RESEARCH SUPERVISOR PROFILE

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Assistant Professor
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https://scholar.google.co.in/citations?hl=en&user=yVAUtDAAAAAJ&view_op=list_works&sortby=pubdate#
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h-index: Google- 28, Scopus -25,WOS-25
Citations: Google: 1928,Scopus -1573, WOS-1495

Professional Experiences

- Assistant Professor, Department of Civil Engineering, Anna University , Regional Campus, Tirunelveli, 22.06.2021 to Till date.
- Assistant Professor, Department of Civil Engineering, University VOC College of Engineering, Thoothukudi, 08.07.2014 to 21.06.2021.
- Assistant Professor, Department of Civil Engineering, Anna University , Regional Campus, Tirunelveli, 2.11.2009 to 07.07.2014
- Assistant Professor, Department of Civil Engineering, Adhiyamman College of Engineering, Hosur, 2.11.2008 to 30.10.2009.

Educational Qualifications

- Ph.D., Civil Engineering, December 2008, CEG, Anna University, Chennai, India.
- M.E, Environmental Engineering, January 2003, CEG, Anna University, Chennai, India.
- B.E, Civil Engineering, April 1999, Bharathidasan University, Tiruchirappalli, India.
- DCE, Civil Engineering, April 1996, DOTE, Chennai, India.

Research Area

- Advanced oxidation process, Residue management, Wastewater treatment, Geo-environmental Engineering.

Research Experiences

- Full Time Research Scholar, Centre for Environmental Studies, Department of Civil Engineering, Anna University, Chennai, June 2003 - December 2008.
- Project Fellow, UGC Major Research project, Centre for Environmental Studies, Department of Civil Engineering, Anna University, Chennai, 15 March 2005 – 15 March 2008.
- Research Fellow, PWD-WRO project, Centre for Environmental Studies, Department of Civil Engineering, Anna University, Chennai, 13 March 2004 – 12 July 2004.

Ph.D Doctoral Thesis Guided/ Ph.D Degree Awarded: 5

1. Dr.G.Ginni, Combination of advanced oxidation process and biological treatment strategies for the degradation and decolourization of pulp and paper mill wastewater, Faculty of Civil Engineering, Anna University, Chennai (June 2019).
2. Dr.S.Devi, Degradation of latex wastewater by electrochemical advanced oxidation process powered by microbial fuel cell, Faculty of Civil Engineering, Anna University, Chennai (July 2019).
3. Dr.S.Sidhardhan, Assessment of groundwater quality and its impact due to solid waste dumpsite,Faculty of Civil Engineering, Anna University, Chennai (February 2020).
4. Dr.S.Sahayavasanthi , Impact of untreated domestic wastewater on water quality of parakai lake by artificial intelligence based approaches, Faculty of Civil Engineering, Anna University, Chennai (August 2020).
5. Dr. G.Selvabharathi , Treatment of Tannery industry wastewater by advanced oxidation and electrochemical advanced oxidation process, Faculty of Civil Engineering, Anna University, Chennai (November 2020).

Ph.D Research coordinator / Ph.D Degree Awarded: 2

1. Dr.M.Dineshkumar, Energy efficient biohydrogen production from a sea weed (*Ulva reticulate*), Faculty of Civil Engineering, Anna University, Chennai (February 2021).

2. Dr.R.Yukesh Kannah, Effect of cell wall weakening on microalgae (*Chlorella vulgaris*) for energy and cost effective biomethane production, Faculty of Civil Engineering, Anna University, Chennai (November 2020).

Ph.D Doctoral Thesis Guiding: 5

1. Mr.Subash N, Modelling and Experimental Investigation on structural members made of Geopolymer concrete,Faculty of Civil Engineering, Anna University, Chennai.
2. Mrs.J Christiarani, Treatment of polycyclic aromatic hydrocarbons contaminated soil by advanced oxidation process, Faculty of Civil Engineering, Anna University, Chennai.
3. Mrs.Angel R, Study on influence of urbanization on tanks, Faculty of Civil Engineering, Anna University, Chennai.
4. Mrs.Reno Infanto R, Experimental analysis of cement kiln dust in the rheological behaviour of engineered cementitious concrete, Faculty of Civil Engineering, Anna University, Chennai.
5. Mr. Mohamed Usman T M, Application of thin film titanium dioxide for cost and energy efficient biofuel production, Faculty of Civil Engineering, Anna University, Chennai.

P.G/U.G Thesis Guided

1. M.E (Environmental Engineering)/ M.Tech (Environmental science and Engineering) - 23 Nos.
2. B.E Civil Engineering – 20 batches
3. B.E Geoinformatics Engineering- 15 batches.

Research Project awarded

1. To study the performance of the sewage treatment plant at Ukkadam Coimbatore due to addition of faecal sludge to the STP and Upgradation of laboratory for faecal sludge analysis at Anna University Regional Campus, Tirunelveli,(Co-Investigator), GIZ, - Euro 85000.

Consultancy Projects

1. Proposed construction of Badminton Court, Thoothukudi Corporation, Thoothukudi – Rs.5,34,988 (July 2020).
2. Structural Design, TamilNadu Slum Clearance Board, Tirunelveli- Rs.3,20,000 (July 2017).

3. Lay Pipeline from oil jetty to proposed land in the existing concrete pedestal in the vacant area, M/s. Kaleesuwari Refinery (P) Ltd., Chennai-Rs.23,600 (Jan.2018).
4. Design of Concrete Mix, Rail Nigam Limited, Chennai,- Rs. 1,95,113 (September 2018).
5. SPT test, Keyem Engineering Enterprises, Chennai – Rs.90, 000 (May 2019).
6. Structural stability for pedestal in Tuticorin Harbor area, M/s. Kaleesuwari Refinery (P) Ltd., Chennai- Rs.23,600 (October 2018).
7. Wind shield, Thartius Engineering contractors, Tuticorin- Rs.11,800 (May 2019)
8. STP structural drawing vetting, Keyem Engineering Enterprises, Chennai- Rs. 1,77,000 (July 2019).
9. Survey of Biomining, Town panchayat, Tiruchendur– Rs.2,12,400 (Sep. 2019).
10. EIA for STP, Keyem Engineering Enterprises, Chennai –Rs 1,50,000 (Sep. 2020).

International Journal Publications (***as on July 2021***)

1. Integrated biorefinery routes of biohydrogen: Possible utilization of acidogenic fermentative effluent JR Banu, G Ginni, S Kavitha, RY Kannah, S Adish Kumar, SK Bhatia, G Kumar, Bioresource technology 319, 124241 (2021)
2. Generation of electricity by the degradation of electro-Fenton pretreated latex wastewater using double chamber microbial fuel cell D Selvaraj, S Adish Kumar Somanathan, RB Jeyakumar, G Kumar International Journal of Energy Research 44 (15), 12496-12505 (2020).
3. Constructed Wetlands: An Emerging Green Technology for the Treatment of Industrial Wastewaters MD Kumar, S Gopikumar, S Adishkumar, JR Banu Emerging Eco-friendly Green Technologies for Wastewater Treatment, 21-44 (2020).
4. Integrated biorefineries of food waste G Ginni, SA Kumar, TMM Usman, P Pakonyi, JR Banu Food Waste to Valuable Resources, 275-298 (2020).
5. Biohydrogen generation from macroalgal biomass, Chaetomorphaantennina through surfactant aided microwave disintegration D Kumar, AP Eswari, JH Park, S Adishkumar, JR Banu Frontiers in Energy Research 7, 78 (2019).
6. Combination of solar advanced oxidation processes and biological treatment strategy for the decolourization and degradation of pulp and paper mill wastewater G Gopalakrishnan, S Adish Kumar Somanathan, RB Jeyakumar DWT 158, 87-96 (2019).
7. Feasibility analysis of homogenizer coupled solar photo Fenton process for waste activated sludge reduction VG Sharmila, S Adish Kumar, JR Banu, IT Yeom, GD Saratale Journal of environmental management 238, 251-256 (2019).
8. Cost effective sludge reduction using synergetic effect of dark fenton and disperser treatment JR Banu, VG Sharmila, S Adish Kumar, G Kumar, DD Nguyen, GD Saratale Journal of Cleaner Production 207, 261-270 (2019).
9. Efficiency analysis of electro-Fenton combined with coagulation process for the degradation of natural rubber latex processing and production waste waters using

bench-scale reactor S Devi, S Adishkumar, JR Banu Desalination and Water Treatment 105, 132-143 (2018).

10. Fenton's reagent augmented with TiO2 for photocatalytic degradation of pulp and paper mill wastewater by plug flow baffle reactor under visible and sunlight irradiation. G Ginni, S Adishkumar, RB Jeyakumar Desalination and Water Treatment 116, 195-204 (2018).
11. Synergistic photodegradation of pulp and paper mill wastewater by combined advanced oxidation process M Ginni, S Adish Kumar, RJ Banu, IT YeomDesalin. Water Treat 68, 160-169 (2017).
12. Effect of deflocculation on the efficiency of sludge reduction by Fenton process V Amudha, S Kavitha, C Fernandez, S Adishkumar, JR Banu Environmental Science and Pollution Research 23 (19), 19281-19291 (2016).
13. Evaluation of bench-scale solar photocatalytic reactors for degradation of phenolic wastewaters S Adishkumar, S Kanmani, J Rajesh Banu, I Tae Yeom Desalination and Water Treatment 57 (36), 16862-16870 (2016).
14. Enhancement of waste activated sludge reduction potential by amalgamated solar photo-Fenton treatment S Kavitha, P Karthika, J Rajesh Banu, IT Yeom, S Adish Kumar Desalination and Water Treatment 57 (28), 13144-13156 (2016).
15. Evaluation of operational parameters for semi-continuous anaerobic digester treating pretreated waste activated sludge S Gopikumar, P Arulazhagan, S Kavitha, S Adish Kumar, J Rajesh Banu Desalination and Water Treatment 57 (20), 9093-9100 (2016).
16. The performance of fluidized bed solar photo Fenton oxidation in the removal of COD from hospital wastewaters AS Anjana Anand, S Adish Kumar, J Rajesh Banu, G Ginni Desalination and Water Treatment 57 (18), 8236-8242 (2016).
17. Combined homogeneous and heterogeneous advanced oxidation process for the treatment of tannery wastewaters G Selvabharathi, S Adishkumar, S Jenefa, G Ginni, J Rajesh Banu, Journal of Water Reuse and Desalination 6 (1), 59-71 (2016).
18. Effect of chemo-mechanical disintegration on sludge anaerobic digestion for enhanced biogas production S Kavitha, SS Pray, KN Yogalakshmi, S Adish Kumar, IT Yeom Environmental Science and Pollution Research 23 (3), 2402-2414 (2016).
19. Evaluation of bench-scale solar photocatalytic reactors for degradation of phenolic wastewaters. S Adishkumar, S Kanmani, J Rajesh Banu, IT Yeom Desalin Water Treat 57: 16862–16870 (2016).
20. Ferrioxalate-induced solar photo-Fenton treatment of natural rubber latex wastewaters L Ashok, S Adishkumar, J Rajesh Banu, I Tae Yeom, Water Quality Research Journal of Canada 50 (4), 349-358 (2015).
21. Achieving profitable biological sludge disintegration through phase separation and predicting its anaerobic biodegradability by non linear regression model S Kavitha, S Adish Kumar, S Kaliappan, IT Yeom, JR Banu Chemical Engineering Journal 279, 478-487 (2015).
22. Effect of NaCl induced floc disruption on biological disintegration of sludge for enhanced biogas production S Kavitha, S Kaliappan, S Adish Kumar, IT Yeom, JR Banu ,Bioresource technology 192, 807-811(2015).

23. Anaerobic co-digestion of chemical-and ozone-pretreated sludge in hybrid upflow anaerobic sludge blanket reactor J Rajesh Banu, P Arulazhagan, S Adish Kumar, S Kaliappan, AM Lakshmi ,Desalination and Water Treatment 54 (12), 3269-3278 (2015).
24. Influence of deflocculation on microwave disintegration and anaerobic biodegradability of waste activated sludge AV Ebenezer, S Kaliappan, S Adish Kumar, IT Yeom, JR Banu, Bioresource technology 185, 194-201(2015).
25. Effect of deflocculation on the efficiency of low-energy microwave pretreatment and anaerobic biodegradation of waste activated sludge AV Ebenezer, P Arulazhagan, S Adish Kumar, IT Yeom, JR Banu Applied Energy 145, 104-110 (2015).
26. Accelerating the sludge disintegration potential of a novel bacterial strain Planococcus jake 01 by CaCl2 induced deflocculation S Kavitha, T Saranya, S Kaliappan, SA Kumar, IT Yeom, JR Banu, Bioresource technology 175, 396-405 (2015).
27. Evaluation of operational parameters for semi-continuous anaerobic digester treating pretreated waste activated sludge, KS Gopi, P Arulazhagan, S Kavitha, S Adish Kumar, J Rajesh Banu, Desalin Water Treat 4: 1–8 (2015).
28. Effect of citric acid induced deflocculation on the ultrasonic pretreatment efficiency of dairy waste activated sludge T Gayathri, S Kavitha, S Adish Kumar, S Kaliappan, IT Yeom, JR Banu Ultrasonics sonochemistry 22, 333-340 (2015).
29. Solar photocatalytic treatment of phenolic wastewaters: influence of chlorides, sulphates, aeration, liquid volume and solar light intensity S Adishkumar, S Kanmani, J Rajesh Banu Desalination and Water Treatment 52 (40-42), 7957-7963 (2014).
30. Enhancing the functional and economical efficiency of a novel combined thermo chemical disperser disintegration of waste activated sludge for biogas production, S Kavitha, C Jayashree, S Adish Kumar, S Kaliappan, JR Banu, Bioresource technology 173, 32-41(2014).
31. Effect of low temperature thermo-chemical pretreatment of dairy waste activated sludge on the performance of microbial fuel cell, C Jayashree, G Janshi, IT Yeom, S Adish Kumar, JR Banu, International Journal of Electrochemical Science 9 (10), 5732-5742 (2014).
32. Bioelectricity generation from coconut husk retting wastewater in fed batch operating microbial fuel cell by phenol degrading microorganism ,C Jayashree, P Arulazhagan, S Adish Kumar, S Kaliappan, IT Yeom, JR Banu, biomass and bioenergy 69, 249-254 (2014).
33. Improving the amenability of municipal waste activated sludge for biological pretreatment by phase-separated sludge disintegration method S Kavitha, S Adish Kumar, S Kaliappan, IT Yeom, JR Banu ,Bioresource technology 169, 700-706 (2014).
34. The enhancement of anaerobic biodegradability of waste activated sludge by surfactant mediated biological pretreatment S Kavitha, C Jayashree, S Adish Kumar, IT Yeom, JR Banu, Bioresource technology 168, 159-166 (2014).
35. Effect of deflocculation on the efficiency of disperser induced dairy waste activated sludge disintegration and treatment cost, TP Devi, AV Ebenezer, S Adish Kumar, S Kaliappan, JR Banu Bioresource technology 167, 151-158 (2014).

36. Synergistic degradation of hospital wastewater by solar/TiO_2/Fe^{2+}/H_2O_2 process, S Adish Kumar, G S SreeLekshmi, J Rajesh Banu, I Tae Yeom, Water Quality Research Journal of Canada 49 (3), 223-233 (2014).
37. Biodegradation of automobile service station wastewater, S Adish Kumar, A Kokila, JR Banu, Desalination and Water Treatment 52 (25-27), 4649-4655 (2014).
38. Co-metabolic degradation of benzo (e) pyrene by halophilic bacterial consortium at different saline conditions P Arulazhagan, C Sivaraman, S Adish Kumar, M Aslam, JR Banu, Journal of environmental biology 35 (3), 445 (2014).
39. Enhancing the anaerobic digestion potential of dairy waste activated sludge by two step sono-alkalization pretreatment, RU Rani, S Adish Kumar, S Kaliappan, IT Yeom, JR Banu, Ultrasonics sonochemistry 21 (3), 1065-1074 (2014).
40. Treatment of pulp and paper mill wastewater by solar photo-Fenton process , G Ginni, S Adishkumar, J Rajesh Banu, N Yogalakshmi, Desalination and Water Treatment 52 (13-15), 2457-2464 (2014).
41. Solubilization of municipal sewage waste activated sludge by novel lytic bacterial strains, MV Lakshmi, J Merrylin, S Kavitha, S Adish Kumar, JR Banu, IT Yeom, Environmental Science and Pollution Research 21 (4), 2733-2743 (2014).
42. Effect of EPS removal on the sludge reduction potential of B. licheniformis on its optimized pH conditions. J Merrylin, S Adish Kumar, S Kaliappan, IT Yeom, J Rajesh Banu, Water Environ J 28: 95–103 (2014).
43. Anaerobic co-digestion of chemical-and ozone-pretreated sludge in hybrid upflow anaerobic sludge blanket reactor. JR Banu, A Pugazhendi, S Adish Kumar, S Kaliappan, ML Anand Desalination and Water Treat, (2014).
44. Enhancing aerobic digestion potential of municipal waste-activated sludge through removal of extracellular polymeric substance .J Merrylin, S Kaliappan, S Adish Kumar, IT Yeom, JR Banu Environmental Science and Pollution Research 21 (2), 1112-1123 (2014).
45. Effect of enzyme secreting bacterial pretreatment on enhancement of aerobic digestion potential of waste activated sludge interceded through EDTA, S Kavitha, S Adish Kumar, KN Yogalakshmi, S Kaliappan, JR Banu, Bioresource technology 150, 210-219 (2014).
46. Biological pretreatment of non-flocculated sludge augments the biogas production in the anaerobic digestion of the pretreated waste activated sludge, J Merrylin, S Adish Kumar, S Kaliappan, IT Yeom, JR Banu , Environmental technology 34 (13-14), 2113-2123 (2013).
47. Effects of side-stream, low temperature phosphorus recovery on the performance of anaerobic/anoxic/oxic systems integrated with sludge pretreatment , SE Raj, JR Banu, S Kaliappan, IT Yeom, S Adish Kumar, Bioresource technology 140, 376-384 (2013).
48. Impacts of microwave pretreatments on the semi-continuous anaerobic digestion of dairy waste activated sludge, RU Rani, S Adish Kumar, S Kaliappan, IT Yeom, JR Banu, Waste Management 33 (5), 1119-1127 (2013).
49. Coupled ozonation with aerobic sequential batch reactor for treatment of distillery wastewater, AV Ebenezer, P Arulazhagan, JR Banu, S Adish Kumar, International Journal of Current Microbiology and Applied Science 2 (6), 137-145 (2013).

50. Effect of extracellular polymeric substances on sludge reduction potential of Bacillus licheniformis, J Merrylin, S Kaliappan, S Adish Kumar, IT Yeom, BJ Rajesh,International Journal of Environmental Science and Technology 10 (1), 85-92 (2013).
51. Combined treatment of alkaline and disperser for improving solubilization and anaerobic biodegradability of dairy waste activated sludge , RU Rani, S Kaliappan, S Adish Kumar, JR Banu, Bioresource Technology 126, 107-116 (2012).
52. Coupled solar photo-Fenton process with aerobic sequential batch reactor for treatment of pharmaceutical wastewater, S Adishkumar, S Sivajothi, J Rajesh Banu, Desalination and water treatment 48 (1-3), 89-95 (2012).
53. Effect of cation binding agents on sludge solubilization potential of bacteria, SG Kumar, J Merrylin, S Kaliappan, S Adish Kumar, IT Yeom, JR Banu, Biotechnology and Bioprocess Engineering 17 (2), 346-352 (2012).
54. Combinative treatment (thermal-anaerobic) of EBPR sludge for the enhanced release and recovery of phosphorous. S Esakki Raj, S Kaliappan, S Adish Kumar, J Rajesh Banu, International Journal of Environmental Engineering 4 (1-2), 92-104 (2012).
55. Degradation of phenolic wastewaters by solar/TiO2 and solar/TiO2/H2O2 processes, S Adishkumar, S Kanmani, International Journal of Environment and Waste Management 9 (1-2), 169-180 (2012).
56. Low temperature thermo-chemical pretreatment of dairy waste activated sludge for anaerobic digestion process, RU Rani, S Adish Kumar, S Kaliappan, IT Yeom, JR Banu , Bioresource technology 103 (1), 415-424 (2012).
57. Effect of low temperature thermochemical pretreatment on sludge reduction potential of membrane bioreactor treating primary treated dairy wastewater, JR Banu, S Kaliappan, S Adish Kumar, IT Yeom, DK Uan, Water Quality Research Journal of Canada 46 (4), 312-320 (2011).
58. Treatment of phenolic wastewaters in single baffle reactor by Solar/TiO2/H2O2 process, S Adishkumar, S Kanmani, Desalination and Water Treatment 24 (1-3), 67-73 (2010).
59. Performance studies on solar photocatalytic reactors for degradation of phenolic wastewaters, S Adish Kumar, S Kanmani, Indian journal of environmental protection 26 (1), 76 (2006).
60. Solar photocatalytic degradation of phenolic wastewaters: Investigation of the effect of operational parameters, S Adish Kumar, S Kanmani, Indian Journal of Environmental Protection 25 (1), 51(2005).

Paper presented in International Conferences

1. Removal of Chromium (III) from tannery wastewater by electrochemical peroxidation process in a bench scale reactor, International conference on Desalination (InDACON), NIT, Tiruchirappalli, 20-21 April 2018.
2. Experimental Investigation on flexural behavior of engineered cementitious concrete with cement kiln dust, International conference on research and innovations in Engineering science and humanities, Noorul Islam Centre for Higher Education, Kumaracoil, 26 April 2019.

3. Effect of size reduction on parameters affecting anaerobic biodegradability in high organic biomass, International conference on recent trends in multi disciplinary research, V.O.Chidambaram College, Thoothukudi, 19-20 April 2018.
4. Bioelectricity production in dual chamber MFC treating dye wastewater, International conference on recent innovation in Civil Engineering and Management, Loyola Institute of Technology, Chennai, 22 March 2018.
5. Treatment of combined wastewater by activated sludge process, International Conference on Recent trends in structural and Environmental Engineering, University College of Engineering, Anna University, Dindigul.
6. Enchanced waste activated sludge reduction by Lysozyme secreting bacterium, International conference on Thermal Energy and Environment ,KalasalingamUnivesity, Kishnankovil, 2011.
7. Low temperature thermochemical pretreatment of dairy waste activated sludge for anaerobic digestion process,International conference on Thermal Energy and Environment ,KalasalingamUnivesity, Kishnankovil, 2011.
8. Removal of chromium from tannery effluent by electro-Fenton process, Fourth International conference on Advanced oxidation processes, BITS, Pilani, 17-20 December 2016.
9. The phenomenological study of operational parameters in a plug flow baffle rector by solar photo-fenton process,International conference on advanced oxidation processes, BITS, Pilani, 17-20 December 2016.
10. Electro-Fenton technology for the treatment of wastewater from natural rubber industry, International conference on Advanced oxidation processes, BITS, Pilani, 17-20 December 2016.
11. Studies on solar photocatalytic degradation of phenol usong response surface methodology, Environmental applications of Advanced oxidation processes, Chania, 7-9 September 2006.
12. Design of pilot-scale aerated solar photocatalytic reactor for the degradation of pulp and paper mill wastewater by solar/TiO_2/Fe^{2+}/H_2O_2 process, International conference on water resources and sustainability –Future and challenges, China, 28-31 October 2018.
13. Generation of electricity from latex wastewater with simultaneous degradation using double chamber microbial fuel cell, International conference on water resources and sustainability –Future and challenges 28-31, China, October 2018.
14. Electrochemical Peroxidation process in the treatment of wastewater from tannery industry for resuse, International conference on water resources and sustainability – Future and challenges 28-31, China, October 2018.
15. Flood inundation and mitigation studies in Tamirabarani river, Tirunelveli, TamilNadu, India using Geospatial Technology, International conference on water resources and sustainability –Future and challenges 28-31, China, October 2018.

Paper presented in National Conferences

1. Assessment of MSWM of Dindigul City using Geospatial tools, UGC sponsored National Conference on Recent Innovations and Technological development in Civil Engineering, The Gandhigram Rural Institute, Gandigram, 12-12 March 2018.

2. Treatability analysis and parameter optimization of electro-Fenton process for latex wastewater, UGC sponsored National Conference on Recent Innovations and Technological development in Civil Engineering, The Gandhigram Rural Institute, Gandigram, 12-12 March 2018.
3. Degradation of pulp and paper mill wastewater by solar photocatalytic process, UGC sponsored National Conference on Recent Innovations and Technological development in Civil Engineering, The Gandhigram Rural Institute, Gandigram, 12-12 March 2018.
4. A combinative treatment of high strength wastewater by HUASB and photo Fenton process, Third National conference on Advances in Civil Engineering, VV College of Engineering, Tisaiyanvillai, 2 March 2018.
5. Solar Photodegradation of automobile service station wastewater, National Conference on Recent advances in water and wastewater treatment, The Gandhigram Rural Institute, Gandigram, 21-22 March 2014.
6. Combination of chemical measurements and remote sensing in Tuticorin costal water monitoring, National Conference on Recent advances in water and wastewater treatment, The Gandhigram Rural Institute, Gandigram, 21-22 March 2014.
7. Onsite grey water treatment by solar photocatalyisane reuse in multi-storeyed buildings,National Conference on Recent advances in water and wastewater treatment, The Gandhigram Rural Institute, Gandigram, 21-22 March 2014.
8. Solar photo-Fenton treatment of latex wastewater,National Conference on Recent advances in water and wastewater treatment, The Gandhigram Rural Institute, Gandigram, 21-22 March 2014.
9. Treatment of hospital wastewater by fluidized bed solar photo Fenton technology, National conference on Sustainable water resources planning, management and impact of climate change, BITS- Pilani, 5-6 April 2013 (First Prize).
10. Treatment of industrial wastewaters by Advanced oxidation processes, National Conference on Environmental challenges towards sustainability, Government College of Technology, Coimbatore, 24 -25 March 2011.
11. Biodegradation of automobile wastewater, National Conference on Environmental challenges towards sustainability, Government College of Technology, Coimbatore, 24 -25 March 2011.
12. Remediation of contaminated soil by advanced oxidation process, National Conference on Environmental challenges towards sustainability, Government College of Technology, Coimbatore, 24 -25 March 2011.
13. A study on the effect of alkali-ozone pretreatment method in enhancing the solubilisation potential of dairy sludge, National Conference on Environmental challenges towards sustainability, Government College of Technology, Coimbatore, 24 -25 March 2011.
14. Coupled solar photo-Fenton process with aerobic sequential batch reactor for treatment of pharmaceutical wastewater, National Conference on Environmental challenges towards sustainability, Government College of Technology, Coimbatore, 24 -25 March 2011.
15. A review on microwave pretreatment technology for excess sludge reduction, National Conference on Environmental challenges towards sustainability, Government College of Technology, Coimbatore, 24 -25 March 2011.

16. Bioremediation of pesticide contaminated soil from AmpurVillage, Tirunelveli district, National Seminar on Biotechnological interventions in green technology for sustainable agriculture, Manonmanium Sundaranar University, Tirunelveli, 22-24 September 2011.

Book Chapter

1. Environmental health risk assessment and management of ground water quality in Melapalayam, Energy, Environment and Health, 11-17. Victorious Publishers, India. (2013), ISBN 978-81-924744-1-0.
2. Solar photocatalytic- biological treatment of phenolic resin Manufacturing wastewaters, Pollution and control technologies, 382-388 (2005), B.S Publications, Hyderabad, ISBN 97-88178001050.
3. Integrated biorefineries of food waste G Ginni, SA Kumar, TMM Usman, P Pakonyi, JR Banu Food Waste to Valuable Resources, 275-298 (2020), Academic Press.
4. Constructed Wetlands: An Emerging Green Technology for the Treatment of Industrial Wastewaters MD Kumar, S Gopikumar, S Adishkumar, JR Banu Emerging Eco-friendly Green Technologies for Wastewater Treatment, 21-44 (2020).

Invited talks

1. Delivered a lecture on Integrated Waste Management, The Institution of Engineers (India), Tirunelveli Centre, Tirunelveli (23.06.2017).
2. Delivered a lecture on Water Conservation, The Institution of Engineers (India), Tirunelveli Centre, Tirunelveli (05.04.2019).
3. Delivered a lecture on Impact of Climate Change on Water resources, UGC sponsored Faculty development programme, Measures to mitigate Climate change, Central University of Tamil Nadu, Tiruvarur (12 -16 October 2020).
4. Delivered a lecture on Degradation of latex wastewater by advanced oxidation process, CPCB sponsored Training programme, Advanced Oxidation Treatment Technology- A futuristic way forward of recalcitrant pollutants, Centre for Environmental Studies, Anna University, Chennai (24 -26 February 2021).
5. Delivered a lecture on Sustainable treatment of rubber latex wastewater using Electrochemical advanced oxidation process powered by microbial fuel cell, AICTE sponsored STTP programme, A Beeline for circular economy through sustainable waste management, K.S.R College of Engineering, Tiruchengode (April 24 – May 01 2021).
6. Adjudicator, TECH-EXPO 2020, Department of Civil Engineering, Government College of Engineering, Tirunelveli, 18.02.2020.

Countries Visited

1. Attended the Joint AfricaSan5 and FSM5 Conference, Cape Town, South Africa, 18-22 February 2019.

Reviewer

- Chemical Engineering Journal, Bioresource technology, Desalination and water treatment, Chemical Engineering Journal Advances,International Journal of Chemical Reactor Engineering, Environmental Technology, Environmental Engineering Science, International Journal of Environmental Analytical Chemistry, Water Research.

Patent filed

1. Australian Patent 2021103475, “A method and system for generating electricity by degradation of pretreated latex wastewater using double chamber microbial fuel cell.”
2. Australian Patent, “A method and system for removing chromium (III) from tannery wastewater.”
3. Australian Patent, “A system and a method for degradation of a natural rubber latex processing and production wastewater.”