CURRICULUM VITAE

Dr. S. MATHAVA KUMAR
Associate Professor,
EWRE Division, Department of Civil Engineering,
Indian Institute of Technology Madras,
Chennai, Tamilnadu – 600 036, India.
Office: ED514, 4th Floor, Engineering Design Building

E-mail: mathav@iitm.ac.in; **Tel.**: +91 44 2257 4267
Alt. E-mail: mathavakumar@gmail.com; **Mob**: +91 94455 34267
Scopus ID: 22934657800; **ORCID ID**: orcid.org/0000-0002-4124-4605

Research Interests

- Application of membrane-(bio)reactors for water & wastewater treatment
- AOPs for water and wastewater treatment
- Biodegradation/bioremediation of contaminated water and soil systems
- Anaerobic ammonium oxidation (Anammox)
- Bioprecipitation of heavy metals
- High rate composting

Professional Experience

❖ **Jul, 2016 – Till date**
Designation: Associate Professor
Institute: Department of Civil Engineering, IIT Madras, Chennai, India

❖ **Nov, 2014 – July, 2016**
Designation: Assistant Professor
Institute: Department of Civil Engineering, IIT Madras, Chennai, India

❖ **Jan, 2011 – Nov, 2014**
Designation: Assistant Professor
Institute: Department of Civil Engineering, NIT Calicut, Kerala, India

❖ **Oct, 2006 – Jan, 2011**
Designation: Postdoctoral Research Fellow
Advisor: *Prof. Jih-Gaw Lin*
University: Institute of Environmental Engineering, National Chiao Tung University (NCTU), Hsinchu, Taiwan
Research Area: The research activities mainly focused on reduce, recycle and recover (3R)/ treatment of organic and inorganic contaminants from various sources using innovative physicochemical & biotechnological processes.

❖ **January 2006 – June 2006**
Designation: Environmental Consultant
Company: *ALSAFA Environmental & Technical Services LLC, Sultanate of Oman*
Work Handled: Worked as a team leader and actively involved in environmental data Collection, preparation of Environmental Impact Assessment (EIA) reports and preparation of Environmental Management Plan (EMP) for several projects (in Sultanate of Oman) including Portland Cement Factory at Rawdha, Lube Oil Blending Plant at Sohar Industrial Estate, Calcined Petroleum Coke plant at Sohar Industrial port (SIP) and Permanganate plant at Sohar Industrial area (SIA).

❖ **July 2002 – December 2005**

Designation: Research Scholar and Research/Teaching Assistant

Institute: EWRE Division, Dept. of Civil, Engg., IIT Madras, Chennai

Work Handled: Assisted in the Consultancy Project, ***Rapid Environmental Auditing (REA)*** of Southern Petrochemical Industries Corporation Ltd (SPIC), Tuticorin, Tamilnadu, India. Assisted in the PG courses as a **Half-Time *Teaching Assistant*** from July 2002 to Dec 2005.

Thesis/ Project Guidance:

S. No	Name of Scholar/Student	Date of Joining	Title of the thesis/project	Co-guide/Remarks (if any)
PhD Guidance:				
1	Ms. Asha C Raju	Dec, 2011	Antibiotics removal in a membrane-photocatalytic slurry reactor	**Completed** (Jul, 2015)
2	Mr. Vishnuganth	Jul, 2012	Investigation of granular activated carbon supported TiO_2 composite for aqueous phase carbofuran removal in photocatalytic systems	Dr. N. Selvaraju, Chemical Engg., NITC (**Completed; Sep, 2016**)
3	Ms. Neghi N	Jan, 2015	PPCP removal in a photocatalytic membrane reactor and biotoxicity assessment	**Completed** (Sep, 2019; Awarded **Best PhD Thesis**)
4	Ms. Mandala Siva Priyanka Yadav	Dec, 2013	Pharmaceutical wastewater treatment in a carrier-supported- photocatalytic membrane reactor	Dr. George K Varghese Civil Engg., NITC (**Completed; Feb, 2020**)
5	Mr. Binay Kumar Tripathy	Jul, 2015	Landfill leachate treatment using a hybrid treatment system with sequential microwave and algal photo-bioreactor	**Completed** (May, 2020; Received **Institute Research Award of IITM**)
6	Mr. Manjunath S V	Jul, 2015	Simultaneous removal of antibiotic and nutrients from multi-component adsorption systems using Prosopis Juliflora activated carbon	**Completed** (June, 2020)
7	Ms. Revathy R	Jan, 2015	Sequential photocatalytic membrane reactor and thin-film nanocomposite reverse osmosis membrane for water purification	Prof. Raghuram Chetty, Chem. Engg, IITM (**Completed; Sep, 2020**)
8	Ms. Sudeeptha G	Jul, 2015	PPCP removal in carrier-supported biomass MBR	-
9	Mr. Inigo Johnson	Dec, 2016	Biofuel production from Distillery waste	Prof. Chandraraj K, School of Biotech., IITM
10	Mr. Mohammad Sithik Ali	Dec, 2016	CO_2 sequestration in mixotrophic Membrane-Photobioreactor	-
11	Mr. Ashok M. I	Jul, 2017	Anaerobic digestion of municipal solid waste	-
12	Ms. Gayathri R	Jul, 2018	Evaluation of multi-pollutant sorption on various low-cost adsorbents	**Direct PhD**
13	Ms. Sonam Tantuvoy	Jan, 2019	Remediation of Contaminated Soils	Dr. Indumathi M Nambi, IITM
14	Ms. Sruthi Jayaraj	Jul, 2019	Photocatalytic removal of selective air pollutants	Dr. Shiva Nagendra (**Main guide**)
15	Mr. Onkar Ekande Sudhir	Jul, 2019	PPCP removal using visible-light based Z-Scheme Photocatalysis	**PMRF Scholar**
16	Mr. Dinakar Parashar	Jul, 2019	Development and Application of hybrid macro-composites for photocatalysis and Disinfection	**Direct PhD**
17	Ms. Manimegalai	Jul, 2019	Effect of soil characteristics on plant based adsorbent preparation	-
18	Mr. Saptarshi Bose	Jul, 2020	Microwave Induced Catalytic Oxidation Coupled with Thin Film Nanocomposite Membrane Filtration for the Removal of Trace Organics from the Wastewater	-
19	Ms. Alakananda Ghosh	Jul, 2020	Management of Reverse Osmosis Process Reject via Microwave treatment.	**Direct PhD through CFTI Scheme**
MS Guidance				
1	Ms. Sruthi Jayaraj	Jul, 2018	Photocatalytic removal of selective air pollutants	Dr. Shiva Nagendra (**Main guide**)
M.Tech Project Guidance:				
1	Ms. Shabhana	Jun, 2013 to May, 14	Prediction of MSW generation in Calicut city and its associated contaminant transport analysis	At NIT Calicut

2	Ms. Sowjanya V	Jul, 2015 to May, 2016	Metronidazole removal from wastewater in freely-suspended and carrier-supported biomass reactors	Dr. Ravikrishna, Chemical Engg., IITM (**Awarded Best dual degree project)**
3	Mr. Navneeth R Krishnan	Jun, 16 to May,17	Metronidazole Removal in a Continuous-mode Photocatalytic Membrane Reactor	-
4	Ms. Vinisha Boddu	Jun, 17 to May,18	Preparation and Application of RO antifouling membranes for water desalination	Dr. Raghuram Chetty, Chemical Engg., IITM
5	Ms. Ranu Singh Baghel	Jul, 18 to May, 19	Single and multi-component sorption of pharmaceutical compounds on Prosopis juliflora activated carbon	-
6	Ms. Gayathri Pullangott		Removal of pharmaceuticals by using a hybrid photocatalytic membrane reactor	-
7	Mr. Krishna Bhatter		Water desalination using reverse osmosis membrane modified with Ag and GO-ZnO/Ag nanoparticles	Dr. Raghuram Chetty, Chemical Engg., IITM
8	Mr. Sumit Kumar		Hybrid Advanced Oxidation System for Dyes Containing Wastewater Treatment	Dr. Animesh Debnath NIT Agartala
9	Ms. Pratishtha Khurana		Fouling analysis of Thin-Film nano-composite membranes during water desalination	Prof. T. Pradeep, IITM (MSc Project)
10	Ms. Afrah Harafan	July, 19 to May 2020	Multipollutant sorption using CS/GO and Ag-NP/CS/GO	-
11	Ms. Krishna Priya		Treatment of secondary effluent from domestic wastewater treatment plant using algal photo bioreactor	-
12	Mr. Abhilash		Fluoride removal in amino-clay incorporated thin-film nanocomposite reverse osmosis membrane system	-
13	Mr. Shaheer Mohammed		Development of multi-stage RO system for improved water purification and water recovery	-
14	Ms. Athulya Maravattikal		Effect of hydraulic retention time on the performance of a membrane bioreactor	Dr. Suja R (Co-guide) GEC, Barton Hill, Trivandrum
15	Ms. Sreepriya Pramod		Photo-oxidative degradation of acidic and basic dyes in mono and multi component dye system	
16	Mr. Sanjit Gayan		Urea removal using thin-film nanocomposite reverse osmosis membrane	Prof. T. Pradeep, IITM (MSc Project)
17	Mr. Saptarshi Bose		Fate of brilliant green dye degradation using emerging hybrid advanced oxidation processes in the presence of secondary pollutant Eosin yellow	Dr. Animesh (Main guide) NIT Agartala
18	Ms. Anwesha Mukhopadhyay		Degradation of toxic dyes from single and binary system by hybrid sonocatalytic/microwave-persulfate oxidation: toxicity and cost analysis	
19	Mr. Adarsh T V	July, 20 to May 2021	Removal of pharmaceutical compounds from water by photocatalysis	-
20	Mr. Rushabh Sakhalikar		ANN modelling in adsorption of multicomponent aqueous solution	-
21	Ms. P. Lakshmi Sarvani		Analysis of membrane fouling in TFC and TFN membranes	Co-Guide (Dr. Abhijit Chaudhuri, AM, IITM)

Projects Handled

S. No	Name of the project	Funding Agency	Investigator(s)	Cost, Duration & Status
Sponsored Research Projects:				
1	Combination of zero-valent iron and photo-Fenton processes for poultry wastewater treatment	Faculty Research Grant (FRG) of NIT Calicut	Dr. S. Mathava Kumar (PI)	Rs. 5,00,000 (2011-2013) **Completed**
2	Antibiotics removal from wastewater using membrane-photocatalytic slurry reactor System (SERC/ET-310/2011)	SERB, DST		Rs. 21,80,000 (2013-2016) **Completed**
3	Bio-toxic emerging contaminants removal	NFIG Scheme, ICSR, IIT Madras		Rs. 5,00,000 (2014-2016) **Completed**

4	PPCPs removal in sPMR & development of bio-toxicity assessment protocol	NFGS, ICSR, IIT Madras		Rs. 26,00,000 (2015-2018) **Completed**
5	PPCP removal and their bio-toxicity assessment in MBR with immobilized-biomass and carrier supported biomass	WTI, DST		Rs. 34,75,000 (2016-19) **Completed**
6	Biomass to energy from low strength municipal wastewater using a new microalgal-Anaerobic-membrane-bioreactor(s)	SPARC, DST	Dr. S. Mathava Kumar (PI) Prof. Huu-Hao Ngo (UTS, Sydney Australia)	Rs. 49,50,746 (2019-2021) Ongoing
7	Development of novel water and wastewater treatment technology	Shastri-Indo Canadian Institute (SICRG Grant)	Dr. S. Mathava Kumar (PI) Prof. Gopal Achari (Univ. Calgary, Canada)	Rs. 10,00,000 (2020-22) Ongoing
8	Use of overburden clay as alternate for coarse aggregate	Ministry of Mines	Dr. Ramamurthy (PI) Dr. Robinson Dr. S. Mathava Kumar	Rs. 173,00,000 (2018-21) Ongoing
9	Nano materials - RO antifouling membrane formulations for water desalination	Indo-Egypt Joint project, DST	Dr. Raghuram Chetty (PI) Dr. S. Mathava Kumar	Rs. 6,30,000 (2016-2018) **Completed**
10	Environmental Antimicrobial Resistance – Creation of a Region Specific Metagenomic Database and Strategies for Halting the propagation of AMR	Indian Council of Medical Research (ICMR)	Dr. Indumathi Nambi (PI) Dr. S. Mathava Kumar	Rs. 1,23,54,340 (2018-2021) ongoing
11	Green Rameswaram	Rural Technology Action Group (RuTAG), IITM	Dr. Ligy Philip (PI) Dr. B.S. Murty Dr. S. Mathava Kumar	Rs. 1,00,000 (2015-16)
Consultancy Projects:				
14	Process Documents for Improvement of Water Supply System in Bhagalpur Municipal Corporation (Bwsp-02), Bihar - Proof Checking	VA Tech WABAG Ltd.	Dr. S. Mathava Kumar (PI)	Rs. 2,12,400 (Dec, 2020)
13	Proof-Checking the design of 180 KLD Grey-water and 110 KLD Black-water treatment plants based on MBBR technology	Pollucare Engineers India Pvt Ltd.		Rs. 1,77,000 (Sep-Nov, 2020)
12	Assessment of Hazardous Waste Management and Air Quality Management at M/s Madras Fertilizer Limited (MFL)	MFL, Manali, Chennai		Rs. 11,12,150 (Aug-Oct, 2020)
11	Vetting the design of 1 MLD sewage treatment plant at Selvachinthamani Lake, Coimbatore	Sree Saravana Engineering Bhavani Pvt. Ltd.		Rs. 1,94,700 (May-Sep, 2020)
10	Vetting the design of 4 MLD sewage treatment plant (STP) at Periyakulam Lake, Coimbatore	S Kadirvel and Company		Rs. 1,94,700 (May-Sep, 2020)
9	Proof checking of civil engineering documents and drawings for development of sewerage treatment plant in Digha and Kankarbagh Zones of Patna, Bihar	VA Tech WABAG Ltd.		Rs. 4,24,800 (2020-21)
8	Evaluation of the performance of STP and ETP in TICEL Bio Park Limited, Chennai	TICEL Bio Park Limited, Chennai		Rs. 2,47,800 (2019-20)
7	Recommendation of setting-up of STP and TTRO for Kancheepuram Municipality	TWAD Board		Rs. 3,06,800 (2017-18)
6	Performance assessment of Hosur-Sipcot Water Treatment Plant and Suggestion for upgradation	TWAD Board		Rs. 1,53,400 (2017-18)
5	Vetting the design of the effluent treatment plant (ETP) for ITC at Kapurthala, Punjab	L & T Constructions	Dr. S. Mathava Kumar (PI) Dr. Venu Chandra	Rs. 2,50,000 (2018-19)

4	Study for a suggestion of new system for effluent treatment	Manali Petrochemical Ltd.	Prof. S. Mohan (PI) Dr. S. Mathava Kumar	Rs. 6,74,000 (2015-16)
3	Preparation of technical report for assessing the level of contamination in environmental in and around the solid waste dumping sites at Perungudi	Tamilnadu Urban Infrastructure Financial Services Limited	Dr. Indumathi Nambi (PI) Dr. S. Mathava Kumar Dr. Dali Naidu Arnepalli	Rs. 35,40,000 (2017-18)
2	Preparation of technical report for assessing the level of contamination in environmental in and around the solid waste dumping sites at Kodungaiyur	Tamilnadu Urban Infrastructure Financial Services Limited	Dr. Indumathi Nambi (PI) Dr. S. Mathava Kumar Dr. Dali Naidu Arnepalli	Rs. 35,40,000 (2017-18)
1	Real-time marine water quality and sediment quality monitoring system for Jawaharlal Nehru Port trust	JNPT, Mumbai	Dr. Shiva Nagendra (PI) Dr. S. Mathava Kumar Dr. Soumendra Nath Kuiry	Rs. 2,44,19,840 (2018-2021) ongoing

Conference/Courses/Workshops/Training Programme Organized:

1. Faculty Development Programme (**FDP**) on "Emerging Contaminants: Analysis, Fate, Treatment and Modelling", 09th to 13th July, 2012 at NIT Calicut, Kerala, India.
2. Faculty Development Programme **(FDP)** on "Modelling Techniques for Environmental and Hydrological Systems (MTEHS-2013)", 08th to 14th Dec, 2013 at NIT Calicut, Kerala, India.
3. **National Workshop** on "Water, Air and Soil: Sampling and Analysis (WASSA-2014)", 11th and 12th March, 2014 at NIT Calicut, Kerala, India.
4. **National Seminar** on "Thermal and other Techniques for Waste Management", 06th to 08th March, 2014 at NIT Calicut, Kerala, India.
5. **Training Programme** on "Investigation, remediation and Management of soil and groundwater Contaminated sites", 07th to 09th, Jan, 2016, IIT Madras, Chennai, India.
6. Continuing Education program (**CEP**) on "Advanced Wastewater Treatment (AWT-2017)", 6-11, March, 2017, IIT Madras, Chennai, India.
7. Continuing Education program (**CEP**) on "Membrane Technologies for Water and Wastewater Treatment (MTWW-2018)", 12-17, Nov, 2018, IIT Madras, Chennai, India.
8. **GIAN Course** "Membrane Bioreactors for Sustainable Wastewater Treatment and Bioenergy Production", 14-20, Nov, 2018 (Foreign Faculty: **Prof. Hao-Huo Ngo**, University of Technology Sydney (UTS), Australia).
9. **GIAN Course** "Algal and Bacterial Bioreactor Systems Design for Sustainable Wastewater Treatment", (Foreign Faculty: **Prof. Chandra Theegala**, Dept. of Biological and Agricultural Engg., Louisiana State University (LSU), USA; **Approved by APEX Body**).
10. **GIAN Course** "Advanced Biological Processes for Nitrogen Removal from Aqueous Systems", (Foreign Faculty: **Prof. Jih-Gaw Lin**, National Chiao Tung University (NCTU), Taiwan; **Approved by APEX Body**).

Publications

- H – Index **- 23**
- SCI Citation: Scopus - > **1950**; Google Scholar - >**2400** (as on Feb, 2020)

Book/Book Chapter

1. Manjunath S V, **Mathava Kumar* (2020)**, Removal and Recovery of Nutrients Using Low-cost Adsorbents from Single-component and Multi-component Adsorption Systems, Wenshan Guo; Huu Hao Ngo; Rao Y Surampalli; Tian C Zhang (Eds), Recovery and Reuse of Resource and Energy, In Press (ISBN: 978-3527347223).
2. Ashok, M.I., **Mathava Kumar* (2020),** Anaerobic membrane reactors for biohydrogen production, Ngo, H.H., Guo, W., Ng, H.Y., Mannina G., Pandey, A. (Eds), Advanced Membrane Separation Processes for Sustainable Water and Wastewater Management - Anaerobic Membrane Bioreactor Processes and Technologies in Current Developments in Biotechnology and Bioengineering, Elsevier, 367-397. (ISBN: 978-0-12-819852-0).
3. Girijan, S. and **Mathava Kumar* (2020),** Microbial degradation of pharmaceuticals and personal care products from wastewater, Shah, Maulin P. (Ed.), Microbial Bioremediation & Biodegradation, Springer, 173-201 (ISBN: 978-981151812-6).
4. Inigo J., Sudeeptha G, Tripathy B.K., Sithik Ali, M.A, **Mathava Kumar** (2020). Algal-bacterial symbiosis and application in wastewater treatment, Maulin P. Shah, Susana Rodriguez-Couto, S. Sevinç Şengör (Eds.), Emerging Technologies in Environment Bioremediation, Elsevier, 341-372. (ISBN: 978-0-12-819860-5)
5. Revathy R, Vinisha, B., **Mathava Kumar**, Raghuram Chetty (**2019**), Surface Modification of RO Desalination Membrane Using ZnO Nanoparticles of Different Morphologies to Mitigate Fouling, Vincenzo Naddeo, Malini Balakrishnan, Kwang-Ho Choo (Eds), Frontiers in Water-Energy-Nexus-Nature-Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability, Springer, 183-185 (ISBN : 978-3-030-13068-8)
6. Inigo, J., Sithik Ali, M.A., **MathavaKumar (2019)**, Cyanobacteria/Microalgae for Distillery Wastewater Treatment-Past, Present and the Future, Maulin P. Shah and Susana Rodriguez-Couto (Eds), Microbial Wastewater Treatment, **Elsevier, 195-236**. (ISBN: 978-0-12-816809-7).
7. **Mathava Kumar,** Achlesh Daverey, Ji-Dong Gu, Jih-Gaw Lin (**2017**), Anammox processes, Lee, D.J., Jegatheesan, J., Ngo, H.H., Hallenbeck, P.C., Pandey, A. (Eds.), IVA: Biological Treatment of Industrial Effluents, Current Developments in Biotechnology Bioengineering, **Elsevier, 387-407**.
8. **Mathava Kumar,** Ligy Philip **(2017),** Microbes induced remediation of endosulfan contaminated system, S. N. Singh (eds.), Microbe-induced degradation of pesticides, Environmental Science and Engineering (Subseries: Environmental Science), **Springer**, Germany, pp 59-81.
9. **Mathava Kumar (2013),** Biodegradation of Emerging Contaminants by Composting, T. Vicent et al. (eds.), Emerging Organic Contaminants in Sludges: Analysis, Fate and Biological Treatment, The Handbook of Environmental Chemistry, **Springer-Verlag** Berlin Heidelberg, Vol (24), 113-136. (ISSN: 1867-979X; ISBN 978-3-642-35608-7)).
10. **Mathava Kumar**, Jih-Gaw Lin (**2011**), "Co-composting of Food Waste and Green Waste in Pilot-Scale Systems: In-vessel and Windrow Investigations", Antoni Sanchez Ferrer (Eds.), Dynamic Soil, Dynamic Plant 5 (Special issue 2), Global Science Books, Japan, 127-133.

❖ International Journals

68. Neghi, N., Gayathri, R and **Mathava Kumar*** (2021), Synthesis and application of CS-GO composite and GAC-TiO_2 for adsorptive and photocatalytic removal of antibiotics, J. Hazardous Toxic Radioactive Waste Management (**Revision requested**).
67. Tripathy B.K., **Mathava Kumar***, (2021) Leachate treatment in sequential microwave-algal SBR photo-bioreactor: Effect of pretreatment on algal reactor performance and biomass productivity, Waste Management (**Revision requested**).
66. Manjunath S V, and **Mathava Kumar*** (2021), Simultaneous removal of antibiotic and nutrients via Prosopis juliflora activated carbon column: Performance evaluation, effect of operational parameters and breakthrough modeling, Chemosphere, 262, 127820.
65. Manjunath SV., Tripathy B. K., **Mathava Kumar***, Sreepriya Pramod (2020), Simultaneous degradation of anionic and cataionic dyes from multi-dye system using falling film photoreactor: performance evaluation, kinetic and toxicity analysis, J. Environ. Chem. Engg., (**Online**).
64. Tripathy, B.M., Sumit Kumar, **Mathava Kumar*** and Animesh Debnath (2020), Microwave induced catalytic treatment of brilliant green dye with carbon doped zinc oxide nanoparticles: Central composite design, toxicity assessment and cost analysis, Environ. Nanotechnol. Monitor. Management (**Online)**.
63. Johnson, I and **Mathava Kumar*** (2020), Electrochemical Oxidation of Distillery Wastewater by Dimensionally Stable Ti-RuO_2 anodes, Environmental Technology Innovation, 33, (**Online**).
62. Revathy Rajakumaran, **Mathava Kumar***, Raghuram Chetty, (2020), Morphological effect of ZnO nanostructures on desalination performance and antibacterial activity of thin-film nanocomposite (TFN) membrane, Desalination, 495, 114673.
61. Minh Hang Do, Huu Hao Ngo, Wenshan Guo, Soon Woong Chang, Dinh Duc Nguyen, Yiwen Liu, Sunita Varjani, **Mathava Kumar** (2020), Microbial fuel cell-based biosensor for online monitoring wastewater quality: A critical review, Science of the Total Environment., 135612 (https://doi.org/10.1016/j.scitotenv.2019.135612).

60. Tripathy, B.M., Johnson, I and **Mathava Kumar*** (2020), Melanoidin removal in multi-oxidant supplemented microwave system: optimization of operating conditions using response surface methodology and cost estimation, J. Water Process Engineering, 33, (**Online**).
59. Manjunath S V, Ranu Singh Baghel and **Mathava Kumar*** (2020), Antagonistic and Synergistic Analysis of Antibiotic Adsorption on Prosopis Juliflora Activated Carbon in Multi-component Systems, Chemical Engineering Journal, 381 (**Online**).
58. Chinnaiyan, P., Thampi, S.G., **Mathava Kumar***, Balachandran, M. (2019), Photocatalytic treatment of Amiodarone and Levetiracetam in pharmaceutical industry effluent: Process optimization using response surface methodology, Desalination Water Treatment, 170, 253-264.
57. Girijan, S. and **Mathava Kumar*** (2019), Immobilized Biomass Systems: An Approach for Complex Wastewater Treatment and Environmental Remediation, Current Opinion Environmental Science Health, 12, 18-29.
56. Manjunath S V, Ranu Singh Baghel and **Mathava Kumar*** (2019), Performance Evaluation of Cement-Carbon Composite for Adsorptive Removal of Acidic and Basic Dyes from Single and Multi-component Systems, Environmental Technology Innovation, 16, (**In Press**).
55. Revathy Rajakumaran, Vinisha Boddu, **Mathava Kumar**, Marwa S Shalaby, Heba Abdallah, Raghuram Chetty (2019), Effect of ZnO morphology on GO-ZnO modified polyamide reverse osmosis membranes for desalination, Desalination, 467, 245-256.
54. Marwa Shalaby, Heba Abdallah, Raghuram Chetty, **Mathava Kumar**, Ahmed Shaban (2019), Silver Nano-Rods: Simple Synthesis and Optimization by Experimental Design Methodology, Nano-Structures & Nano-Objects, 19, 100342**.**
53. Murugan. M., Krishnan, C.R., Santhanam, M., Rangarajan, M., **Mathava Kumar** (**2019**), Heavy Metals Removal and Leaching from Pervious Concrete Filter: Influence of Operating Water Head and Reduced Graphene Oxide Addition, ASCE Journal Environmental Engineering, 145(9), 04019049**.**
52. Raju, A.C., Yadav, M.S.P., **Mathava Kumar*** (2019), Sulfamethoxazole Removal in Membrane-photocatalytic Reactor System - Experimentation and Modelling, Environ. Technol., 40(13), 1697-1704.
51. Tripathy, B.M., Ramesh , G., Debnath, A., **Mathava Kumar** (2019), Mature Landfill Leachate Treatment Using Sonolytic-Persulfate/Hydrogen Peroxide Oxidation: Optimization of process parameters, Ultrasonics Sonochemistry, 54, 210-219.
50. Tripathy, B.M., **Mathava Kumar** (2019), Sequential coagulation/flocculation and microwave- persulfate processes for landfill leachate treatment: assessment of bio-toxicity, effect of pretreatment and cost-analysis, Waste Management, 85, 18-29.
49. D. Cheng, H. H. Ngo, W. S. Guo, S. W. Chang, D. D. Nguyen, **Mathava Kumar**, (2019), Microalgae biomass from swine wastewater and its convention to bioenergy, Bioresource Technology, 275, 109-122.
48. Neghi, N., **Mathava Kumar**, Burkhalov, D (2019), Synthesis and application of stable, reusable TiO_2 polymeric composites for photocatalytic removal of metronidazole: Removal kinetics and density functional analysis, Chemical Engg. Journal., 359, 963-975.
47. Chinnaiyan, P., Thampi, S.G., **Mathava Kumar***, Balachandran, M. (2018),Photocatalytic degradation of Metformin and Amoxicillin in synthetic hospital waste water- Effect of Classical parameters, Int. J. Environ. Sci. Technol. **Online**, (**https://doi.org/10.1007/s13762-018-1935-0**).
46. Cheng, D., Ngo, H.H.,* Guo, W., Chang, S.W., Nguyen, D.D., **Mathava Kumar**, Du, B., Wei, Q., Wei, D. (2018), Problematic effects of antibiotics on anaerobic treatment processes in swine wastewater, Bioresource Technology, 263, 642-653.
45. Yadav, M.S.P., Neghi, N, **Mathava Kumar***, Varghese, G.K (2018), Photocatalytic-oxidation and photo-persulfate-oxidation of sulfadiazine in a laboratory-scale reactor: Analysis of catalyst support, oxidant dosage, removal-rate and degradation pathway, J. Environ. Mange., 222, 164-173.
44. Muthu, M, Santhanam, M, **Mathava Kumar** (2018), Pb removal in pervious concrete filter: Effects of accelerated carbonation and hydraulic retention time, Construction Building Materials, 174, 224-232.
43. Chinnaiyan, P., Thampi, S.G., **Mathava Kumar***, Mini, K.M. (2018), Pharmaceutical products as emerging contaminant in water: Relevance for developing nations and identification of critical compounds for Indian environment, Environ. Monit. Assess., **190(5):288 (https://doi.org/10.1007/s10661-018-6672-9)**.
42. Manjunath S V and **Mathava Kumar*** (2018), Evaluation of Single-component and Multi-Component Adsorption of Metronidazole, Phosphate and Nitrate on Activated Carbon from Prosopis Juliflora, Chem. Engg. Journal., 346, 525-534.
41. Neghi, N., Krishnan, N.R., **Mathava Kumar*** (2018), Analysis of metronidazole removal and micro-toxicity in photolytic systems: Effects of persulfate dosage, anions and reactor operation-mode, J. Env. Chem. Engg., 6(1), 754-761.
40. Tripathy, B.K, **Mathava Kumar***, (2017), Suitability of microwave and microwave-coupled systems for landfill leachate treatment: An overview, J Env. Chem. Engg., 5(6), 6165-6178.
39. Manjunath S V and **Mathava Kumar***, Ngo, H.H., Guo, W. (2017), Analysis of Metronidazole Removal in Powder Activated Carbon and Concrete Containing Graphene Adsorption Systems by Kinetic, Equilibrium and

Thermodynamic Parameters and Optimization of Adsorption by Central Composite Design, J. Env. sci and Health A, 52(14), 1269-1283.

38. Neghi M and **Mathava Kumar*** (2017), Performance analysis of photolytic, photocatalytic and adsorption systems in the degradation of metronidazole on the perspective of removal rate and energy consumption, Water, Air & Soil Pollution, 228(9), 339.
37. M A Vishnuganth, Neelancherry Remya, **Mathava Kumar***, N. Selvaraju (2017), Carbofuran removal in continuous-photocatalytic reactor: Reactor Optimization, rate-constant determination and carbofuran degradation pathway analysis, J Env. Sci. Health B, 52(5), 353-360.
36. M A Vishnuganth, Neelancherry Remya, **Mathava Kumar***, N. Selvaraju (2016), Photocatalytic degradation of carbofuran by TiO_2-coated activated carbon: Model for kinetic, electrical energy per order and economic analysis, J. Environ. Manage., 181, 201-207.
35. Raju C Asha, **Mathava Kumar*** (2015), Sulfamethoxazole in Poultry wastewater: Identification, Treatability and Degradation Pathway Determination in a Membrane-Photocatalytic Slurry Reactor, J. Environ. Sci. Health A , 50(10), 1011-1019.
34. Raju C Asha, M. A. Vishnuganth, Remya Neelancherry, N. Selvaraju, **Mathava Kumar*** (2015), Comparison of batch and continuous photocatalytic systems for livestock wastewater treatment, Water, Air & Soil Pollution, 226(5), 132.
33. M. A. Vishnuganth, S Rangabhashiyam, Neelancherry Remya, **Mathava Kumar***, N. Selvaraju (2015), Optimization of GAC supported TiO_2 photocatalytic process for competent carbofuran removal from an aqueous system, J. Scientific and Industrial Research, 74(4), 225-231.
32. Asha C Raju, **Mathava Kumar*** (2015), "Photo-catalytic degradation of Poultry Wastewater using Activated Carbon supported Titanium Dioxide" Desalination Water Treatment, 54(12), 3279-3290.
31. **Mathava Kumar**, Pei-Yun Lee, Toshikazu Fukusihma, Liang-Ming Whang, Jih-Gaw Lin (2012), "Effect of supplementary carbon addition in the treatment of low C/N High-technology industrial wastewater by MBR", Bioresource Technology, 113, 148-153.
30. Hong-Bang Cheng, **Mathava Kumar**, Jih-Gaw Lin (2012), "Interpretation of redox potential variation during biological denitrification using linear non-equilibrium thermodynamic model", International Biodeterioration and Biodegradation, 67, 28-39.
29. Li-An Lu, Ying-Shih Ma, **Mathava Kumar**, Jih-Gaw Lin (2011), "Photo-Fenton pretreatment of carbofuran – Analyses via experimental design, detoxification and biodegradability enhancement", Separation and Purification Technol., 81(10), 325-331.
28. Chih-Cheng Wang, **Mathava Kumar**, Chien-Ju Lan, Jih-Gaw Lin (2011), Real-time Landfill-leachate Treatment by Simultaneous Partial Nitrification, Anammox and Denitrification (SNAD) process, Desalination Water Treatment, 32, 4-9.
27. **Mathava Kumar**, Wei-Chih Liao, Jen-Chieh Tsai, Jih-Gaw Lin (2011), "Versatility of fluorene metabolite (phenol) in fluorene biodegradation by a sulfate reducing culture", International Biodeterioration and Biodegradation, 65(3), 522-526.
26. Neelancherry Remya, **Mathava Kumar***, S Mohan, Rafig Azzam (2011), "Influence of organic matter and solute concentration on nitrate sorption in batch and diffusion cell experiments", Bioresource Technol., 102(9), 5283-5289.
25. J. C. Lan, **Mathava Kumar**, Shao-Chien Huang, Jih-Gaw Lin (2011), Influence of membrane flux on the performance of a pilot-scale membrane bioreactor treating low C/N wastewater, Florida Water Resources Journal, Jan 2011, 8-9.
24. Chien-Ju Lan, **Mathava Kumar**, Chih-Cheng Wang, Jih-Gaw Lin (2011), Development of simultaneous partial nitrification, anammox and denitrification (SNAD) process in a sequential batch reactor, Bioresource Technol. 102(9), 5514-5519.
23. Li-An Lu, Ying-Shih Ma, **Mathava Kumar**, Jih-Gaw Lin (2011), "Photochemical degradation of carbofuran and elucidation of removal mechanism", Chem. Engg. Journal, 166, 150-156.
22. Li-An Lu, Ying-Shih Ma, **Mathava Kumar**, Jih-Gaw Lin (2010), "Influence of pH and H2O2 dosage on the decomposition of carbofuran during the photo-Fenton process", Sustain. Environ. Res., 20(5), 1-5.
21. **Mathava Kumar**, Jih-Gaw Lin (2010), "Review: Co-existence of anammox and denitrification for the simultaneous nitrogen and carbon removal – strategies and issues", J. Haz. Materials, 178(1-3), 1-9.
20. Hsiu-Feng Hsu, Yu-Sheng Jhou, **Mathava Kumar**, Ying-Shih Ma, Jih-Gaw Lin (2010), "Simultaneous sulfate reduction and copper removal by a PVA-immobilized sulfate reducing bacterial culture", Bioresource Technol. 101(12), 4354-4361.
19. **Mathava Kumar**, Yan-Liang Ou, Jih-Gaw Lin (2010), "Co-composting of food waste and green waste at low C/N", Waste Management, 30(4), 602-609.
18. Hsiao-Fen Cheng, **Mathava Kumar**, Jih-Gaw Lin (2010), "Assessment of di-(2-ethylhexyl) phthalate (DEHP) removal in attached growth and suspended growth biological treatment systems of a municipal sewage treatment plant", Separation Science Technol., 45, 221-227.

17. Chih-Cheng Wang, Po-Heng Lee, **Mathava Kumar**, Yu-Tzu Huang, Shihwu Sung, Jih-Gaw Lin (2010), "Simultaneous partial nitrification, anaerobic ammonium oxidation and denitrification (SNAD) in a full-scale landfill-leachate treatment plant", J. Haz. Materials, 175(1-3), 622-628.
16. Jen-Chieh Tsai, **Mathava Kumar**, Sue-Min Chang, Jih-Gaw Lin (2009), "Determination of optimal phenanthrene, sulfate and biomass concentrations for anaerobic biodegradation of phenanthrene by sulfate-reducing enrichment culture and elucidation of metabolic pathway" J. Haz. Materials, 171(1-3), 1112-1119.
15. Ying-Shih Ma, **Mathava Kumar**, Jih-Gaw Lin (2009), "Degradation of carbofuran-contaminated water by Fenton process", J. Environ. Sci. Health A, 44, 914-920.
14. Hsiu-Feng Hsu, **Mathava Kumar**, Ying-Shih Ma, Jih-Gaw Lin (2009), "Extent of precipitation and sorption during copper removal from aqueous solution by sulfate reducing bacteria", Environmental Engineering Science, 26(6), 1087-1096.
13. Jen-Chieh Tsai, **Mathava Kumar**, Jih-Gaw Lin (2009), "Anaerobic Biotransformation of fluorene and phenanthrene by sulfate reducing bacteria and identification of biotransformation pathways" J. Haz. Materials, 164, 847-855.
12. **Mathava Kumar**, Pei-Chi Wu, Jen-Chieh Tsai, Jih-Gaw Lin (2009), "Biodegradation of soil applied polycyclic aromatic hydrocarbons by sulfate reducing bacteria", J. Environ. Sci. Health A, 44(1), 12-20.
11. Hsiao-Fen Cheng, **Mathava Kumar**, Jih-Gaw Lin (2008), "Degradation kinetics of di-(2-ethylhexyl) phthalate (DEHP) and organic matter of sewage sludge during in-vessel composting", J. Haz. Materials, 145(1-3), 55-62.
10. Hsiao-Fen Cheng, **Mathava Kumar**, Jih-Gaw Lin (2008), "Assessment of di-(2-ethylhexyl) phthalate (DEHP) in municipal and industrial sludges of Taiwan by supercritical fluid extraction (SFE) and gas chromatography with electron ionization detection", Separation Science and Technology, 43, 132-146.
9. Li-An Lu, **Mathava Kumar**, Jen Chieh Tsai, Jih-Gaw Lin (2008), "Evaluation and optimization of High-rate Composting of Barley Dregs with Sewage Sludge in a Pilot Scale Bioreactor", Bioresource Technology, 99, 2210-2217.
8. Chieh Tsai, **Mathava Kumar**, Chen, S.Y., Jih-Gaw Lin (2007), "Nano-Bubble Flotation with Chemical Coagulation for the Treatment of Chemical Mechanical Polishing Wastewater", Separation and Purification Technol., 58, 61-67.
7. Hong-Bang Cheng, **Mathava Kumar**, Jih-Gaw Lin (2007), "Development of Linear Irreversible Thermodynamic Model for Oxidation Reduction Potential in Environmental Microbial System", Biophysical Journal, 93(3), 787-794.
6. **Mathava Kumar**, Ligy Philip (2007). "Biodegradation of endosulfan contaminated soil in a pilot scale reactor – bioaugmented with mixed bacterial culture". J. Environ. Sci. Health B, 42(6), 707-715.
5. Madhubabu, **Mathava Kumar**, Ligy Philip, Venkobacher (2007). "Treatment of carbofuran bearing wastewater using UASB process", J. Environ. Sci. Health B, 42(2), 189-199.
4. **Mathava Kumar**, Ligy Philip (2006). "Endosulfan mineralization by bacterial isolates and possible degradation pathway determination" Bioremediation Journal, 10(4), 179-190.
3. **Mathava Kumar**, Ligy Philip (2006), "Bioremediation of endosulfan contaminated soil and water - optimization of operating conditions in laboratory scale reactors", J. Haz. Materials, 136(2), 354-364.
2. **Mathava Kumar**, Ligy Philip (2006), "Enrichment and isolation of endosulfan degrading mixed bacterial culture", J. Environ. Sci. Health B, 41(1), 81-96.
1. **Mathava Kumar**, Ligy Philip (2006), "Sorption characteristics of hydrophobic pesticide endosulfan in four Indian soils", Chemosphere, 62(7), 1064 - 1077.

❖ International Conferences

39. Yadav, M.S.P., **Mathava Kumar**, Varghese, G.K (2019), Pharmaceutical wastewater treatment by OH and sulfate radical based advanced oxidation process (AOP's), IWA Water and Development Congress & Exhibition, 1-5 Dec, 2019, Colombo, Sri Lanka. (**Poster presentation**)
38. Sumit Kumar, Animesh Debnath, **Mathava Kumar** (2019), Application of Hybrid-Photo-Reactor for Methylene Blue Removal, at the Indo-German Bilateral Workshop on Membrane for Water and Energy (IGWMWE-2019), 18-20, February, 2019, CSIR-CSMCRI, Bhavnagar, Gujarat, India.
37. Rajakumaran, R., Vinisha, B., **Mathava Kumar**, Chetty, R., (2019), Fabrication of Graphene Oxide-Zinc Oxide Nanocomposite Reverse Osmosis Membrane for Water Desalination' at the Indo-German Bilateral Workshop on Membrane for Water and Energy (IGWMWE-2019), 18-20, February, 2019, CSIR-CSMCRI, Bhavnagar, Gujarat, India. (**Poster presentation**)
36. Vinisha, B., Rajakumaran, R., Chetty, R., **Mathava Kumar** (2018), GO-ZnO Modified Polyamide Reverse Osmosis Membrane with Improved Desalination Performance, 6th Regional Membrane Technology Conference, 10-13, Dec, 2018, Gujarat, India.
35. Rajakumaran, R., Chetty, R., **Mathava Kumar** (2018), Surface Modified Nano-Filtration Membrane with Titanium nanotubes for Rejection and Adsorption of Pharmaceutical Compounds, 6th Regional Membrane Technology Conference, 10-13, Dec, 2018, Gujarat, India.

34. Rajakumaran, R., Vinisha, B., **Mathava Kumar**, Chetty, R., (2018), Surface modification of RO desalination membrane using ZnO nanoparticles of different morphologies to mitigate fouling, 2nd Water Energy Nexus Conference, 14-17 November, 2018, Salerno, Italy.
33. Tripathy, B.K, Inigo, J, **Mathava Kumar** (2018), Melanoidin removal in microwave-persulfate oxidation system, CESE 2018, 4-8 November, 2018, Bangkok, Thailand.
32. Vinisha B, Chetty R, **Mathava Kumar** (2018), GO-ZnO nanocomposite for antifouling of reverse osmosis membrane in desalination, International Conference on Desalination (InDACON2018), NIT Trichy, 20-21, Apr, 2018.
31. Sudeeptha G, **Mathava Kumar** (2018), Metronidazole and Acetaminophen removal in batch bioreactors: Effect of MLSS, C/N ratio, Metronidazole and Acetaminophen, 2nd International Conference of Waste Management (RECYCLE2018), IIT Guwahati, 22-24, Feb, 2018.
30. Tripathy, B.K, Gayathri Ramesh, **Mathava Kumar**, (2018), Landfill leachate treatment using Sonolytic-Persulfate/hydrogen peroxide Oxidation, 2nd International Conference of Waste Management (RECYCLE2018), IIT Guwahati, 22-24, Feb, 2018.
29. Murugan Muthu, Manu Santhanam, **Mathava Kumar** (2017), Effect of hydraulic retention time on the filtration performance of porous concrete, 71st RILEM Week & International Conference on Advances in Construction Materials and Systems (ICACMS-2017), IITM, Chennai, India
28. Manjunath S V and **Mathava Kumar** (2017), Metronidazole Removal from Aqueous Solutıon Using Prosopis Juliflora Activated Carbon: Estimation of Kinetic, Equilibrium and Thermodynamic Parameters, International Conference on Environment, Health and Policy Nexus (ICEHPN2017), JSS University, Mysuru, 27-28, July, 2018.
27. Manjunath S V and **Mathava Kumar** (2016), Removal of Metronidazole from aqueous solution by adsorption, International conference on Water: From pollution to Purification, 12-14 Dec, 2016, MG University, Kottayam, India.
26. **Mathava Kumar** and Gattum Sowjanya Rani (2016), Metronidazole removal in freely-suspended-biomass and carrier-supported-biomass systems, 12th International Symposium on Southeast Asian Water Environment (SEAWE2016), 28-30, Nov, 2016, Hanoi, Vietnam.
25. Neghi N, **Mathava Kumar**, Metronidazole in a UV/TiO_2 photocatalytic system: Fate, removal and mineralization, 13th IWA Specialized conference on Small Water and Wastewater Systems, 14-16, Sep, 2016, Athens, Greece.
24. M A Vishnuganth, N Selvaraju, Mathava Kumar*, 'Granular Activated Carbon Supported Titanium Dioxide Photocatalytic Process for Carbofuran Removal', International Conference on Advances in Chemical Engineering (ICACE), 20-22, December 2015, NITK Surathkal, India.
23. Raju C Asha, **Mathava Kumar**, Antibiotic removal in membrane-photocatalytic slurry reactor: Optimization of hydraulic retention time, Second International Conference on Sustainable Urbanization (ICSU2015), 7-9 January, 2015, Hong Kong, China.
22. Asha C Raju, **Mathava Kumar**, Sulfamethoxazole Removal in a Granular Activated Carbon Immobilized TiO_2 (GAC-TiO_2) photocatalytic System, The 11th International Symposium on Southeast Asian Water Environment (SEAWE11), 26-28 Nov, 2014, AIT Bangkok, Thailand.
21. Asha C Raju, Sarat Chandra B, Adarsh Shukla, Varun Kumar Reja, Krishna Anish Adusumilli, Remya Neelancherry, **Mathava Kumar**, Photocatalytic Treatment of Poultry Wastewater by Hectorile-TiO_2 Aqueous Suspensions, International Conference on Chemical and Environmental Research (ICCER-2014), 11th and 12th March, 2014, Tiruchirappalli, Tamilnadu, India.
20. Asha. C. Raju, **Mathava Kumar,** Effect of Supported-Catalysts in the Treatment of Poultry Wastewater in a Photoreactor, International Symposium on Integrated Water Resources Management, IWRM 2014, 19-21 Feb, 2014, CWRDM, Calicut, Kerala, India.
19. Vishnuganth, Selvaraju, **Mathava Kumar,** Continuous-mode photocatalysis reactor operation for livestock wastewater treatment, International Symposium on Integrated Water Resources Management, IWRM 2014, 19-21 Feb, 2014, CWRDM, Calicut, Kerala, India.
18. Neelancherry Remya, Jih-Gaw Lin, **Mathava Kumar**, Performance evaluation of microwave assisted systems for degradation of carbofuran, International Symposium on Integrated Water Resources Management, IWRM 2014, 19-21 Feb, 2014, CWRDM, Calicut, Kerala, India.
17. Asha. C. Raju, **Mathava Kumar**, "Real-time Poultry Wastewater Treatment by Photocatalytic Process", The 5th IWA ASPIRE Conference, 8-12 Sep, 2013, Daejeon, Korea.
16. **Mathava Kumar**, Pei-Yun Lee, Jih-Gaw Lin (2011), "Effect of supplementary carbon addition in the treatment of low C/N High-technology industrial wastewater by MBR"**,** CESE-2011, 25-30 Sep, 2011, Tainan, Taiwan**.**
15. **Mathava Kumar**, Wei-Fen Yu, Jih-Gaw Lin (2011), Effect of sludge retention time (SRT) on extracellular polymeric substances (EPS) production and fouling rate in membrane bioreactor, MBR Asia 2011, 25-26 Apr, 2011, Kuala Lumpur, Malaysia.
14. Chien-Ju Lan, **Mathava Kumar**, Chih-Cheng Wang, Jih-Gaw Lin (2010), Development of simultaneous partial nitrification, anammox and denitrification (SNAD) process in a sequential batch reactor, CESE-2010, 28th Sep to 2nd Oct, Cairns, Australia.

13. Chih-Cheng Wang, **Mathava Kumar**, Chien-Ju Lan, Jih-Gaw Lin (2010), Real-time Landfill-leachate Treatment by Simultaneous Partial Nitrification, Anammox and Denitrification (SNAD) process, CESE-2010, 28th Sep to 2nd Oct, Cairns, Australia.
12. Neelancherry Remya, **Mathava Kumar**, S Mohan, Rafig Azzam (2010), Influence of organic matter and solute concentration in the nitrate sorption potential of three German soils: Comparison of batch and diffusion-cell experiments, CESE-2010, 28th Sep to 2nd Oct, Cairns, Australia.
11. J. C. Lan, **Mathava Kumar**, Shao-Chien Huang, Jih-Gaw Lin (2010), Influence of membrane flux on the performance of a pilot-scale membrane bioreactor treating low C/N wastewater, Florida Water Resources Conference, 16-19 May, 2010, Renaissance Orlando Resort at SeaWorld, Florida, USA.
10. Li-An Lu, **Mathava Kumar**, Jih-Gaw Lin (2009) Influence of H_2O_2 dosage in the decomposition of aqueous carbofurn by photo-fenton process, The 3rd IWA-ASPIRE Conference and exhibition, 18-22 Oct, 2009, Taipei, Taiwan.
09. Ying-Shih Ma, Jih-Gaw Lin, **Mathava Kumar**, Chih-Fang Sung, Chinh-Siang Yeh, Shih-Han Chang, and Chuan-Pin Hu, Study of the decomposition of carbofuran by Fenton and ultrasonic processes, International Symposium on Environmental Science and Technology (ISEST), 2009, Beijing, China.
08. Chih-Cheng Wang, **Mathava Kumar**, Yu-Tzu Huang, Jih-Gaw Lin, Enrichment of anaerobic ammonium-oxidizing bacteria from an anaerobic sequencing batch reactor treating swine wastewater, **10th Latin-American workshop and symposium on anaerobic digestion**, 19-23 Oct 2008, Eastern Island, Chile.
07. **Mathava Kumar**, Chi Ting Liu, Pei Lin Chang, Hsu Chuan Liu, Kon Tsu Kin and Jih-Gaw Lin, "A new flow reactor with UV, RO and continuous electrodeionization for the treatment of DMSO contaminated water", 8th IWA specialized conference on Small Water and Wastewater Systems (SWWS) and 2nd IWA conference on Decentralized Water and Wastewater International Network (DEWSIN), 2-6 Feb, 2008, Coimbatore, India.
06. Jen-Chieh Tsai, **Mathava Kumar**, Jih-Gaw Lin, "Biodegradation of fluorene and phenanthrene by sulfate reducing bacteria", 2nd IWA-ASPIRE Conference, 28th Oct- 1st Nov, 2007, Perth, Australia.
05. **Mathava Kumar S**, "Bioremediation of pesticide contaminated soils", International Conference on Biotechnology - Promises and Reality", PSGR Krishnammal College for Women, 14-15, Jul 2006, Coimbatore, India.
04. **Mathava Kumar S** and Ligy Philip, "Biodegradation of endosulfan in bench scale soil reactors by a mixed bacterial culture", ICEM 2005, 28-30 Oct 2005, Hyderabad, India.
03. **Mathava Kumar S** and Ligy Philip, "Effect of pH and supplementary carbon source on biodegradation of aqueous endosulfan", 1st IWA-ASPIRE conference, 10-15, July 2005, The Pan Pacific, Singapore.
02. **Mathava Kumar S** and Ligy Philip, "Role of supplementary carbon source, pH and inocculum size on Biodegradation of Endosulfan in aqueous environment", 2nd international conference on development of Southeast Asian water environment, 1-3, Dec. 2004, Hanoi, Vietnam.
01. **Mathava Kumar S**, Arun Kumar S, and Jayanthi R, "Environmental Reporting for Sustainable development", International symposium on restoration of lakes and wet lands (Lake 2000), 27-29 Nov 2000, Indian Institute of Science, Bangalore, India.

❖ National Conferences

7. Asha. C. Raju, Madem Sadhana, Pentakota Saran Kumar, R Sribhanupratap Rathod, Revanth Reddy Katta, **Mathava Kumar** (2013), "Real-Time Poultry Wastewater Treatment in a Photocatalytic System: Effect of UV Power and Catalyst Dosage", National Conference on Environmental Sustainability and Society: The Growing Paradigm Shift (ESS – 2013), 30 & 31 March, 2013, Jaypee University of Engineering & Technology, Madhya Pradesh, India.
6. Asha C Raju, Amit Pandey, Prashant Chedwal, Ravi Ranjan, Rohit Kumar, Rohit Tamta, **Mathava Kumar** (2013), "Application of Photo-Fenton Process for Poultry Wastewater Treatment", National Conference on Environmental Sustainability and Society: The Growing Paradigm Shift (ESS – 2013), 30 & 31 March, 2013, Jaypee University of Engineering & Technology, Madhya Pradesh, India.
5. **Mathava Kumar** and Ligy Philip. Biodegradation of endosulfan in both aqueous and soil systems. Symposium on Biological methods of waste treatment and management in south India, The New College, 15th Feb 2007, Chennai, India.
4. **Mathava Kumar** and Ligy Philip, "Endosulfan degradation by a mixed bacterial culture", First CUSAT national conference on Recent Advances in Civil Engg. (RACE-2004), 25-27, Mar 2004, Cochin University of Science and Technology, Kochi, India.
3. **Mathava Kumar** and Ligy Philip, "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 2004, National Institute of Hydrology, Roorkee, India.
2. **Mathava Kumar** and Kalaiarasan P, "Wastewater Management in Textile Industry - A Case study", National Conference on control of Industrial pollution and Environmental degradation, P.S.G College of Technology, 14-15 Sep 2001, Coimbatore, India.
1. **Mathava Kumar** and Meenambal T, "Ambient Air quality study in selected places of Tirupur", National Conference on Pollution control and industrial ecology, Thiagarajar College of Engineering, 27-28 Feb 2002, Madurai, India.

Awards and Honors

- Young Scientist Award (**YSA-2018**), Prof. Ananthakrishnan prize in Engineering and Technology in recognition of research contributions under Engineering & Technology Category, **Academy of Sciences, Chennai** (Awarded on 15th March, 2019).
- Young Faculty Recognition Award (**YFRA-2018**), For Excellence in Teaching and Research by **IIT Madras, Chennai**.
- **Received visiting fellowship (2020) from Melbourne School of Engineering**, Univ. of Melbourne (UoM), Australia for making research collaboration with UoM.
- **KTP-UTS fellowship (2016)** for visiting School of Civil and Environmental Engineering, Univ. of Technology Sydney (UTS), Australia and making key technology partnership (KTP) with UTS.
- Ministry of Science and Technology ***(MOST), Taiwan fellowship for Short-term visiting Scientist Scheme*** – to Visit Inst. of Environ. Engg., NCTU, Taiwan, 13th to 19th July, 2014.
- Member in three **Expert Committees of National Green Tribunal (NGT)** formed for pollution assessment.
- Awarded ***GE Ecomagination Excellence award for the best environmentally friendly ("green") PhD thesis*** in the specific area of ecological and environment protection for the year 2006 at the 43rd convocation of Indian Institute of Technology Madras, Chennai, India.
- **Best poster award** for the paper "Fabrication of Graphene Oxide-Zinc Oxide Nanocomposite Reverse Osmosis Membrane for Water Desalination' at the Indo-German Bilateral Workshop on Membrane for Water and Energy (IGWMWE-2019) held at CSIR-CSMCRI, Bhavnagar, Gujarat, India, 18-20, February, 2019.
- **Best paper award** for the paper "GO-ZnO nanocomposite for antifouling of reverse osmosis membrane in desalination" in the International Conference on Desalination (InDACON2018), NIT Trichy, 20-21, Apr, 2018.
- Awarded the second-best **poster** of the "Poster Presentation Competition" Organized by Civil Engineering Association, IIT Madras in Nov' 2003 and Feb' 2005.
- **Best paper award** (college category) for the paper "Environmental reporting for sustainable development" presented in Symposium on restoration of lakes and wetlands (LAKE 2000), organized by Indian Institute of Science (IISc), Bangalore, 27 – 29 of Nov 2000.
- **Scientific Committee Member, International conference CESE-2011**, 28th Sep to 2nd Oct, Tainan, Taiwan.
- **Session chair (two sessions), International conference CESE-2010**, 28th Sep to 2nd Oct, Cairns, Australia.
- **International advisory committee member**, for International Conference on "**Industrialization of Institutional Research on Phytomedicines**", PSGR Krishnammal College for Women, 8-9, Jan 2009, Coimbatore, India.
- **Session chair, International Conference on Biotechnology - Promises and Reality**, PSGR Krishnammal College for Women, 14-15, Jul 2006, Coimbatore, India.
- Biography published in **Marquis Who'sWho in the World** (26th edition onwards).
- Number of **PhD Thesis Reviewed - 22** (as Indian examiner and subject expert).
- **Reviewer for the following Journals:** (a) Bioresource Technology, (b) Journal of Hazardous Materials, (c) Chemical Engineering Journal, (d) Environmental Engineering Science, (e) International Biodeterioration and Biodegradation, (f) International J. of Env. Sci. and Technology, (g) J. of the Taiwanese Institute of Chemical Engineering, (h) Applied Biochemistry and Biotechnology, (i) Desalination and Water Treatment, (j) J. Environ. Sci and Health A, (k) Canadian Journal of Microbiology and Indian Journal of Microbiology, (l) Sadhana Journal, Current Science, (m) Current Science and (n) Institute of Engineers India, (o) Letters in Applied Microbiology, etc.

Educational Qualification:

Course	Institution	Year of Completion
PhD (Environmental Engg)	IIT Madras, Chennai	Jun, 2006
M.E (Environmental Engg)	Govt. College of Technology, Coimbatore (Bharathiar University)	May, 2002
B.E (Civil Engg)	Govt. College of Technology, Coimbatore (Bharathiar University)	Apr, 2000