21-03-2003 To 20-03-2006	Development Of A Low Cost Technology For Arsenic Removal In Rural Areas Of West Bengal	Department of Science &Technology	Rs:6,10,632/-	✔	
3	10-03-2004 To 29-03-2007	Chromium Removal From Tannery Effluent Through Microbial Bioremediation	Department Of Biotechnology	Rs:12,34,000/-	✔	
4	07-07-2004 To 30-06-2008	Monitoring of Toxic Pollutants and Development of Flue Gas Control Technology for Clean Air In Chennai	Asian Institute of Technology	Rs:54,94,033/-	✔	
5	01-09-2005 To 31-08-2007	Development of A Humane Sewer Cleaning System	IIT Madras	Rs:1,50,000/-		✔
6	18-09-2008 To 17-01-2009	Monitoring Water Quality In Rural Habitats Of Krishnagiri	United Nations Children's Fund	Rs: 5,62,686/-	✔	
7	01-10-2007 To 30-09-2009	Development Of Economical And Easy To Use Water Quality Test Kits	IIT Madras Alumini	Rs: 8,50,000/-	✔	
8	19-12-2006 To 18-12-2009	Development Of Models For The Cleanup Of Cr(Vi) Contaminated Aquifers Using Bio-Remediation	Ministry of Water Resources	Rs: 22,65,865/-	✔	

Sl. no	Duration of the Project	Title of the Project	Funded by	Value of the Project	Principal Investigator	Co – Principal Investigator
9	05-05-2009 To 04-12-2009	Piloting community-based water quality monitoring system	United Nations Children's Fund	Rs:9,47,870/-	✔	
10	14-09-2009 To 15-04-2010	Assessment of drinking water safety in Krishnagiri District	United Nations Children's Fund	Rs: 7,50,426/-	✔	
11	12-11-2009 To 31-12-2012	Development of models for managing water quality in drinking	Department Of Science & Technology	Rs: 37,69,000/-		✔
12	15-04-2010 To 27-10-2011	Sustainable water waste management on the 64alaji64 basin	Indo-German Center for Sustainability	Rs: 22,50,000 /-	✔	
13	28-04-2011 To 27-10-2011	Bio hydro metallurgy for metal recovery and stabilization of mining waste	NORUT Teknologi AS Norway	Rs: 5,22,179/-	✔	
14	16-03-2011 To 31-03-2012	Solution of Textile Pollution	Department Of Environment	Rs: 9,60,000/-	✔	
15	03-06-2009 To 02-06-2012	Alternative water systems project in mylai 64alaji Nagar Chennai	International Development Research Centre Canada	Rs: 76,17,833/-	✔	
16	01-05-2009 To 31-12-2014	Decentralized waste water management, benchmarking of public utilities and PPP	Ministry Of Urban Development	Rs: 2,00,27,000/-	✔	
17	06-07-2010 To 31-03-2015	Ganga River Basin Management plan(GRBMP) – A Pan IIT project	Ganga River Basin Management	Rs: 65,94,075/-	✔	

Sl. no	Duration of the Project	Title of the Project	Funded by	Value of the Project	Principal Investigator	Co – Principal Investigator
18	06-01-2012 To 05-01-2017	Water purification using nanotechnology	Department Of Science & Technology	Rs: 10,81,00,000/-		✔
19	23-01-2013 To 22-07-2015	Feasibility study of pulse power technique: Alternative technology for water treatment	Department Of Science & Technology	Rs: 25,49,000/-		✔
20	16-01-2013 To 30-11-2016	Supporting consolidation replication and up-scaling of sustainable wastewater treatment and reuse	Department Of Science & Technology	Rs:57,69,000/-	✔	
21	28-03-2013 To 30-09-2016	Building an International research network on sustainability to enhance strategic knowledge	Department Of Science & Technology	Rs: 5,33,74,400/-		✔
22	25-07-2013 To 24-07-2016	Sustainable decentralized waste management in urban residential areas	Department Of Science & Technology	Rs: 44,38,800/-	✔	
23	19-11-2013 To 30-09-2016	Fast sampling analyses for anthropogenic micro pollutants in wet environmental compartments	Indo-German Center for Sustainability	Rs: 24,28,000/-		✔
24	19-11-2013 To 30-09-2016	Development of sustainable waste management of septage by composting and minimizing GHG emissions	Indo-German Center for Sustainability	Rs: 24,97,000/-	✔	
25	28-08-2014 To 30-09-2016	Design and development of solar thermal energy system for domestic sewage (Black water) treatment	Indo-German Center for Sustainability	Rs: 42,27,060/-		✔

Sl. no	Duration of the Project	Title of the Project	Funded by	Value of the Project	Principal Investigator	Co – Principal Investigator
26	01-01-2014 To 31-03-2018	CoE of MoUD (Phase-II) Performance Evaluation Study of Sewerage Treatment Plants Sanctioned	Ministry Of Urban Development	Rs:2,72,00,000/-	✔	
27	24-02-2015 To 31.3.2017	Climate Change Adaptation and Resilience in Peri-Urban Chennai In the Study Area of Sriperumbudur	Indo-German Center for Sustainability	Rs: 80,04,000/-		✔
28	17-06-2015 To 16-06-2017	Industry Waste Water Treatment Adopting Pulsed Power Technique	Department of Science & Technology	Rs: 53,12,500/-	✔	
29	02-02-2017 To 01-02-2019	Sustainable Solar Powered Wastewater Treatment Systems to Improve hygiene and Sanitation in Schools by Adopting Water Recycling and Online Quality Monitoring	Impacting Research Innovation and Technology (IMPRINT)	Rs:1,32,00,000/-	✔	
30	17-02-2018 To 16-02-2022	Fate and management of Emerging Contaminants (FAME)	Department of Science & Technology	Rs: 3,05,65,000/-	✔	
31	22-02-2019 To 31-07-2022	C- TaP “Creation of Management Structure for Hazardous Substances”	Ministry of Environment, Forest and Climate Change(GoI)	Rs: 1,23,48,600/-		✔
32	23-03-2018 To 22-03-2023	Adaptation of waste management infrastructure in coastal areas to climate change	Department of Science & Technology	Rs: 75,43,800/-	✔	
33	15-03-2017 To 31-8-2020	Thematic Projects in Frontiers of Nano S&T (TPF-Nano) on Water Purification using Nanotechnology	Department of Science & Technology	Rs: 5,41,01,600/-		✔

34	23-10-2018 To 30-6-2024	Centre for Sustainable Treatment, Reuse and Management for Efficient, Affordable and Synergistic solutions for Water	Department of Science & Technology	Rs: 4,46,56,222/-	✔	
35	23-10-2018 To 30-6-2024	Wastewater Treatment Technologies and sensors (WATER-IC)	Department of Science & Technology	Rs:1,79,14,810/-	✔	
36	11-3.2020 To 31-12-2024	Identifying Best Available Technologies for Decentralized Wastewater Treatment and Resource Recovery for India	Department of Science & Technology	Rs:1,64,53,320/-	✔	
37	04-02-2021 To 31-12-2023	Water and Sustainability (IOE-COE)	Ministry of Human Resource and Development	Rs:4,64,00,000/-	✔	
38	9-3-2020 To 8-3-2023	Modular Lightweight Wastewater Treatment Units made with TRC for Rural and Periurban Dwellings	Indo German Science & Technology Centre	Rs:84,77,000/-		✔
39	4-1-2021 To 3-1-2026	International Centre for Clean Water (ICCW)	Science and Engineering Research Board	Rs:20,00,000/-		✔
40	1-2-2023 To 31.6.2026	Water and Sustainability (IOE-COE) – Phase II	Ministry of Education	Rs:5,00,00,000/-	✔	
41	7-10-2023 To 6-10-2026	School of Sustainability	Ministry of Human Resource and Development	Rs:1,00,00,000/-		✔
42	15-6.2024 To 14-6-2027	Sustainable and Energy Positive Wastewater Management Incorporating Circular Economy Principles	Science and Engineering Research Board	Rs: 38,10,000/-	✔	

43	2.12.2025 To 30.6.2026	Innovation challenge to develop a portable device for the detection of chemical and bacteriological water quality parameters	Department of Drinking Water and Sanitation	Rs: 41,80,000/-	✔	
44	20.2.2026 To 19.6.2026	Impact Assessment Study of Jal Jeevan Mission – Har Ghar Jal Rural Water Distribution System in Bundelkhand and Vindhya Region, Uttar Pradesh	State Water and Sanitation Mission	Rs:45,84,000/-	✔	

Research Based Consultancy Projects

Sl. no	Duration of the Project	Title of the Project	Funded By	Value of the Project	Principal Investigator	Co – Principal Investigator
1	24-05-2010 To 01-12-2010	Scaling Up of Community Based Water Quality in Krishnagiri District	United Nations Children's Fund	Rs: 21,25,450/-	✔	
2	14-12-2009 To 01-01-2011	Terrestrial Environmental Monitoring In L&T Shipbuilding Kattupalli	L&T Shipbuilding	Rs: 36,89,912/-	✔	
3	27-07-2009 To 26-07-2011	Demonstration Project for The Bioremediatyion Of Chromium Contaminated Soil and Aquifer in Ranipet	Central Pollution Control Board	Rs: 14,41,200/-	✔	
4	01-01-2012 To 31-12-2012	Evaluation of Water Filter Performance	Blue Gold Engineering., USA	Rs: 3,94,098/-	✔	
5	01-12-2010 To 31-03-2013	Terrestrial Environmental Monitoring In L&T Shipbuilding Kattupalli	L&T Shipbuilding	Rs: 68,51,280/-	✔	
6	30-01-2013 To 30-11-2013	Feasibility Study for Design, Investment and Management Models of Toilet	Institute for Financial Management and Research	Rs: 5,72,637/-	✔	
7	01-03-2014 To 28-02-2015	Study on pollution River Stretches	Tamil Nadu Pollution Control Board	Rs: 2,00,000/-	✔	
8	21-09-2015 To 30-09-2016	Evaluation of DRDO wastewater treatment system	Bill and Melinda Gates Foundation	Rs: 97,86,500/-	✔	

Sl. no	Duration of the Project	Title of the Project	Funded by	Value of the Project	Principal Investigator	Co – Principal Investigator
9	01-10-2015 To 30-09-2017	Developing improved Design of Septic Tanks to Prevent Groundwater Contamination in the Context of Namakkal	ARGHYAM	Rs: 52,30,560/-		✔
10	14-12-2015 To 13-06-2016	Assessment of Migration of Plasticizers in Consumer Products Such as Hair Oils, Soft Drinks, etc	M/s:Galaxy Trust	Rs:10,30,500/-	✔	
11	08-02-2016 To 07-07-2017	Evaluation of small scale decentralized sanitation systems	Bill and Melinda Gates Foundation	Rs: 1,28,85,800/-	✔	
12	27-01-2017 To 30-06-2017	Know How Process to Bioremediate Hexavalent Chromium	M/s: Shriram pistons & Rings Ltd.	Rs:34,50,000/-	✔	
13	15-09-2016 To 31-12-2017	Evaluation of DRDO wastewater treatment system	Bill and Melinda Gates Foundation	Rs:1,38,74,520/-	✔	
14	25-06-2019 To 30-06-2020	Water filtration performance of Saint-Gobain Ceramic filters	M/s: Saint – Gobain Research India Limited	Rs:6,00,000/-	✔	
15	15-11-2017 To 31-1-2019	Procurement & Training of Softwares for TWAD Board Engineers	TWAD Board	Rs: 1,48,67,822/-		✔
16	16-9-2019 To 30-4-2021	Study the source of ground water contamination in the wells surrounding the tailing pond of Uranium Corporation. Kadapa	Andra Pradesh Pollution Control board	Rs:61,40,000/-		✔
17	1-10-2019 To 30-9-2022	Consulting Services Agreement with M/s: Greenvironment Innovation & Marketing India (P) Ltd	Greenvironment Innovation and Marketing India Pvt Ltd	Rs:21,24,000/-	✔	

18	21-4-2020 To 16-8-2022	Sustainability of India – EFT platform	Duke University, USA	Rs: 50,58,020 /-	✔	
19	04-8-2020 To 31-3-2025	Water filtration performance of Saint-Gobain Ceramic filters	M/s: Saint – Gobain Research India Limited	Rs: 93,49,482/-	✔	
20	1-7-2020 To 30-6-2024	CCRBF – Expansion of the Indo-German Competence Centre for Riverbank Filtration	University of Applied Sciences Dresden	Rs: 7,46,860/-	✔	
21	1-8-2021 To 31-7-2022	NGWA Acceleration Scholarship – Young Academics	Technical University of Denmark	Rs: 87,010/-	✔	
22	1-5-2021 To 31-12-2027	Investigation of Water Treatment Technology	Toray Industries, Inc, Japan	Rs: 1,34,14,137/-	✔	
23	22-7-2022 To 31-1-2023	To conduct Pilot study by IIT Chennai to identify appropriate treatment systems to treat water from Kolavai lake and to provide constant quality and quantity of water	Mahindra World City Developers Limited	Rs:3,50,000/-	✔	
24	11.10.2022 To 31.1.2023	Sampling and Analyses water and Wastewater samples from TTUF Plant and Lakes	Madras Metropolitan Water Supply and Sewerge Board	Rs:3,10,200/-	✔	
25	28.10.2022 To 30.4.2023	To test the TDS measurement device under different environmental conditions.	Schneider Electric Systems India Private Limited	Rs:7,26,000/-	✔	
26	8-2-2023 To 30-6-2024	Piloting for Anaerobic attached growth process with IIT Madras	Paques Environmental Technology India Private Limited	Rs:18,74,500/-	✔	

27	28-3-2023 To 30-9-2023	Provide treatment train for municipal wastewater at ELECTROSTEEL CASTINGS LTD., Srikalahasti, AP	Electrosteel Castings Limited	Rs:4,90,000/-	✔	
28	1-5-2023 To 30-4-2024	Performance Evaluation of salt-based Electro chlorination Plant Installed by HYDRAPURE TECHNOLOGIES PVT. LTD.	Hydrapure Technologies Private Limited	Rs:6,00,000/-	✔	
29	2-6-2023 To 31-12-2023	To conduct the water audit and feasibility analyses of recycling and reuse of wastewater generated in the plant.	Strides Pharma Science Limited	Rs:3,30,000	✔	
30	22-8-2023 To 29-2.2024	To identify VOC sources in IAL facility and long term ambient VOC study within premises of Indian Additives Limited (IAL), Manali,, Chennai – 600 068	Indian Additives Limited (IAL)	Rs:3,50,000	✔	
31	1-11-2023 To 30-4-2024	Testing the Performance of Electro-Chlorination based Disinfection Systems	Harambh Chemicals Private Limited	Rs:4,50,000	✔	
32	21-12-2023 To 31-12-2024	Assessment of Implementation of Single Use Plastics (SUP) ban in the 12 identified Eco-sensitive areas in Tamil Nadu	Tamilnadu Pollution Control Board	Rs:20,97,000	✔	
33	1-1-2024 To 30-6-2024	Lab-scale Study of ETP Treated water at ELECTROSTEEL CASTINGS LTD., Srikalahasti, Andhra Pradesh	Electrosteel Castings Limited	Rs: 3,00,000	✔	
34	24-1-2024 To 30-6-2024	Evaluating the Suitability of Chilly Spent as A Boiler Fuel	Synthite Industries Private Limited	Rs: 2,50,000	✔	

35	1-2-2024 To 30-10-2025	Providing Technical Advisory Services to WATCO by IITM on Water Quality Assurance in all the cities of the state of Odisha.	WATCO Corporation	Rs:1,64,84,600	✔	
36	13-2-2024 To 31-8-2024	Preparation of Bacteriological H2S Strips	Greenvironment Innovation and Marketing India Pvt Ltd	Rs:3,00,000	✔	
37	15-3-2024 To 14.6-2024	Certification of performance for Bio trickling filter	IEC FABCHEM LIMITED	Rs:2,25,000	✔	
38	2-8-2024 To 31-12-2025	Evaluation of the efficacy of remediationof contaminated soil in Hindustan Unilever Limited, Kodaikanal, Tamil Nadu, India	Hindustan Unilever Limited	Rs:65,85,600	✔	
39	31.1.2025 To 31.7.2025	Performance Evaluation of Pilot Scale Innovative Zero Solid Discharge (ZSD)System	AIC NIFTTEA Incubation Centre for Textiles and Apparels	Rs:3,00,000/-	✔	
40	6.2.2025 To 31.1.2027	Prototypes for Humanity 2024 – Award Dr. Deepchandra Joshi	Art Dubai Fair FZ LLC	Rs:8,75,300/-	✔	
41	21.5.2025 To 30.6.2027	To conduct Lab scale study to develop processes to recover iron oxide of high purity from the mixed High TDS waste	DCW LIMITED	Rs: 39,48,000/-	✔	
42	10.6.2025 To 30.6.2026	Providing Technical Help in Modifying the Existing Online Continuous Effluent/Emission Monitoring Systems (OCEMS) of TNPCB	Tamilnadu Pollution Control Board	Rs:20,76,000/-	✔	

43	23.7.2025 To 31.6.2026	Validation study of 18 CETPs functioning at Tiruppur	Department of Textiles	Rs:54,00,000/-	✔	
44	3.9.2025 To 30.11.2025	Preparation of a Five Year Plan for the Manali – Ennore Restoration & Rejuvenation Council (MERRC)	Tamilnadu Pollution Control Board	Rs:5,00,000/-	✔	
45	4.11.2025 To 31.7.2025	Conducting Environmental Audit of Common EffluentTreatment Plants (CETPs), Member Units, and Individual EffluentTreatment Plants (IETPs) of Tanneries in Tirupathur, Vellore, andRanipet Districts	Tamilnadu Pollution Control Board	Rs: 96,37,200/-	✔	
46	18.11.2025 To 31.3.2026	Roadmap for TN's Water Future	Institute for Financial Management & Research	Rs: 3,38,983/-	✔	
47	18.12.2025 To 30.6.2026	To conduct a detailed visit and feasibility study of the water treatment, reuse systems, and associated processes at ELECTROSTEEL CASTINGS LTD., Srikalahasti, Andhra Pradesh	Electrosteel Castings Limited	Rs:4,00,000/-	✔	
48	04.03.2026 To 31.8.2026	Validation of New Technology for Sewage / Industrial Wastewater Treatment – 30 KLD Pilot Plant at Silvassa (UT), near Vapi, Gujarat	Thermax Limited	Rs:4,00,000/-	✔	

Corporate Social Responsibility Projects

Sl. no	Duration of the Project	Title of the Project	Funded By	Value of the Project	Principal Investigator	Co - Principal Investigator
1	31-03-2015 To 30-03-2018	Sustainable waste management and resource recovery for clean and healthy villages [Vichoor]	M/s.India Additives Ltd	Rs: 2,00,00,000/-	✔	
2	19-10-2015 To 30-9-2019	Sustainable waste management and resource recovery for clean and healthy villages [SP Kovil]	M/s.Technip India Limited	Rs: 1,14,00,000/-	✔	
3	01-04-2018 To 30-06-2021	Sustainable waste management and resource recovery for clean and healthy villages Vichoor Phase II	M/s.India Additives Ltd	Rs: 2,25,00,000/-	✔	
4	21-06-2018 To 31-12-2021	Implementing activities of providing safe drinking water, sanitation @ Nagapatnam	Chennai Petroleum Corporation Ltd.,	Rs:13,75,31,883	✔	
5	22-4-2019 To 31-3-2021	Identification of reliable source for drinking water supply and designing of conveyance systems in vilangadupakkam	AM CSR Foundation	Rs:13,76,500	✔	
6	12-1-2022 To 11-1-2027	Aqua MAP-Water Management and Policy Centre at IIT Madras	IITM Alumni	Rs:3,00,00,000/-	✔	
7	20-9-2022 To 31-3-2023	Water and Wastewater management for a clean and healthy village transformation project on Sidkaghatta, Chikkaballapur District	IBM India Private Limited	Rs: 70,50,000/-	✔	
8	22-3-2022 To 22-3-2025	Improvement in water,wastewater and solid waste management for a clean and healthy in Vallipuram	IITM Alumni	Rs:5,00,000/-	✔	

10	20-6-2023 To 30-6-2024	Advisory from IIT Madras team for Water Body Rejuvenation in K. Thangamalpuram GP, Vilathikulam Block, Thoothukudi District, TN	HCL Foundation	Rs: 1,99,100	✔	
11	22-5-2023 To 11-1-2027	Sustainable Water Management in Panchayats of Vellore District-Thuthipet Lake	TAFE Foundation	Rs:25,00,000	✔	
12	1-9-2023 To 29-2-2024	Sustainable Water Management in Panchayats of Vellore District – Thuthipet Lake	Voltas Limited	Rs:25,00,000	✔	
13	1-12-2023 To 31-6-2026	Development of Clean and Healthy Village through Holistic Waste (Water and Solid) Management: Vallipuram, Tamil Nadu, India	Nanyang Technological University, Singapore	Rs:2,00,00,000	✔	
14	25.10.2024 To 30.4.2026	Waste Water Management for a clean and healthy village transformation in AnkathattiVillage , Chikballapur Dist, Karnataka	Gramaantara Trust	Rs: 19,57,620	✔	
15	15.11.2024 To 31.3.2026	Waste Water Management for a clean and healthy village transformation in Kachahalli Village, Chikballapur Dist, Karnataka	Amadeus Software Labs India Private Limited	Rs.80,08,000 /-	✔	
16	27.3.2025 To 27.3.2026	To provide a comprehensive IoT system to the rural water supply scheme in Panchayat, Erode	Severn Glocon Valves Private Limited	Rs: 60,00,000/-	✔	
17	27.3.2025 To 27.3.2026	To provide a comprehensive IoT system to the rural water supply scheme in the Panchayat, Erode	Severn Glocon India Private Limited	Rs: 20,00,000/-	✔	
18	6.5.2025 To 31.12.2027	Providing Clean Drinking Water to The People of Mallur Gram Panchayat,Karnataka, INDIA	Nanyang Technological University, Singapore	Rs: 1,94,04,000/-	✔	

19	23.9.2025 To 22.9.2030	To undertake research driven design, piloting, and protocol development for scalable liquid waste management solutions in rural India, grounded in evidence generation and capacity building	I T C Limited	Rs: 60,79,000	✔	
20	1.1.2026 To 31.12.2028	Sustainable and holistic water and waste management framework for Chennai City (INDIGO)	InterGlobe Aviation Limited	Rs: 1,47,34,650	✔	

Industrial Consultancy Projects

Sl.no	Duration of the Project	Title of the Project	Funded by	Principal Investigator	Co - Principal Investigator
1	01-10-2003 To 30-05-2004	Environment Management Plan for Chennai Airport	M/s Airports Authority of India, Chennai	✔	
2	07-10-2005 To 31-03-2006	Audit of Spic Fertilizer Plants at Tuticorin	M/s: Southern Petrochemical Industries Corporation Ltd	✔	
3	17-10-2005 To 31-03-2006	Studies on The Feasibility of Calcium Chloride Recovery from Manali Petrochemical Effluent	M/s: Manali Petrochemicals Ltd	✔	
4	26-12-2005 To 30-06-2006	EIA Study and Disposal of Caco3 Sludge	M/s: Tuticorin Alkali Chemicals and Fertilizers Ltd	✔	
5	16-06-2006 To 30-09-2006	Tirupur Textile Industries-Common Effluent Treatment Plants	M/s: Andipalayam Common Effluent Treatment Plant (P) Ltd	✔	
6	14-06-2006 To 30-09-2006	Tirupur Textile Industries-Common Effluent Treatment Plants	M/s: Mannarai Common Effluent Treatment Plant (P) Ltd	✔	
7	16-06-2006 To 30-09-2006	Tirupur Textile Industries-Common Effluent Treatment Plants	M/s: Karaipudur Common Effluent Treatment Plant (P) Ltd	✔	

8	12-06-2006 To 30-09-2006	Tirupur Textile Industries-Common Effluent Treatment Plants	M/s: Veerapandi Common Effluent Treatment Plant (P) Ltd	✔	
9	09-03-2007 To 31-08-2007	Technical Appraisal Of Effluent Treatment Process,	M/s: Aima Textile Processing Centre, Cuddalore,	✔	
10	25-06-2007 To 30-09-2007	Technical Appraisal Of Effluent Treatment Process,	M/s: Veerapandi Common Effluent Treatment Plant (P) Ltd	✔	
11	16-07-2007 To 31-10-2007	Technical Appraisal Of Effluent Treatment Process	M/s:Villarasampatti Cetp, Erode	✔	
12	03-03-2008 To 30-04-2008	Tirupur Textile Industries Common Effluents Treatment Plants-Zero Discharge Projects	Ms: Creative Environmental Consultants	✔	
13	21-07-2008 To 20-09-2008	Conducting Of Ambient Air Quality Survey At Ennore	Southern Railway	✔	
14	05-05-2008 To 04-11-2008	Consultancy Work For Evaluation Of Proposed STP System	M/s: Consolidated Construction Consortium Ltd	✔	
15	15-10-2007 To 31-12-2008	Design And Performance Evaluation Of A Pilot Scale Flue Gas Desulphurization System,	M/s: Hi-Tech Carbon	✔	
16	24-10-2007 To 31-12-2008	Ground Water Quality Monitoring And Modeling For Preparation Of Action Plan For Remedial Measures	Central Pollution Control Board	✔	
17	02-07-2008 To 31-12-2008	Treatability Study Of Effluent From Tata Refractors For Color Removal	M/s: Tata Refractories Ltd	✔	

18	01-12-2008 To 31-03-2009	Soil Contamination Analysis	M/s:Toshiba Corporation Power Systems Company Japan	✔	
19	28-10-2008 To 30-06-2009	Carrying Out Environment Audit For Nicholas Piramal India Ltd	M/s: Piramal Healthcare Ltd	✔	
20	23-02-2009 To 22-08-2009	To Assess The Migration Of Organic Components Form Different Polyethylene Terephthalate Bottles	M/s: Lead-Capacs And Sodis Chennai	✔	
21	03-07-2009 To 30-09-2009	Validation Of The Design For The Design Adequacy Validation On The Resources Requirement And Waste	M/s: Hebbal Bangalore	✔	
22	23-08-2009 To 23-10-2009	Preparation of Report on Short Term Measures to Be Taken To Reduce Pollution,	M/s: Shasun Chemical and Drugs Ltd	✔	
23	12-10-2009 To 31-10-2009	Training On Water Quality Analyses And Water Treatment in Krishnagiri	M/s: Kingsley Community Centre	✔	
24	22-09-2009 To 31-12-2009	Analysis Of Soil Samples	M/s:Toshiba Corporation Power Systems Company Japan	✔	
25	04-08-2009 To 03-02-2010	Soil Contamination Analysis	M/s:Toshiba Corporation Power Systems Company Japan	✔	
26	18-12-2009 To 28-02-2010	Wetting of The Design of Proposed 2 MLD ETP For Chennai Airport,	M/s: Consolidated Construction Consortium Ltd	✔	

27	2-01-2010 To 31-03-2010	Analysis of Soil Samples	M/s:Toshiba Corporation Power Systems Company Japan	✔	
28	13-07-2009 To 12-04-2010	Design and Performance Evaluation of a Pilot Scale Flue Gas Desulphurization Systems	M/s: Hi-Tech Carbon	✔	
29	04-09-2009 To 31-05-2010	Analysis of Soil Samples	M/s:Toshiba Corporation Power Systems Company Japan	✔	
30	01-04-2010 To 31-05-2010	Technical Assessment of DPR,	M/s: Andipalayam Common Effluent Treatment Plant Pvt. Ltd	✔	
31	11-05-2010 To 31-08-2010	Onsite Treatment Plant of Sewage without Polluting the Ground Water-Feasibility Study,	M/s: Tamilnadu Small Industries Development Corpn, Ltd.	✔	
32	15-06-2010 To 14-09-2010	Process Technical Feasibility Report,	M/s: VK Chemicals, Tamilnadu	✔	
33	15-06-2010 To 14-09-2010	Analysis of Soil Samples	M/s:Toshiba Corporation Power Systems Company Japan	✔	
34	01-03-2011 To 31-03-2011	Technical Feasibility Report for The Construction Of 40 MLD STP,	Municipal Corporation Coimbatore	✔	
35	10-01-2011 To 15-04-2011	Coovam River Water Sample Testing,	M/s: Soma Enterprises Limited., Chennai	✔	

36	01-11-2010 To 30-04-2011	Analysis Of Soil Samples,	M/s:Toshiba Corporation Power Systems Company Japan	✔	
37	15-06-2010 To 14-06-2011	Design And Performance Evaluation Of A Pilot Scale Flue Gas Desulphuization System	M/s: Hi - Tech Carbon	✔	
38	29-06-2011 To 28-12-2011	Vetting Of Scheme For Sewage Treatment Plants And Sewage Line ,	M/s: Acme Tele Power Limited	✔	
39	01-09-2011 To 31-01-2012	Vetting Of Design Of Sewage Treatment Plant,	Tamilnadu Small Industries Development Corporation Limited	✔	
40	03-10-2011 To 30-04-2012	Vetting Of Design Of Wastewater Treatment Plant For Brewery Industry ,	M/s: Potential Semac Consultants Pvt Ltd	✔	
41	01-11-2011 To 30-04-2012	Analysis of Carbon Fractions In Soil	Central Institute Of Brackish water Aquaculture	✔	
42	01-01-2012 To 01-06-2012	Vetting Of Water Treatment Plant Design	M/s: Megha Engineering & Infrastructures Ltd	✔	
43	10-02-2012 To 09-08-2012	Technical Assessment of DPR For Andipalayam ,	M/s: Andipalayam Common Effluent Plant Pvt Ltd Tirupur	✔	
44	10-02-2012 To 09-08-2012	Technical Assessment of DPR For Veerapandi,	M/s: Veerapandi Common Effluent Treatment Plant Limited Tirupur	✔	

45	01-03-2012 To 31-08-2012	Technical Assessment Of DPR For Karipvdur CETP,	M/s: Karaipudur Common Effluent Treatment Plant Limited Tirupur	✔	
46	01-03-2012 To 31-08-2012	Zero Discharge Of Liquid - Technical Assessment Report Of DPR	M/s: Mannarai Common Effluent Treatment Plant (P) Ltd	✔	
47	01-05-2012 To 31-10-2012	Evaluation of trail run of CETPS ZLD system ,	M/s: Veerapandi Common Effluent Treatment Plant Limited Tirupur	✔	
48	01-07-2013 To 31-10-2013	Testing Aquatain Waterguard ,	M/s: Secuforce Chennai	✔	
49	01-05-2013 To 31-10-2013	Audit of TNWML Operated in Gummidipoondi,	M/s: Industrial Waste Management Association	✔	
50	05-12-2013 To 04-06-2014	Evaluation of Production Capacity in CETP,	M/s: Mannarai Common Effluent Treatment Plant (P) Ltd	✔	
51	01-01-2013 To 31-12-2013	Vetting of The Design and Drawings Of 10 MLD Sewage Treatment Plant at Bodhgaya Buidco Bihar,	M/s: Bihar Urban Infrastructure Development Corporation Ltd Patna		✔
52	01-01-2013 To 31-12-2013	Vetting of The Design and Drawings Of 16 MLD Sewage Treatment Plant at Buxar, Buidco Bihar,	M/s: Bihar Urban Infrastructure Development Corporation Ltd Patna		✔

53	01-01-2013 To 31-12-2013	Vetting of The Design and Drawings Of 17 MLD Sewage Treatment Plant at Begusarai Buidco Bihar,	M/s: Bihar Urban Infrastructure Development Corporation Ltd Patna		✔
54	17-07-2013 To 15-07-2014	Vetting of The Design and Drawings of Water Treatment Plant and Intake Structures for Patna Buidco,	M/s: Bihar Urban Infrastructure Development Corporation Ltd Patna		✔
55	01-03-2014 To 31-08-2014	Evaluation of the performance of trial run of Zero Liquid Discharge systems	M/s: Karaipudur Common Effluent Treatment Plant (P) Ltd	✔	
56	01-07-2013 To 30-09-2014	TSS And Turbidity Monitoring at Kattupalli Shipyard Cum Port	M/s: L&T Shipbuilding Limited	✔	
57	01-07-2014 To 31-12-2014	VOC Monitoring at The Paint Booth,	M/s: Tractors & Farm Equipment Ltd	✔	
58	20-11-2014 To 31-01-2015	To evaluate the effectiveness of remediation of Chromium (VI) contaminated site in and around	M/s: Shriram Pistons & Rings Ltd	✔	
59	01-07-2014 To 31-08-2015	TSS And Turbidity Monitoring At Kattupalli Shipyard Cum Port,	M/s: L&T Shipbuilding Limited	✔	
60	01-08-2015 To 31-10-2015	Technical Assessment of DPRs of integrated water supply and sewerage project of Nellore Municipal	Public Health and Municipal Engineering Dept,Nellore		✔
61	22-09-2015 To 21-11-2015	Approval for STP Design & Operation with Safety Measures @ Muktha Triveni,Thiruverkadu	M/s: Muktha Foundation Pvt Ltd	✔	

62	01-06-2015 To 01-12-2015	Audit of TNWML Operated in Gummidipoondi,	M/s: Industrial Waste Management Association	✔	
63	20-07-2015 To 19-10-2015	Vetting design/drawings and issue of stability certificate for the project"shine" located at oldmahabalipuram road	M/s: Radiance Realty Developers India Ltd	✔	
64	28-09-2015 To 27-12-2015	Evaluation of Biosludge Management through Biobricks	M/s: Arulpuram Common Effluent Treatment Company Pvt Ltd	✔	
65	12-10-2015 To 11-01-2016	To Evaluate the effectiveness of remediation of Chrominum (VI) Contaminated site in and around Lohi ,	M/s: Shriram Pistons & Rings Ltd	✔	
66	23-10-2015 To 22-10-2016	Validation of the design and corroboration on the indigenous development of innovative vertical,	M/s: Thermax Ltd	✔	
67	01-10-2015 To 30-09-2016	TSS and Turbidity Monitoring at Kattupalli Shipyard cum port,	M/s: L & T Shipbuilding Limited	✔	
68	14-10-2015 To 13-04-2016	Feasibility study on Marine Disposal of Salts generated from Effluent Treatment Plants of textiles	M/s: Industrial Waste Management Association	✔	
69	16-11-2015 To 15-02-2016	Validation of Systems for "A Platform for Integrated Sanitation Investment Planning"-a Decision Support,	Center for Study of Science Technology & Policy	✔	

70	15-07-2015 To 14-01-2016	Performance of trial run of zero liquid discharge systems installed by Veerapandi CETP ,	M/s: Veerapandi Common Effluent Treatment Plant Thirupur	✔	
71	20-07-2015 To 19-10-2015	Vetting of design for 170 KLD STP & 130 KLD STP at S. No.80/8, Thalambur village, Chengleput taluk, Kanchipuram District	, M/s: Adroit Urban Developers Pvt Ltd	✔	
72	20-07-2015 To 19-10-2015	Vetting of process design for 150 m3/day sewage treatment plant & process design for 550 m3/day sewage treatment plant in Syntel GDC Siruseri ,	M/s:Amazon Envirotech Pvt Ltd	✔	
73	01-02-2016 To 30-04-2016	Carrying out Environment Audit for our Industry for CMR Toyotsu Aluminium India Private Limited	M/s: CMR Toyotsu Aluminium India Private Limited	✔	
74	01-02-2016 To 30-04-2016	Feasibility Study of Marine Disposal of Salts Generated from Common Effluent Treatment Plants (CETP)	M/s: The All india Skin and Hide Tanners and Merchants Association	✔	
75	19-02-2016 To 18-05-2016	Vetting the DPR and Estimate of STP Project- Wellington Cantonment Board,	Ministry of Defense	✔	
76	04-01-2016 To 30-04-2016	Proving storm water drainage scheme to Vijayawada municipal corporation,	Public Health and Municipal Engineering Department Vijayawada		✔
77	10-10-2016 To	Suitable Technology & Design for Sewage Treatment Plant	TWAD Board	✔	

	09-04-2017	(STP) for 6.5 MLD for Kodaikanal Municipal			
78	01-01-2017 To 30-06-2017	To Testing Soil Samples for Contamination of Hexavalent Chrominum around Lohianagar, Ghaziabad	M/s:Shriram pistons & Rings Ltd.	✔	
79	13-12-2017 To 12-03-2018	Evaluation of 100% Capacity Run of CETP Zero Liquid Discharges	Mannarai Common Effluent Treatment Plant	✔	
80	22-01-2018 To 21-06-2018	Veerapandi Common Effluent Treatment Plants - Zero Discharge Projects - Evaluation of Trial Run	Veerapandi Common Effluent Treatment Plant (P) Ltd	✔	
81	02-05-2018 To 31-10-2018	Identification of Ecologically Sensitive Areas for Ban on Use of Use and Throw Plastics	Tamilnadu Pollution Control Board	✔	
82	06-04-2018 To 05-10-2018	Health, Safety and Environment Audit for M/s. Cetex Petrochemicals Ltd	M/s. Cetex Petrochemicals Ltd	✔	
83	02-04-2018 To 01-10-2018	Evaluation of Sensors & Accuracy of Real Time Monitoring (RTM) of Wastewater Treatment plant	Greenvironment Innovation & Marketing India (P) Ltd	✔	
84	01-01-2017 To 30-09-2019	To Testing Soil Samples for Contamination of Hexavalent Chrominum around Lohianagar, Ghaziabad	M/s: Shriram pistons & Rings Ltd	✔	
85	22-06-2018 To 31-12-2018	Water Management adequacy study for RNAIPL Plant at Oragadam	M/s:Renault Nissan Automotive India Pvt. Ltd	✔	
86	01-08-2018 To	Pilot Study of Rettai Eri Lake Kolathur	Chennai Metropolitan	✔	

	30-01-2019		Water Supply & Sewerage Board		
87	20-08-2018 To 19-02-2019	WTP Process and Hydraulic Design for 1900MLD Water Treatment Plant under Package XV in Amaravati,	M/s: NCC Limited	✔	
88	01-08-2018 To 28-02-2019	Water Treatment Plants for the work of Rural Piped water supply Schemes pertaining to Keonjhar	M/s: NCC Limited	✔	
89	01-10-2018 To 30-04-2019	Technical Appraisal of the DPR for the M/S Ayyampet common Effluent Treatment Plant pvt ltd	Ayyampet Muthialpet Bleaching And Dyeing Effluent Treatment Co Limited	✔	
90	01-12-2018 To 31-05-2019	Auditing the Performance of Ozone units in the RANITEC CETP	Ranipet Tannery Effluent Treatment Company Private Limited	✔	
91	13-02-2019 To 12-02-2020	Study of Contaminated UPSIDC Plot No: A-19, Meerut Road, Ghaziabad & Study the adequacy of Existing	M/s: Shriram pistons & Rings Ltd	✔	
92	04-03-2019 To 03-03-2020	Help in DPR preparation with plant parameters and design outline for contingency measures to augment	Chennai Metropolitan Water Supply & Sewerage Board	✔	
93	13-10-2017 To 12-10-2022	Technology License and Monetization Agreement for Drinking water quality test kit	Weaver Technologies LLP	✔	
94	20-06-2019 To 19-12-2019	Study on pollution abatement process of Budha Nallah, Ludhiana	M/s: TATA Projects Limited	✔	

95	16-06-2019 To 15-12-2019	Proof Checking of Plant Design" of STP & WTP in IIT Palakkad	M/s: DDF Consultants Private Limited	✔	
96	14-07-2019 To 16-01-2020	Vetting the Design for Pipe Reactor system of Galaxy Towers	M/s: Aurobindo Realty & Infrastructure	✔	
97	26-07-2019 To 31-01-2020	Detailed Project Report for ZLD for Gangapuram Common Effluent Treatment Plant Pvt Ltd	M/s: Gangapuram Common Effluent Treatment Plant Private Limited	✔	
98	13-9-2019 To 12-3-2020	Detailed Project Report for ZLD for proposed Kadayampatti CETP	Kadayampatti Common Effluent Treatment Plant (Bhavani) Pvt ltd	✔	
99	13-9-2019 To 12-3-2020	Detailed Project Report for ZLD for propsed Textile common reject management systems private Limited (CRMS)	Kadayampatti Common Effluent Treatment Plant (Bhavani) Pvt ltd	✔	
100	8-8-2019 To 7-2-2020	Detailed Project Report for ZLD for Villarasampatti CETP	Villarasampatti Common Effluent Treatment Plant	✔	
101	5-9-2019 To 4-2-2020	Detailed Project Report for ZLD for Green Kalingarayan Common Effluent Treatment Plant Pvt Ltd	Green Kalingarayan Common Effluent Treatment Plant	✔	
102	9-8-2019 To 8-2-2020	Detailed Project Report for ZLD for Suriyampalayam CETP	Suriyampalayam Common Effluent Treatment Plant	✔	
103	10-1-2020 To 9-7-2020	Detailed Project Report for ZLD for Erode CETP	Erode Common Effluent Treatment Plant Pvt ltd	✔	

104	22-4-2019 To 31-3-2021	Identification of reliable source for drinking water supply and designing of conveyance systems in vilangadupakkam	AM CSR Foundation	✔	
105	24-1-2020 To 31-3-2021	Tirunelveli City Municipal Corporation, Construction of Sewage Treatment Plant	Tirunelveli Smart City limited	✔	
107	20-2-2020 To 19-2-2021	Characterization of the surface water sludge and feeders to the water bodies in and around Ranipet Industrial area	Chemical Industries Association	✔	
108	27-4-2020 To 26-10-2020	Vetting of design of iron-arsenic removal plants to be installed in Punjab	Hydromaterials Private Limited	✔	
109	01-12-2018 To 31-3-2021	Carrying out Environment Audit for M/S Srides Shasun Ltd, Kalapet, Pondicherry	Government of Puducherry	✔	
110	1-1-2021 To 31-5-2021	Vetting of Process design and Hydraulic Profiles of 4 proposed STPs in Jabalpur Cantonment Area	Garrison Engineer West Jabalpur	✔	
111	1-5-2021 To 31-10-2021	Vetting of DPR for M/s: Southern District Textile Processing Cluster Pvt ltd	Southern District Textile Processing Cluster Private Limited	✔	
112	28-6-2021 To 31-12-2021	DetailedProject Report (DPR) for the Remediation of Contaminated site within the premises TCL, Ranipet	Thirumalai Chemicals Limited	✔	
113	28-6-2021 To 31-12-2021	carrying out the Adequacy test needs to assess and certify the capacity of the upgraded ETP at TCL., Ranipet to achieve ZLD	Thirumalai Chemicals Limited	✔	

114	1-8-2021 To 31.1.2022	MEE Condensate COD reduction study	CHEMPLAST SANMAR LIMITED	✔	
115	9-11-2021 To 8-11-2022	Design and development of odour control bio-trickling filter for sewage treatment plants	IEC Fabchem Limited	✔	
116	10-12-2021 To 30-06-2022	Assessment of the efficacy of Bioremediation status of Contaminated site within the premises of M/S Thirumalai Chemicals Ltd (TCL).	Thirumalai Chemicals Limited	✔	
117	22-3-2022 To 30-09-2022	Proof-checking/ vetting of process design for 5 MLD STP (Sewage Treatment Plant) based on MBBR technology	NBCC (India) Limited	✔	
118	5-4-2022 To 30-09-2022	DPR for ZLD for proposed Common Effluent Treatment Plant (CETP) in Chinnalapatti, Dindigul	Chinnalapatti CETP Private Limited	✔	
119	6-6-2022 To 30-6-2025	Carrying out mass balance of mercury in the treatment processes of contaminated soil in Hindustan Unilever Limited, Kodaikanal	M/s:Hindustan Unilever Limited	✔	
120	1-6-2022 To 31.5.2023	Development of treatment protocol for synthetic metal working fluids to meet the discharge standards specified by CPCB	M/s:Callington India Private Limited	✔	
121	26.8.2022 To 28.2.2023	Third party Auditing of CHWTSDF, Gummidipoondi	M/s:Industrial Waste Management Association	✔	

122	12.6.2024 To 30.11.2024	Design Vetting on Process calculation, Hydraulic profiling of 19.49 MLD STP - with SBR Technology at Coimbatore	M/s: Dee Tech projects pvt. Ltd	✔	
123	29.7.2024 To 31.12.2024	Design Vetting on Process calculation, Hydraulic profiling of 15.43 MLDSTP - with SBR Technology at Coimbatore	M/s: Dee Tech projects pvt. Ltd	✔	
124	6.1.2025 To 30.6.2025	Vetting the Process Design for the TEL Grey Water to Contact Water Plant Project	Centre for Urbanization Buildings & Environment (CUBE)	✔	
125	12.9.2025 To 11.12.2025	Vetting of the Process Design of 1500 KLD STP for M/s. Vidiyal Residency Pvt. Ltd	Thermax Limited	✔	
126	17.11.2025 To 16.2.2026	Vetting ofthe Process design of 2000KLD capacity Zero Liquid Discharge based Common Effluent Treatment Plant (CETP) at SIPCOT Industrial Park, Perundurai	State Industries Promotion Corporation of Tamilnadu Limited	✔	
127	10.10.2025 To 31.5.2026	Surge Analysis Design work /vetting for Water infrastructure Projects	Fluid Hammer Consultancy Private Limited	✔	
128	20.5.2026 To 30.11.2026	Validation of High-Rate Anaerobic Reactor Design	EDI Enviro and Engineering	✔	

Continuing Education Programs

1. Advanced Waste Minimization and Management Technologies. Sponsored by AICTE under QIP program. Held during **20-25 November, 2000** at IIT, Kharagpur (Co-coordinator Dr. A.K. Dikshit). Also registered as CEC program.

2. Hazardous waste management. Sponsored by AICTE under QIP program. Held during **7-18 July, 2003** at IIT, Madras (Co-coordinator Dr. B.K. Bezbarua). Also registered as CEC program.

3. Video Course on "Water and Wastewater Engineering" (30 Lectures), **NPTEL, IIT Madras (2005-2006).**

4. **Documentary** on "Water recycle and Reuse", CD Cell, Continuing Education Centre, IIT Madras (AICTE Sponsored, **2007**)

5. Contaminant Transport Modeling: Theory and Application Sponsored by AICTE under QIP program. Held during **11-16, June, 2007** at IIT, Madras (Co-coordinator Dr. B.S. Murty). Also registered as CEC program

6. Collection, treatment and Distribution of Water and Wastewater. Training Program conducted for Nagarjuna Construction Company (CEP) during **11-13 September, 2007** at IIT, Madras (Coordinator Dr. B.S. Murty)

7. Collection, treatment and Distribution of Water and Wastewater. Training Program conducted for Nagarjuna Construction Company (CEP) during 18-20 November, **2008** at IIT, Madras (Co-coordinator Dr. B.S. Murty)

8. Collection, treatment and Distribution of Water and Wastewater. QIP/CEP program during 25-31 August, **2008** at IIT, Madras (Co-coordinator Dr. B.S. Murty)

9. Water Quality and Related Health Issues. Two-day Training Program, sponsored by UNICEF. Held at IIT Madras During 14-15, November, **2008** (Co-coordinator Dr. Indumathi Nambi)

10. About 30 Training workshops on Community Based Water Quality Monitoring System (Organized for the Community Level Stakeholders of Village Panchayat), Krishnagiri District, Tamilnadu, Sponsored by UNICEF, **2009-2012**.

11. Training Program given for Government Officials in Odisha State towards "Water Quality Monitoring and Management**"** Sponsored by Government of Odisha**, 2024.**

12. Training Program given for Government Officials in Karnataka State towards "Waste Water Treatment System" Sponsored by Government of Karnataka, **2024.**

13. Training Program On "Waterbody Rejuvenation: Two-Days Workshop" for Engineers / Managers/ Contractors working on Waterbody Rejuvenation Projects during 1st – 2nd July **2024** in IIT Madras, Sponsored by MoHUA (Ministry of Housing and Urban Affairs, Government of India).

14. Dissemination Workshops "Training & Capacity Building on Water Quality Testing & Analysis" for Engineers of WATCO & PHEO in Odisha" during 28th Jan – 3rd Feb **2025** (Online)

15. INAE Training Program for All India Council for Technical Education (AICTE) held in IIT Madras during 30th June and 1st July **2025.**

16. Rural Greywater/Wastewater Management: Two-Days Training Program for Taluk level AEEs and GP level TAEs in Rural Development Department, Karnataka during 4th and 5th July **2025** in State Institute of Rural Development, Mysore.

17. Water Resources Management and Environmental Systems: Two Day Training Program conducted during 2nd – 3rd June 2026 in (Karume Institute of Science and Technology) KIST, Zanzibar, Tanzania

Fellow of following Scientific/Technical bodies

Royal Society of Chemistry (FRSC)
National Academy of Engineers (FNAE)

Associate Editor /Subject Editor/ Editorial board Member

1. Editorial Board Member, Environmental Science: Water Research & Technology, RSC (2016 onwards)
2. Editor-in-Chief, H2Open Journal. IWA publication (2016 onwards)
3. Editorial Board Member. Journal of Environmental Science and Engineering, National Environmental Engineering Research Institute (NEERI) (2010 onwards)
4. Associate Editor, Journal of Hazardous Toxic and radioactive waste, American Society of Civil Engineering, (ASCE) (2010-2015)
5. Editorial board member. Applied biochemistry and biotechnology (Springer) 2011-2015
6. Editorial Advisory Board in Environmental Science and Technology, American Chemical Society (ACS)
7. Associate Editor, in Environmental Earth Sciences (EES), Springer

Expert Committee Member

1. Chairperson, BOG, Government College of Engineering, Trissur Kerala
2. Member, BOG, Abdul Kalam Technical University Kerala
3. Member, Board of Infrastructure, IIM Vishakhapatnam
4. Member, Finance Committee, IIT Palakkad
5. Chairperson, BIS Water Purification Subcommittee under the Drinks and Drinking Water Sectional Committee, FAD 14: 2
6. DST PAC member, Civil and Mechanical Engineering
7. DST Women Scientist Scheme (WOS-A) Subject Expert Committee (SEC) – Engineering Technology.
8. DST PAC member, FIST Program
9. Pollution Control Board, Pondicherry. To assess the ground water contamination caused by Shashun Chemicals, Pondicherry
10. Department of Science and Technology, Govt. of India. To assess the research issues related to plastic and E-waste.
11. Tamilnadu Pollution Control Board. Many industrial process and pollution control process evaluation
12. High Court Chennai. To assess the water quality and environmental issues associated with Veeranam lakes due to quarrying operations
13. Appellate Authority, TNPCB. To assess the pollution potential of various Magnesium sulfate manufacturing industries in Salem, Tamilnadu.
14. Member, Board of Studies, S.V.University, Tirupati
15. Member, Research Advisory Council, Vellore Institute of Technology etc..
16. Member, Board of Studies, Pondicherry University, Pondicherry
17. Expert Committee member, Modification of Govt. Order related to textile Industries, TNPCB
18. Expert Committee member, National Green Tribunal
19. Expert committee member Chennai Metropolitan Development Authority
20. Project Advisory Committee member, DBT etc
21. Many committee members of Tamilnadu and Kerala Pollution control boards, Sabarimala etc
22. A member of the Committee for preparation of roadmap for grey water management works in villages under Jal Jeevan Mission (JJM)
23. A member of panel of experts in drinking water sector with a view to assist all stake holders of JJM, in its endeavor to transform the drinking water supply sector from 'infrastructure creation' to 'service delivery' approach

24. A member of several Committees of BIS dealing with drinking water and point of use water treatment systems
25. A Member of NGT committee on assessment of Impact of Thermal power plants on the water environment in the areas North of Chennai area.
26. An Expert Member in Biotechnology Industry Research Assistance Council (BIRAC) for ARP (Area Review Panel) related to Energy, Environment and Secondary Agriculture.
27. A Member in Science and Engineering Research Board (SERB) for Core Research Grant - Extra Mural Research (EMR)
28. Providing Technical Advisory Services to WATCO by IITM on Water Quality Assurance in all the cities of the state of Odisha.
29. Creation of Management Structure for Hazardous Substances for Ministry of Environment, Forest and Climate Change.
30. Expert committee under PHE Sector for used water – CPHEEO, Ministry of Housing and Urban Affairs (MoHUA).
31. Expert committee member on "Ban on Single use Plastic and Identifying alternate materials" – Tamil Nadu Pollution Control Board (TNPCB)

Corporate Activities

1. Head, Environmental and Water Recourses Engineering Laboratory, IIT Madras (Dec 2005 –July, 2009)
2. Warden Sharavathi Hostel, IIT Madras (Oct 2007- March, 2011)
3. Area Coordinator for waste management group. Indo-German Centre for sustainability (2010- 2020)
4. Co-Chairperson, Engineering Unit, IIT Madras (Sept, 2013- Feb., 2015)
5. Chairperson, Engineering Unit, IIT Madras (Feb 2015- Oct 2017)
6. Dean, Planning, IIT Madras (Oct 2017 – Sep 2023)
7. Professor In-Charge, (Infrastructure) IIT Madras Zanzibar Campus (Feb 2023 – till date)