

## List of Publications – Dr. Indumathi M Nambi, Professor

1. Rajasekhar, B., Nambi, I. M., & Govindarajan, S. K. (2020). Investigating the degradation of nC12 to nC23 alkanes and PAHs in petroleum-contaminated water by electrochemical advanced oxidation process using an inexpensive Ti/Sb-SnO<sub>2</sub>/PbO<sub>2</sub> anode. *Chemical Engineering Journal*, 125268.
2. Sivagami, K., Tamizhdurai, P., Mujahed, S., & Nambi, I. (2020). Process optimization for the recovery of oil from tank bottom sludge using microwave pyrolysis. *Process Safety and Environmental Protection*.
3. Ambika, S., Devasena, M., & Nambi, I. M. (2020). Single-step removal of Hexavalent chromium and phenol using meso zerovalent iron. *Chemosphere*, 248, 125912.
4. Srinivasan, R., & Nambi, I. M. (2019). Liquid crystal display electrode-assisted bio-electroperoxone treatment train for the abatement of organic contaminants in a pharmaceutical wastewater. *Environmental Science and Pollution Research*, 1-12.
5. Divyapriya, G., Mohanalakshmi, J., & Nambi, I. M. (2020). Electro-enhanced adsorptive removal of ciprofloxacin from aqueous solution on graphite felt. *Journal of Environmental Chemical Engineering*, 8(5), 104299.
6. Nambi, I. M. Investigating Atrazine Concentrations in the Zwischenscholle Aquifer Using MODFLOW with the HYDRUS-1D Package and MT3DMS.
7. Rajasekhar, B., Nambi, I. M., & Govindarajan, S. K. (2020). Human health risk assessment for exposure to BTEXN in an urban aquifer using deterministic and probabilistic methods: A case study of Chennai city, India. *Environmental Pollution*, 114814.
8. Premke, K., Dharanivasan, G., Steger, K., Nitzsche, K. N., Jayavignesh, V., Nambi, I. M., & Seshadri, S. (2020). Anthropogenic Impact on Tropical Perennial River in South India: Snapshot of Carbon Dynamics and Bacterial Community Composition. *Water*, 12(5), 1354.
9. Rajasekhar, B., Venkateshwaran, U., Durairaj, N., Divyapriya, G., Nambi, I. M., & Joseph, A. (2020). Comprehensive treatment of urban wastewaters using electrochemical advanced oxidation process. *Journal of Environmental Management*, 266, 110469.
10. Gangadharan, P., & Nambi, I. M. (2020). The performance of Cu<sup>2+</sup> as dissolved cathodic electron-shuttle mediator for Cr<sup>6+</sup> reduction in the microbial fuel cell.
11. Divyapriya, G., Rajesh, L., & Nambi, I. M. (2020). Electro-enhanced removal of perchlorate ions from aqueous solution using capacitive deionization process. *Journal of Industrial and Engineering Chemistry*, 89, 351-360.
12. Sivagami, K., Vignesh, V. J., Srinivasan, R., Divyapriya, G., & Nambi, I. M. (2020). Antibiotic usage, residues and resistance genes from food animals to human and environment: An Indian scenario. *Journal of Environmental Chemical Engineering*, 8(1), 102221.
13. Sasikaladevi, R., Eswari, V. K., & Nambi, I. M. (2020). Antibiotic Resistance and Sanitation in India: Current Situation and Future Perspectives.
14. Sivagami, K., Anand, D., Divyapriya, G., & Nambi, I. (2019). Treatment of petroleum oil spill sludge using the combined ultrasound and Fenton oxidation process. *Ultrasonics sonochemistry*, 51, 340-349.

15. Gaonkar, O., Nambi, I. M., & Suresh Kumar, G. (2019). Biodegradation kinetics of dichlorvos and chlorpyrifos by enriched bacterial cultures from an agricultural soil. *Bioremediation Journal*, 23(4), 259-276.
16. Gaonkar, O. D., Nambi, I. M., & Govindarajan, S. K. (2019). Soil organic amendments: impacts on sorption of organophosphate pesticides on an alluvial soil. *Journal of Soils and Sediments*, 19(2), 566-578.
17. Divyapriya, G., Vijayakumar, K. K., & Nambi, I. (2019). Development of a novel graphene/Co<sub>3</sub>O<sub>4</sub> composite for hybrid capacitive deionization system. *Desalination*, 451, 102-110.
18. Srinivasan, R., Nambi, I. M., & Senthilnathan, J. (2019). Liquid crystal display electrode assisted bio-reactor for highly stable and enhanced biofilm attachment for wastewater treatment—a sustainable approach for e-waste management. *Chemical Engineering Journal*, 358, 1012-1021.
19. Sivagami, K., Padmanabhan, K., Joy, A. C., & Nambi, I. M. (2019). Microwave (MW) remediation of hydrocarbon contaminated soil using spent graphite—An approach for waste as a resource. *Journal of environmental management*, 230, 151-158.
20. Sivagami, K., Vignesh, V. J., Tamizhdurai, P., Rajasekhar, B., Sakthipriya, N., & Nambi, I. M. (2019). Studies on short term weathering of spilled oil along Chennai coast in South India. *Journal of Cleaner Production*, 230, 1410-1420.
21. Nalarajan, N. A., Govindarajan, S. K., & Nambi, I. M. (2019). Numerical modeling on flow of groundwater energies in transient well capture zones. *Environmental Earth Sciences*, 78(5), 142.
22. Sriram, S., Nambi, I. M., & Chetty, R. (2019). Hexavalent chromium reduction through redox electrolytic cell with urea and cow urine as anolyte. *Journal of environmental management*, 232, 554-563.
23. Peter, A. E., Nagendra, S. S., & Nambi, I. M. (2019). Environmental burden by an open dumpsite in urban India. *Waste management*, 85, 151-163.
24. Beegum, S., Šimůnek, J., Szymkiewicz, A., Sudheer, K. P., & Nambi, I. M. (2018). Updating the Coupling Algorithm between HYDRUS and MODFLOW in the HYDRUS Package for MODFLOW. *Vadose Zone Journal*, 17(1), 1-8.
25. Divyapriya, G., Nambi, I., & Senthilnathan, J. (2018). Ferrocene functionalized graphene based electrode for the electro-Fenton oxidation of ciprofloxacin. *Chemosphere*, 209, 113-123.
26. Sriram, S., Nambi, I. M., & Chetty, R. (2018). Electrochemical reduction of hexavalent chromium on titania nanotubes with urea as an anolyte additive. *Electrochimica Acta*, 284, 427-435.
27. Divyapriya, G., Srinivasan, R., Nambi, I. M., & Senthilnathan, J. (2018). Highly active and stable ferrocene functionalized graphene encapsulated carbon felt array—A novel rotating disc electrode for electro-Fenton oxidation of pharmaceutical compounds. *Electrochimica Acta*, 283, 858-870.
28. Sivagami, K., Sakthivel, K. P., & Nambi, I. M. (2018). Advanced oxidation processes for the treatment of tannery wastewater. *Journal of environmental chemical engineering*, 6(3), 3656-3663.

29. Han, Y., Nambi, I. M., & Clement, T. P. (2018). Environmental impacts of the Chennai oil spill accident–A case study. *Science of the total environment*, 626, 795-806.
30. Divyapriya, G., Thangadurai, P., & Nambi, I. (2018). Green approach to produce a graphene thin film on a conductive LCD matrix for the oxidative transformation of ciprofloxacin. *ACS Sustainable Chemistry & Engineering*, 6(3), 3453-3462.
31. Nalarajan, N. A., Govindarajan, S. K., & Nambi, I. M. (2018). Analyzing the flow of energies within the well capture zones under steady state conditions. *Groundwater for Sustainable Development*, 6, 134-140.
32. Sivagami, K., Sakthivel, K. P., & Nambi, I. M. (2018). Improved treatment of tannery wastewater treatment plant effluent using polymeric coagulants. *DESALINATION AND WATER TREATMENT*, 103, 49-54.
33. Rajasekhar, B., Nambi, I. M., & Govindarajan, S. K. (2018). Human health risk assessment of ground water contaminated with petroleum PAHs using Monte Carlo simulations: a case study of an Indian metropolitan city. *Journal of environmental management*, 205, 183-191.
34. Peter, A. E., Nagendra, S. S., & Nambi, I. M. (2018). Comprehensive analysis of inhalable toxic particulate emissions from an old municipal solid waste dumpsite and neighborhood health risks. *Atmospheric Pollution Research*, 9(6), 1021-1031.
35. Divyapriya, G., Nambi, I. M., & Senthilnathan, J. (2017). An innate quinone functionalized electrochemically exfoliated graphene/Fe<sub>3</sub>O<sub>4</sub> composite electrode for the continuous generation of reactive oxygen species. *Chemical Engineering Journal*, 316, 964-977.
36. Nambi, I. M., Rajasekhar, B., Loganathan, V., & RaviKrishna, R. (2017). An assessment of subsurface contamination of an urban coastal aquifer due to oil spill. *Environmental monitoring and assessment*, 189(4), 148.
37. Mekala, C., Gaonkar, O., & Nambi, I. M. (2017). Understanding nitrogen and carbon biogeochemical transformations and transport dynamics in saturated soil columns. *Geoderma*, 285, 185-194.
38. Vikesland, P. J., Pruden, A., Alvarez, P. J., Aga, D., Bürgmann, H., Li, X. D., ... & Zhu, Y. G. (2017). Toward a comprehensive strategy to mitigate dissemination of environmental sources of antibiotic resistance.
39. Mekala, C., & Nambi, I. M. (2017). Understanding the hydrologic control of N cycle: Effect of water filled pore space on heterotrophic nitrification, denitrification and dissimilatory nitrate reduction to ammonium mechanisms in unsaturated soils. *Journal of contaminant hydrology*, 202, 11-22.
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41. Ambika, S., & Nambi, I. M. (2016). Optimized synthesis of methanol-assisted nZVI for assessing reactivity by systematic chemical speciation approach at neutral and alkaline conditions. *Journal of Water Process Engineering*, 13, 107-116.

42. Divyapriya, G., Nambi, I. M., & Senthilnathan, J. (2016). Nanocatalysts in Fenton based advanced oxidation process for water and wastewater treatment. *Journal of Bionanoscience*, 10(5), 356-368.
43. Ansaf, K. V. K., Ambika, S., & Nambi, I. M. (2016). Performance enhancement of zero valent iron based systems using depassivators: optimization and kinetic mechanisms. *Water research*, 102, 436-444.
44. Ambika, S., Devasena, M., & Nambi, I. M. (2016). Synthesis, characterization and performance of high energy ball milled meso-scale zero valent iron in Fenton reaction. *Journal of environmental management*, 181, 847-855.
45. Mekala, C., & Nambi, I. M. (2016). Transport of ammonium and nitrate in saturated porous media incorporating physiobiotransformations and bioclogging. *Bioremediation Journal*, 20(2), 117-132.
46. Ambika, S., Nambi, I. M., & Senthilnathan, J. (2016). Low temperature synthesis of highly stable and reusable CMC-Fe<sup>2+</sup> (-nZVI) catalyst for the elimination of organic pollutants. *Chemical Engineering Journal*, 289, 544-553.
47. Gangadharan, P., Nambi, I. M., Senthilnathan, J., & Pavithra, V. M. (2016). Heterocyclic aminopyrazine-reduced graphene oxide coated carbon cloth electrode as an active bio-electrocatalyst for extracellular electron transfer in microbial fuel cells. *RSC advances*, 6(73), 68827-68834.
48. Vasudevan, M., Johnston, C. D., Bastow, T. P., Lekmine, G., Rayner, J. L., Nambi, I. M., ... & Davis, G. B. (2016). Effect of compositional heterogeneity on dissolution of non-ideal LNAPL mixtures. *Journal of contaminant hydrology*, 194, 10-16.
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53. Gangadharan, P., Nambi, I. M., & Senthilnathan, J. (2015). Liquid crystal polaroid glass electrode from e-waste for synchronized removal/recovery of Cr<sup>6+</sup> from wastewater by microbial fuel cell. *Bioresource technology*, 195, 96-101.
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56. Berlin, M., Nambi, I. M., & Kumar, G. S. (2015). Experimental and numerical investigations on nitrogen species transport in unsaturated soil during various irrigation patterns. *Sadhana*, 40(8), 2429-2455.
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59. Vasudevan, M., Kumar, G. S., & Nambi, I. M. (2015). Numerical studies on kinetics of sorption and dissolution and their interactions for estimating mass removal of toluene from entrapped soil pores. *Arabian Journal of Geosciences*, 8(9), 6895-6910.