**CURRICULAM VITAE**

**Dr. G. Arthanareeswaran FRSC**

 **CORRESPONDENCE ADDRESS**

: Professor

Group Leader, Membrane Research Laboratory

Department of Chemical Engineering,

National Institute of Technology Tiruchirappalli 620 015 (NITT), India

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**FELLOW**

 Fellow of the Royal Society of Chemistry (FRSC),

 Royal Society of Chemistry, UK

**QUALIFICATIONS**

**POST DOC POSITION**

Ph.D. Chemical Technology,

Allagappa College of Technology, Anna University, Guindy, Chennai, India

M.Tech. (Petroleum Refining and Petrochemicals)

Allagappa College of Technology, Anna University, Guindy, Chennai, India

B.Tech. (Chemical Engineering)

Coimbatore Institute of Technology, Coimbatore, Bharathidasan University, India

Department of Chemical Engineering, Monash University, Clayton, Australia

Department of Chemical Engineering, Loughborough University, UK

**CURRENT POSITION**

: Professor

Department of Chemical Engineering, National Institute of Technology

Tiruchirappalli 620 015, India

 **PREVIOUS RELEVANT EXPERIANCE**

Mar. 2018 to Present : Professor of Chemical Engineering,

National Institute of Technology, Tiruchirappalli (NITT), India

Nov. 2011 to Mar. 2018 : Associate Professor of Chemical Engineering,

National Institute of Technology, Tiruchirappalli (NITT), India

Nov. 2008 - Nov. 2011 : Assistant Professor of Chemical Engineering,

National Institute of Technology, Tiruchirappalli (NITT), India

Aug. 2007- Nov. 2008 : Lecturer of Chemical Engineering,

National Institute of Technology, Tiruchirappalli (NITT), India

April 2005 - Aug. 2007 : Lecturer of Chemical Engineering,

Allagappa College of Technology, Anna University, Chennai, India

July 2001 – April 2005 : Teaching and Research Associate,

Allagappa College of Technology, Anna University, Chennai, India

 **VISITING PROFESSIONAL EXPERIANCE**

30th January 2010 - 7th February 2010 : **Visiting Scientist**,

Department of Mechanical Engineering, University of Sao Paulo, Brazil.

1st June 2010 to 30th August 2010 : **Visiting Scientist,**

Department of Chemical Engineering, Loughborough University, UK

1st April 2011 to 30th August 2011 : **Visiting Scientist,**

Department of Chemical Engineering, Monash University, Clayton, Australia

10th October 2013 to 7th December 2013 : **Visiting Researcher,**

Advanced Membrane Technology Research Centre (AMTEC) Universiti Teknologi Malaysia (UTM),

Malaysia

7th March 2014 to 21st March 2014 : **Visiting Professor,**

Department of Environmental Engineering,

Konkuk University, SEOUL, 143-701, South Korea.

21st May 2015 to 14th June 2015 : **Visiting Research Professor,**

Advanced Membrane Technology Research Centre (AMTEC) Universiti Teknologi Malaysia (UTM),

Malaysia

10th May 2016 to 13th February 2017 : **Visiting Professor (Brainpool)**

Department of Environmental Engineering, Konkuk University, SEOUL, 143-701, South Korea

14 January to 20 January 2019 : **Visiting Professor,**

Department of Chemical Engineering,

Loughborough University, UK

20th Nov 2019 to 3th February 2020 : **Visiting Professor (Brainpool)**

Department of Environmental Engineering, Konkuk University, SEOUL, 143-701, South Korea

11th May 2022 to 26th May 2022 : **Visiting Professor**

Department of Biosystems Engineering

Faculty of Engineering

University of Szeged

Szeged, Hungary

 **AWARDS AND HONORS**

|  |  |
| --- | --- |
| **Name of the Award and year**  |  **Awarding Organization**  |
| 2017-Distinguished Scientist in Chemical Engineering | Venus Research Foundation, India  |
| 2017-Hiyoshi Environmental Award | Outstanding Research In the field of Environmental conservation, Hiyoshi Corporation, Japan. |
| 2017-Australian Awards Ambassador | Promote Australian education and Research in India**,** Australian Higher Commission, India.  |
| 2016-Brain Pool Fellowship  | Enhance the R&D level of Korea by injecting foreign scientists, KOFCT, Korea. |
| 2011-Endeavour Executive Award  | Brings leading researchers to Australia to undertake research and professional development, Government of Australia. |
| 2010-Research Exchange award  | India-UK Research collaboration, The Royal Academy of Engineering, UK. |
| 2007-Young Scientists award  | Awarded by Department of Science and Technology, India under Fast Track Scheme for sponsored project. |

**RESEARCH GRANTS**

|  |  |  |
| --- | --- | --- |
| **Year** | **Amount****(INR)** | **Project title and sponsored agency** |
| 2007-2009  | 700000 | Removal of Toxic Metal Ions using Polymeric MembranesSponsored by Department of Science and Technology, India |
| 2009-2011  | 1600000 | **Indo- Brazil Joint collaboration Research Project,** Development and application of inorganic membranes in the treated of wastewater of processing of sugarcane, Sponsored by DST, India- CNPq, Brazil |
| 2010  | €3000 Pounds | Ultrafiltration, concentration, inorganic salts, permeateSponsored by Royal Academy Of Engineering, London, UK |
| 2011  | 600000 | Current development on waste water treatment in India Sponsored by The Royal society, UK and DST, India |
| 2012-2015  | 2562000 | Novel Energy Production from Distillery Effluent Treatment byBioelectrochemical Method Sponsored by Department of Biotechnology, India |
| 2013-2016 | 3000000 | **Indo-Korea Joint Collaboration Research Project,**- Development of biofouling resistant membranes for waste water treatment Sponsored by DST, India and MST, Korea |
| 2018-2020  | 5000000 | **UKIERI Joint Collaborative Research Project,**- Training of Trainers towards capacity building in skills and education (ToT-CBSE) under MSDE-UKIERI Skills Thematic Institutional Partnership Sponsored by UKIERI, India |
| 2018-2021 | 2950000 | **INDO-HUNGARIAN Joint Collaborative Research Project,**- Development of a new approach in wastewater treatment with the self-cleaning membrane technology and regeneration of membranes via natural source for restoring water ecosystem Sponsored by DST, India |
| 2018-2021  | 2900000  | **ASEAN INDIA Joint Collaborative Research Project,**Reduction in greenhouse gas emission with synergistic mixed matrix membrane for CO2 separation Sponsored by ASEAN-India Science,Technology & Innovation Cooperation |

*G. Arthanareeswaran*

 **Industry- Academic partnership**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Funding agency** | **Industry**  | **Project title** | **Project amount****(INR)** | **Outcome**  |
| The Royal Academy of Engineering UK | Galaxy Research Technologies | Development of innovative solution to serve water technology for clean and sustainable water resources | 4991000  | Developed membrane filters with distribution of the pores with micro- and nano-dimensions for perfect filtration of polluted water. Demonstrated the innovative and cheapest membranes system for clean water supply. |

**Prototype Development Project with support of Industry**

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| --- | --- | --- | --- | --- |
| **Funding agency** | **Industry**  | **Project title** | **Project amount****(INR)** | **Outcome**  |
| MHRD,India | Freshara Picklz Exports and GENERAL TEKNIX | Solar-powered multi-effect membrane distillation for high water recovery andZLD | 1000000  | In India, the commercial availability of MD water modules is very limited and no industry has the technology to manufacture ME-VMD module. Hence, the prosperity of manufacturing startup and commercialization is very obvious. Rising awareness on environmental concern and stringent laws forces the desalination, petroleum, mining, food and power sector to go for ZLD at their premises. These industries will be the potential customer of this technology. |

**PUBLICATIONS**

|  |  |  |
| --- | --- | --- |
|  | **All** | **Since 2017** |
| **h-index** | 36 | 31 |
| **i10-index** | 96 | 88 |
| **Citations** | 4267 | 3118 |
|  ***Reference: Google scholar*** |

**ORCID:** [**orcid.org/0000-0002-6166-8018**](http://orcid.org/0000-0002-6166-8018)

 **ResearcherID: L-6341-2013**

1. M. A. B. Azali. A. Rushdan, L. T. Yogarathinam, A. .F. Ismail, **G. Arthanareeswaran**, M. K. N. Bin Ramli Impact of nanoclays on polyvinylidene fluoride mixed matrix membranes for the efficient treatment of oily-wastewater, *Micro and Nanosystems* 15, (**2023**).
2. S.A. Gokulakrishnan, Vikas Kumar, **G. Arthanareeswaran**, A. F. Ismail, and Juhana Jaafar. "Thermally stable nanoclay and functionalized graphene oxide integrated SPEEK nanocomposite membranes for direct methanol fuel cell application." *Fuel* 329 (**2022**): 125407.
3. S. E. Jigar, G. Veréb, Z.Pap, T. Gyulavári, Á. Ágoston, J. Kopniczky, C. Hodúr, **G. Arthanareeswaran**, S.A. Gokula Krishnan, Z.László. "Visible-light-driven photocatalytic PVDF-TiO2/CNT/BiVO4 hybrid nanocomposite ultrafiltration membrane for dairy wastewater treatment." *Chemosphere* (**2022**): 135589..
4. Sasikumar, B., and G. **Arthanareeswaran**. "Construction of selective gas permeation channels in polymeric membranes using nanocage tuned ionic liquid/MIL-53 (Al) filler nanoparticles for effective CO2 separation." *Journal of Natural Gas Science and Engineering* 106 (**2022**): 104728.
5. B. Sasikumar, Yohannan Subin Sabilon, **G. Arthanareeswaran**, Design, fabrication, and physicochemical characterization of polyamideimide membranes containing ZIF-8 and CMS particles for potential gas separation applications. *Fuel* 325 (**2022**): 124947.
6. B. Sasikumar, **G. Arthanareeswaran**, Concurrent enhancement of CO2-philic pathway and interfacial compatibilization in ZIF-67 based polysulfone membranes through [Bmim][Tf2N] for CO2 separation,

*Applied Surface Science*, 606, (**2022**): 154900.

1. Elakkiya, S., and **G. Arthanareeswaran**. "Hydrophilic nanoclay-polyaniline decorated membrane with improved permeability for separation of endocrine-disrupting chemical and fitness of fouling using model." *Journal of Industrial and Engineering Chemistry* 110 (**2022**): 234-247.
2. S.A. Gokula Krishnan, B. Sasikumar, **G. Arthanareeswaran**, Zsuzsanna László, Erika Nascimben Santos, Gábor Veréb, and Szabolcs Kertész. Surface-initiated polymerization of PVDF membrane using amine and bismuth tungstate (BWO) modified MIL-100 (Fe) nanofillers for pesticide photodegradation. *Chemosphere* (**2022**): 135286.
3. S. Sujithra, **G. Arthanareeswaran**. A novel asymmetric structured nanocomposite PEO-Cloisite based membrane for salt and dye separation*. Materials Letters:* X 14 **(2022**): 100141.
4. Deepa, K., and **G. Arthanareeswaran**. "Influence of various shapes of alumina nanoparticle in integrated polysulfone membrane for separation of lignin from woody biomass and salt rejection." *Environmental Research* 209 (**2022**): 112820.
5. Sasikumar, B., and **G. Arthanareeswaran**. "Interfacial design of polysulfone/Cu-BTC membrane using [Bmim][Tf2N] and [Dmim][Cl] RTILs for CO2 separation: Performance assessment for single and mixed gas separation." *Separation and Purification Technology* (**2022**): 121315.
6. G. Gopi, M. Premalatha, **G. Arthanareeswaran**. Transient mathematical modelling and investigation of radiation and design parameters on the performance of multi-effect solar still integrated with evacuated tube collector. *Energy Conversion and Management*: X 14 (**2022**): 100210.
7. S.A.Gokulakrishnan, **G. Arthanareeswaran**, G. Gnanasekaran, Advanced extraction and separation approaches for the recovery of dietary flavonoids from plant biomass: A review. *Biomass Conversion and Biorefinery* (**2022**).
8. L. T. Yogarathinam, P. S Goh, A. F. Ismail, **G. Arthanareeswaran**, N. A. Ahmad, A. Samavati, S. C. Mamah, M.N.Z.Abidin, B. Cheer Ng, B. Gopal, Nanocrystalline cellulose incorporated biopolymer tailored polyethersulfone mixed matrix membranes for efficient treatment of produced water, Chemosphere, 293 (**2022**) 133561,
9. Deepa, K., G. Gnanaselvan, **G. Arthanareeswaran**, Recovery of Lignin From Hot Water Prehydrolysis of Groundnut Shell and Sugarcane Bagasse Biomass Using Silane-Modified Nanofiller-Reinforced Polysulfone Membrane. *Biomass Conversion and Biorefinery* (**2022**).
10. Elakkiya, S., **G. Arthanareeswaran**, "Evaluation of membrane tailored with biocompatible halloysite‒polyaniline nanomaterial for efficient removal of carcinogenic disinfection by‒products precursor from water." *Environmental Research* 204 (**2022**): 112408.
11. Kavitha, E., E. Poonguzhali, D. Nanditha, Ashish Kapoor, **G. Arthanareeswaran**, and S. Prabhakar. "Current status and future prospects of membrane separation processes for value recovery from wastewater." *Chemosphere* 291 (**2022**): 132690.
12. H.Pooja, S. Sujithra, **G. Arthanareeswaran**, S. Sunanda, D.B. Das, and A. F. Ismail. "Advancements in modification of membrane materials over membrane separation for biomedical applications-Review." *Environmental Research* 204 (**2022**): 112045
13. L.K. Yogarathinam, Jamilu Usman, Mohd Hafiz Dzarfan Othman, A.F.Ismail, Pei Sean Goh, **G. Arthanareeswaran,** M. R. Adam. "Low-cost silica based ceramic supported thin film composite hollow fiber membrane from guinea corn husk ash for efficient removal of microplastic from aqueous solution." *Journal of Hazardous Materials* 424 (**2022**): 127298.
14. S.A Gokulakrishnan, S. Abinaya, **G. Arthanareeswaran**, G. Saravanan, K.Yun. "Surface-constructing of visible-light Bi2WO6/CeO2 nanophotocatalyst grafted PVDF membrane for degradation of tetracycline and humic acid." *Journal of Hazardous Materials* 421 (**2022**): 126747.
15. Naik, Nagaraj, Prajwal Sherugar, K. A. Vishnumurthy, **G. Arthanareeswaran**, D. B.Das, and P. Mahesh. "Polycarbene-Bearing Membrane Surface Containing Silver Species for Size and Charge Selective Molecular Separation." *Environmental Science: Water Research & Technology* (**2022**).
16. N. Santos, Erika, Á.Fazekas, C. Hodúr, Z. László, S. Beszédes, D. S. Firak, T. Gyulavári, K. Hernádi, **G. Arthanareeswaran**, G. Veréb. "Statistical Analysis of Synthesis Parameters to Fabricate PVDF/PVP/TiO2 Membranes via Phase-Inversion with Enhanced Filtration Performance and Photocatalytic Properties." *Polymers 1*4, no. 1 (**2022**): 113.
17. L.K. Yogarathinam, K. Velswamy, **G.Arthanareeswaran**, A. F. Ismail, P.S. Goh, N. Anantharaman, and M. S. Abdullah. "Performance evaluation of whey flux in dead-end and cross-flow modes via convolutional neural networks." *Journal of Environmental Management* 301 (**2022**): 113872.
18. K., Deepa, B.Sasikumar, S. Elakkiya, and **G.Arthanareeswaran**. "Composite proton exchange membrane of cellulose triacetate polymer integrated with polyacrylic acid and triazole based copolymer for balanced proton conduction and methanol permeability." Journal of Chemical Technology & Biotechnology 97 (**2022**) 984-994
19. Y.L. Thuyavan, V. Kirubakaran, **G. Arthanareeswaran**, A.F.Ismail, P.S.Goh, S.N. Mahesan, M. M. Satya Narayana, N. Yaacob, M.S. Abdullah. "Parametric analysis of lignocellulosic ultrafiltration in lab scale cross flow module using pore blocking and artificial neural network model." *Chemosphere* (**2021**): 131822.
20. Gnanasekaran, Gnanaselvan, **G. Arthanareeswaran**, and Young Sun Mok. "A high-flux metal-organic framework membrane (PSF/MIL-100 (Fe)) for the removal of microplastics adsorbing dye contaminants from textile wastewater." Separation and Purification Technology 277 (**2021**): 119655.
21. Sunil, K., Prajwal Sherugar, Srilatha Rao, C. Lavanya, Geetha R. Balakrishna, **G. Arthanareeswaran**, and Mahesh Padaki. "Prolific approach for the removal of dyes by an effective interaction with polymer matrix using ultrafiltration membrane." Journal of Environmental Chemical Engineering (**2021**), 9, 106328.
22. S.A. Gokulakrishnan, **G Arthanareeswaran**, Laszlo Zsuzsanna, “Recent development of photocatalytic nanomaterials in mixed matrix membrane for emerging pollutants and fouling control, membrane cleaning process” *Chemosphere,* (**2021**) 281, 130891.
23. Sundarajan, Sujithra, Kamaraj Sriram, **G. Arthanareeswaran**, Jihyang Kweon, and A. F. Ismail. "Effective separation of salts and dye using egg shell membrane (ESP) incorporated polyethersulfone polymer material." Emergent Materials 4, no. 5 (**2021**): 1413-1423.
24. K.Venkatesh, **G. Arthanareeswaran**, “Fabrication of zwitterion TiO2 nanomaterial based nanocomposite membranes for improved antifouling, antibacterial properties, hemocompatibility and reduced cytotoxicity” *ACS Omega* (**2021** 6 (31), 20279-20291.
25. S. Elakkiya, **G. Arthanareeswaran**, D.B.Das Embedding low–cost 1D and 2D iron pillared nanoclay to enhance the stability of polyethersulfone membranes for the removal of bisphenol A from water *Separation and Purification Technology*, (**2021**), 266, 118560.
26. G. Gnanaselvan, M.S.P.Sudhakaran, **G.Arthanareeswaran**, “Efficient removal of anionic, cationic textile dyes and salt mixture using a novel CS/MIL-100 (Fe) based nanofiltration membrane” *Chemosphere,* (**2021**), 284, 131244.
27. B. Sasikumar, S. Bisht, **G. Arthanareeswaran**, “Performance of polysulfone hollow fiber membranes encompassing ZIF-8, SiO2/ZIF-8, and amine-modified SiO2/ZIF-8 nanofillers for CO2/CH4 and CO2/N2 gas separation*” Separation and Purification Technology*, (**2021**) 264, 118471.
28. S. Elakkiya, **G. Arthanareeswaran**, A.F. Ismail, “Review on characteristics of biomaterial and nanomaterials based polymeric nanocomposite membranes for seawater treatment application” *Environmental Research,* (**2021**) 197, 111177.
29. Sujithra, S., and **G. Arthanareeswaran**. "Incorporation of Antifouling Based Nanoparticles in Ultrafiltration Membrane for Improving Water Permeability and Mitigate Microbial Fouling." Journal of Applied Membrane Science & Technology 25, no. 1 (**2021**): 21-33.
30. S. Bisht, B. Sasikumar**, G. Arthanareeswaran**, "Proton exchange composite membranes comprising SiO2, sulfonated SiO2, and metal–organic frameworks loaded in SPEEK polymer for fuel cell applications." *Journal of Applied Polymer Science*, (**2021**), 138, 50530.
31. N.Phalgun, B. Sasikumar, S. Elakkiya, **G. Arthanareeswaran**, A. F. Ismail, W. Youravong, E. Yuliwati, Pillared cloisite 15A as an enhancement filler in polysulfone mixed matrix membranes for CO2/N2 and O2/N2 gas separation. Journal of Natural Gas Science and Engineering 86 (**2021**): 103720.
32. K.Deepa, Purabi Pegu, B. Sasikumar, **G.Arthanareeswaran**, and S.Vengatesan, "Proton conducting membrane based on multifunctional interconnected copolymer containing 4, 4′‐diaminodiphenylmethane‐aminoethyl piperazine with sulfonated polyethersulfone membrane for fuel cell application." *Journal of Applied Polymer Science* (**2021**): 51819.
33. L.T. Yogarathinam, J. Jaafar, J., A.F. Ismail, P.S. Goh, M.H. Mohamed, M.F. Radzi Hanifah, **G.Arthanareeswaran**, J.Peter Polyaniline decorated graphene oxide on sulfonated poly (ether ether ketone) membrane for direct methanol fuel cells application. *Polymers for Advanced Technologies* 3 (**2021**) 66-80
34. S. Sujithra, Y. Subin Sabilon, **G. Arthanareeswaran** “Investigation of intrinsic bisphenol separation capacity of zeolitic imidazolate framework-8 based membranes” *Desalination and Water Treatment*, (**2021**), 227, 1-10.
35. Y. Lukka Thuyavan, J. Juhana, **G. Arthanareeswaran** "Functionalized boron nitride embedded sulfonated poly (ether ether ketone) proton exchange membrane for direct methanol fuel cell applications." *Journal of Environmental Chemical Engineering,* (**2021**), 9, 105876.
36. Y. Lukka Thuyavan, J. Jaafar, **G. Arthanareeswaran**, "Synthesis and characterization of conductive polymer coated graphitic carbon nitride embedded sulfonated poly (ether ether ketone) membranes for direct methanol fuel cell applications." *International Journal of Energy Research* (**2021**), 45,16649-16666.
37. K. Venkatesh, **G. Arthanareeswaran**, A. Chandra Bose, “Diethylenetriaminepentaacetic acid-functionalized multi-walled carbon nanotubes/titanium oxide-PVDF nanofiber membrane for effective separation of oil/water emulsion” *Separation and Purification Technology*, (**2020**), 257, 117926.
38. Seshasayee, M. S., Yu, Z**., Arthanareeswaran, G**., & Das, D. B. (2020). Preparation of nanoclay embedded polymeric membranes for the filtration of natural organic matter (NOM) in a circular crossflow filtration system. *Journal of Water Process Engineering*, (**2020**) 37, 101408.
39. Thuyavan, Y. Lukka, **G. Arthanareeswaran**, A. F. Ismail, P. S. Goh, M. V. Shankar, and N. Lakshmana Reddy. "Treatment of synthetic textile dye effluent using hybrid adsorptive ultrafiltration mixed matrix membranes." *Chemical Engineering Research and Design* (**2020**). 159, 92-104.
40. N. Santos, Érika, Zsuzsanna László, Cecilia Hodúr, **G. Arthanareeswaran**, and G. Veréb. "Photocatalytic membrane filtration and its advantages over conventional approaches in the treatment of oily wastewater: A review." *Asia‐Pacific Journal of Chemical Engineering*: (**2020**), 15, e2533. doi.org/10.1002/apj.2533
41. Das, Diganta B., Mostafa Mabrouk, Hanan H. Beherei, and **G. Arthanareeswaran**. "Pharmaceutical Particulates and Membranes for the Delivery of Drugs and Bioactive Molecules." *Pharmaceuticals* **(2020**): 412. 10.3390/pharmaceutics12050412.
42. Mehta, Priya, V. Seenuvasan, Gopal Sathyaraj, G. Somenath, **G. Arthanareeswaran**, S. Kamatchi, "Fast sensing ammonia at room temperature with proline ionic liquid incorporated cellulose acetate membranes." *Journal of Molecular Liquids* (**2020)**, 305, 112820. 10.1016/j.molliq.2020.112820
43. K. Venkatesh, **G. Arthanareeswaran**, A. Chandra Bose, P.Suresh Kumar. "Hydrophilic hierarchical carbon with TiO2 nanofiber membrane for high separation efficiency of dye and oil-water emulsion." *Separation and Purification Technology* (**2020**), 241 116709. 10.1016/j.seppur.2020.116709
44. Veréb, Gábor, Péter Kassai, Erika Nascimben Santos, **G. Arthanareeswaran**, Cecilia Hodúr, and Zsuzsanna László. "Intensification of the ultrafiltration of real oil-contaminated (produced) water with pre-ozonation and/or with TiO 2, TiO 2/CNT nanomaterial-coated membrane surfaces." *Environmental Science and Pollution Research* (**2020)**: 1-11. doi.org/10.1007/s11356-020-08047-1.
45. B. Govardhanan**, G. Arthanareeswaran**, and M. Ashok. "Photocatalytic removal of organic pollutants and self‐cleaning performance of PES membrane incorporated sulfonated graphene oxide/ZnO nanocomposite." Journal of Chemical Technology & Biotechnology, (2020), 95, 3012-3023.
46. D.George, P. U. Maheswari, K.M.M. Sheriffa Begum, K. **G. Arthanareeswaran**, Biomass-Derived Dialdehyde Cellulose Cross-linked Chitosan-Based Nanocomposite Hydrogel with Phytosynthesized Zinc Oxide Nanoparticles for Enhanced Curcumin Delivery and Bioactivity. *Journal of Agricultural and Food Chemistry*, 67 (**2019**) 10880-10890.
47. B Sasikumar, G. **Arthanareeswaran**, K. Sankaranarayanan, K. Jeyadheepan Synthesis and Formation of Phase-Tuned TiO2-/Ionic Liquid-Incorporated Polymeric Membranes for Ammonia Sensing at Room Temperature, *ACS Sustainable Chemistry & Engineering* (**2019**), 7, 15884-15895.
48. C.Evangeline, V. Pragasam, K. Rambabu, S. Velu, P. Monash, **G. Arthanareeswaran**, F. Banat, Iron oxide modified polyethersulfone/cellulose acetate blend membrane for enhanced defluoridation application. *Desalination and Water Treatment,* (**2019**),156, 177-188
49. R. Saranya, **G. Arthanareeswaran**, A.F. Ismail, Enhancement of anti‐fouling properties during the treatment of paper mill effluent using functionalized zeolite and activated carbon nanomaterials based ultrafiltration, *Journal of Chemical Technology and Biotechnology*, (**2019**), 94, 2805-2815
50. G.Gnanaselvan, B.Sasikumar, **G. Arthanareeswaran**, Performance of composite PES/MOF-5 membranes for the treatment of textile wastewater, *Desalination and Water Treatment,*(**2019**),156, 220-228.
51. P. Aruna, **G. Arthanareeswaran**, S. Murali Mohan, Synthesis of highly stable PTFE-ZrP-PVA composite membrane for high-temperature direct methanol fuel cell, *International Journal of Hydrogen Energy* (**2019**). doi.org/10.1016/j.ijhydene.2019.04.164
52. K. Rambabu, F. Banat,G.S.Nirmala, S. Velu, ,**G. Arthanareeswaran**, Activated carbon from date seeds for chromium removal in aqueous solution. *Desalination and Water Treatment,* (**2019**), 156, 267-277
53. Mostafa Mabrouk, R. Rajakumari, Islam E. Soliman, Mohamed M. Ashour, Hanan H. Beherei, Khairy M. Tohamy, Sabu Thomas, Nandakumar Kalarikkal, **G. Arthanareeswaran**, D.B. Das, Nanoparticle- and Nanoporous-Membrane-Mediated Delivery of Therapeutics, *Pharmaceutics* (**2019**), 11, 294.
54. L.L.Nisha, Laali, **G. Arthanareeswaran**, T.V. Poonguzhali, T.A. Mohan, J. Valentina, Phycoremediation of hydrocarbon using two marine seaweeds from the Bay of Bengal coast of India. *Desalination and Water Treatment,* (**2019**), 156, 378-386.
55. K.Thiyagarajan, **G. Arthanareeswaran**, J.H. Kweon, D.B. Das, V. Jaikumar, Influences of nano zero valent ion and Fe2+ supported kaolin nanoparticles for metal ion separation thorough ultrafiltration. *Desalination and Water Treatment,* (**2019**), 156, 257-266.
56. A.Fahmi, **G. Arthanareeswaran**, Silver nano-particle coated hydroxyapatite nano-composite membrane for the treatment of palm oil mill effluent, Journal of Water Process Engineering, (**2019**), 31 , 100844.
57. S.Elakkiya, **G. Arthanareeswaran**, A. F. Ismail, Diganta B. Das, R. Suganya, Polyaniline coated sulfonated TiO2 nanoparticles for effective application in proton conductive polymer membrane fuel cell, *European Polymer Journal* (**2019**), 112, 696-703.
58. R. Sathish Kumar, **G.Arthanareeswaran**, Reduction of chemical oxygen demand and color from the rice mill wastewater by chitosan/2 (5 H)-furanone-incorporated ultrafiltration membrane system, *Separation Science and Technology* (**2019**) 54, 409-425.
59. G. Gnanaselvan, B. Sasikumar, **G. Arthanareeswaran**, Diganta B. Das, Removal of hazardous material from wastewater by using metal organic framework (MOF) embedded polymeric membranes, *Separation Science and Technology* (**2019**) 54, 434-446.
60. CP Om Ariara Guhan, *G. Arthanareeswaran*, Flow Analysis of Catalytic Converter—LCV BS III Applications for Optimising Pressure Drop, *In Innovative Design, Analysis and Development Practices in Aerospace and Automotive Engineering* (**2019**) 427-435. Springer, Singapore, 2019.
61. K.Rambabu, G. Bharath, P. Monash, S. Velu, Fawzi Banat, Mu Naushad, **G. Arthanareeswaran**, Pau Loke Show, Effective treatment of dye polluted wastewater using nanoporous CaCl2 modified polyethersulfone membrane, *Process Safety and Environmental Protection* (**2019**) 124, 266-278.
62. G. Gopi, **G. Arthanareeswaran**, A.F. Ismail, Perspective of renewable desalination by using membrane distillation. *Chemical Engineering Research and Design*, (**2019**) 144, 520-537.
63. R. Sathish Kumar, **G. Arthanareeswaran,** Nano-curcumin incorporated polyethersulfone membranes for enhanced anti-biofouling in treatment of sewage plant effluent, *Materials Science and Engineering: C* 94 (**2019**), 258-269.
64. Y. L., Thuyavan, **G. Arthanareeswaran**, A.F. Ismail, A. Sivasamy, N. Anantharaman, Concentration of whey protein from cheese whey effluent using ultrafiltration by combination of hydrophilic metal oxides

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 **RESEARCH INTERESTS**

 Membrane preparation and formation

 Membrane processes which include reverse osmosis, nanofiltration, ultrafiltration for water and wastewater treatment

 Pressure-driven membrane processes, membrane bioreactor technology, colloidal and interfacial aspects of membrane processes.

 Hybrid organic-inorganic membranes for separation applications

 Improved membranes for small molecule separations based on structure water purification and desalination, fouling resistance

Development of membrane materials and membrane technology for energy related application is also of special

interest.

 **MEMBERSHIP IN SCIENTIFIC SOCITIES**

1. Life Member - Indian Institute of Chemical Engineers

2. Life member - International Association of Engineers (IAENG) (Membership Number: 126407)

3 Life member - World Academy of Science, Engineering and Technology

4. Executive member - Indian Membrane Society

5. Life Member - Indian Desalination Association

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18. Gnanaselvan. G, Sasikumar.B, **G. Arthanareeswaran**, Removal of hazardous material from wastewater by using Metal Organic Framework (MOFs) Embedded Polymer Membrane, Recent trends in membranes separation and technology. National conference on Recent Trends on Membranes and Separation Technology (RTMST-2017), held in Central Salt & Marine Chemicals Research Institute, Gujarat, India on 22 -23 November 2017.
19. K. Deepa, K. Dinakaran and **G. Arthanareeswaran**, Synthesis of a novel polyaspartimide derived from bismaleimides with piperazine amine blended polyamide imide membrane for removal of environmental micropollutant in water. International Conference on Membrane Science & Technology MST, held in Semarang, Indonesia on 15-16 November 2017.
20. K. Deepa, M. Kesava, K. Dinakaran, **G. Arthanareeswaran**, Synthesis and electrochemical properties of Polysulfone blended Poly(acrylic acid-co-2-(2-(piperazin-1-yl)ethylamino)-2-hydroxyethyl methacrylate)) membranes for proton exchange membrane fuel cell application. National conference on Recent Trends on Membranes & Separation Technology (RTMST-17), held in Central Salt & Marine Chemicals Research Institute, Gujarat, India on 22 -23 November 2017.
21. R. Sathish Kumar, **G. Arthanareeswaran**, Fabrication of polyethersulfone /nano bio polymer composite membranes for the enhanced biofouling resistant properties. International Conference on Membrane Technology and Its Applications (MEMSEP- 2017), held in National Institute of Technology, Tiruchirappalli, Tamilnadu, India on 21-23 February 2017.
22. Harshad Lade, Sathish Kumar,**G. Arthanareeswaran** and Ji HyangKweon, Efficacy of curcumin in controlling N-acryl homoserine lactone-mediated biofouling in membrane bioreactor for wastewater treatment, . International Conference on Membrane Technology and Its Applications (MEMSEP- 2017), held in National Institute of Technology, Tiruchirappalli, Tamilnadu, India on 21-23 February 2017.
23. R.Suganya, S. Elakkiya, R. Sathish Kumar , **G. Arthanareeswaran**, Synthesis of proton exchange membrane for fuel cell application, International Conference on Membrane Technology and Its Applications (MEMSEP- 2017), held in National Institute of Technology, Tiruchirappalli, Tamilnadu, India on 21-23 February 2017.
24. K.Sriram, P. Uma maheswari, R. Suganya, R. Sathish kumar , K.M. Meera.S.Begum, **G. Arthanareeswaran**, Sulfonated polyamide imide with tyrosine modified chitosan composite membrane for fuel cell application. , International Conference on Membrane Technology and Its Applications (MEMSEP- 2017), held in National Institute of Technology, Tiruchirappalli, Tamilnadu, India on 21-23 February 2017.
25. Arjun Ramesh, Shyam Sundar, **G. Arthanareeswaran**, S. Velu L.Muruganandam, Utilizing Optimized Imidazolium functionalized Polysulfone in a completely noble metal free alkaline membrane Fuel Cell. *11th International Conference on Membrane Science & Technology (MST2013) held in Kuala Lumpur, Malaysia on 27- 29 August 2013*
26. **G. Arthanareeswaran**, D. Mohan, M. Raajenthiran Effect of alumina particles on cellulose acetate ultrafiltration membranes, *International Conference on Catalysis in Membrane Reactors* December 18 - 21,2008, Kolkata, India.
27. **G.Arthanareeswaran**, P.Thanikaivelan, M.Raajenthiren, Characteristics, performance of blend CA/SPEEK ultrafiltration membranes prepared by phase separation method using PEG 600 as an additive,*7th International Conference on Membrane Science & Technology*, May 12-14,2009,Kuala Lumpur, Malaysia.
28. Radhe Shyam Thakur, Debjyoti Sen, **G. Arthanareeswaran,** Effect of inorganic particle on the performance of polyethersulfone-cellulose acetate blend ultrafiltration membrane, *7th International Conference on Membrane Science & Technology*, May 12-14,2009,Kuala Lumpur, Malaysia.
29. M. Subas Chandra Bose, **G. Arthanareeswaran**, M. Raajenthiran, Preparation, characterization and application of polymer ultrafiltration membranes, *2nd International Conference on Polymer Processing and Characterization,* January 15-17, 2010, Kottayam, India
30. **G. Arthanareeswaran**, S. Velu, Performance enhancement of polysulfone ultrafiltration membrane by blending with polyurethane hydrophilic polymer, *2nd International Conference on Polymer Processing and Characterization,* January 15-17, 2010, Kottayam, India
31. A. Ananth, K.Thiyagarajan, **G.Arthanareeswaran**, Preparation and Characterization of PES-TEOS composite membranes: performance studies, *2nd International Conference on Natural Polymers, Bio- Polymers, Bio-Materials, their Composites, Blends, IPNs, Polyelectrolytes and Gels: Macro to Nano Scales September 24-26, 2010, Kottayam, India*
32. **G. Arthanareeswaran**, B.G. Prakash Kumar, M. Subas Chandra Bose, Effect of blend composition on morphology, pore statistics and permeability of the microporous membrane prepared by polyethersulfone/gelatin polymer blend, *2nd International Conference on Natural Polymers, Bio-Polymers, Bio-Materials, their Composites, Blends, IPNs, Polyelectrolytes and Gels: Macro to Nano Scales September 24-26, 2010, Kottayam, India*
33. Harsha P. Srivastava, N. Anantharaman, **G. Arthanareeswaran,** Synthesis and Characterization of PVDF- Atactic PS Blend, *Symposium on Recent and Emerging Advances in Chemical Engineering*, December 2-4, 2010, Chennai, India.
34. Harsha P. Srivastava, N. Anantharaman, **G. Arthanareeswaran**, Study of Morphology, Crystallinity and Phase Behavior of PVDF-GPPS Blends Membranes from X-ray Diffractometry and Fourier Transform Infra Red Spectroscopy (in ATR Mode), *CHEMCON-2010*, 27-29 December 2010, Chidambaram, India.
35. **G. Arthanareeswaran,** Preparation polymer blend membrane for the separation of metal ions using micellar enhanced UF, *6th IWA Specialist Conference on Membrane Technology for Water & Wastewater Treatment,* 4-7 October 2011, Aachen, Germany
36. Harsha P. Srivastava, N. Anantharaman, **G. Arthanareeswaran**, Performance of modified poly (vinylidene fluoride) membranes synthesized using atactic polystyrene (aPS) for textile applications, *1st International Conference on Membranes,* September 16-19, 2011, Kottayam, India
37. K. Sriram, R. Saranya, Y. Lukka Thuyavan, **G. Arthanareeswaran**, N. Anantharaman, Victor M. Starov, Fabrication of inorganic nanoparticles based sulfonated polyethersulfone membrane for fuel cell applications, *EUROMEMBRANE 2012,* 23-27 September 2012, London, UK.
38. K. Sriram, Y. Lukka Thuyavan, **G. Arthanareeswaran**, N. Anantharaman, Wirote Youravong, Novel chicken egg white blend ultrafiltration membranes for fouling resistance, *10thInternational conference on membrane science & technology: MST 2012,* 22-23 August 2012, Bangkok, Thailand.
39. R. Saranya, **G. Arthanareeswaran** and M. Matheswaran, An integrated treatment system for the reuse of kraft paper mill effluent, *International conference on membrane science & technology: MST 2012*

*Sustainable Energy and Environment, 22-23 August 2012, Bangkok, Thailand.*

1. R. Saranya, Achal Agarwal , **G. Arthanareeswaran**, Novel mixed matrix membranes prepared from Polyacrylonitrile/Kaolinite polymer nanocomposite for wastewater treatment applications*, International conference on Global Sustainability and Chemical Engineering, 24-26 April 2012, Malaysia.*

**TEACHING EXPERIENCE Undergraduate Courses taught**

Chemical Process equipment Design and Drawing-I, Technical Analysis laboratory, Heat

Transfer, Heat Transfer and mass transfer laboratory, Principles of Chemical Engineering, Petrochemical Process equipment Design and Drawing-I, Non Conventional Processes Project Engineering, Process Engineering Economics, Safety in Chemical Industries, New separation Processes, Heat Transfer laboratory.

**Postgraduate Courses taught**.

Industrial Instrumentation, Process equipment design, Modern Separation process, Design of heat transfer equipments, CL801- Membrane Separations Technology - Principles and Applications

**PhD Course work taught**

CL801- Membrane Separations Technology- Principles and Application

**MOTIVATION SPEECH to FACULTY**

2012: Guest lecture to all the faculty in Sathyabama University, Chennai

2018: Guest lecture to all the faculty in Professor academy, Chennai

2017: Guest lecture to all the management faculty in PSG Institute of Management Coimbatore

2020: Guest lecture to all the faculty in VIT, Vellore, India

2021: Guest lecture to all the faculty in NIT-Raipur, India

2021: Guest lecture to all the faculty in Anna University, India

2021: Guest lecture to all the faculty in Panjob university, India

2021: Guest lecture to all the faculty in Jain University, India

 **UNIVERSITY LEVEL**

December 2012 - 2014 : Member, Equipment Purchase committee, NITT November 2012 - 2014 : Chairman, Transport Section, NITT

January 2012 : Chairman, Class committee, PAC, NITT August 2012 : Doctoral committee member, NITT

January 2011 : Doctoral committee member, Anna University, Chennai, India July 2010 : Member, Screening Committee for faculty recruitment, NITT April 2009 : Member, PhD scholar selection Committee, NITT

March 2008 : Staff In charge, ALCHEMY, Student symposium, NITT

 **RESEARCH VISITS ABROAD**

|  |  |
| --- | --- |
| Institution | Universiti Teknologi Malaysia |
| Country | Malaysia  |
| Period | 11-May-2009 to 16-May-2011  |
| Purpose of Visit | To present a paper in 7th International Conference on Membrane Science & Technology, |
|  |  |
| Institution | University of Sao Paulo, Brazil. |
| Country | Brazil. |
| Period | 30th January 2010 - 7th February 2010 |
| Purpose of Visit | Research work under Indo- Brazil Joint collaboration Research Project  |
|  |  |
| Institution | Loughborough University, UK |
| Country | UK  |
| Period | 1st June 2010 to 30th August 2010 |
| Purpose of Visit | Research work under Research Exchange between India-UK |
|  |  |
| Institution | Monash University, Clayton, Australia |
| Country | Australia  |
| Period | 1st April 2011 to 30th August 2011 |
| Purpose of Visit | Research work under Endeavour Executive Award, Australia |
|  |  |
| Institution | RWTH Aachen University |
| Country | Germany  |
| Period | 04 October 2011 to 07 October 2011 |
| Purpose of Visit | To present a paper in 6th IWA Specialist Conference on Membrane Technology for Water & Wastewater Treatment |
| Institution | Centre for Surface Chemistry and Catalysis, KU Leuven |
| Country | Belgium  |
| Period | 08 October 2011 |
| Purpose of Visit | To deliver lecture in Centre for Surface Chemistry and Catalysis, KU Leuven |
|  |  |
| Institution | Prince of Songkla University, Thailand |
| Country | Thailand  |
| Period | 21 August 2012 to 25 August 2012 |
| Purpose of Visit | To present a paper in 10th International conference on membrane science & technology |
| Institution | Universiti Teknologi Malaysia |
| Country | Malaysia |
| Period | 26 August 2013 to 30 August 2013  |
| Purpose of Visit | To present a paper in 11th International conference on membrane science & technology |
|  |  |
| Institution | Konkuk University, SEOUL, 143-701, South Korea. |
| Country | South Korea  |
| Period | 7th March 2014 to 21st March 2014  |
| Purpose of Visit | Research Activity under Indo- Korea Joint collaboration Research Project  |
|  |  |
| Institution | Universiti Teknologi Malaysia |
| Country | Malaysia |
| Period | 21st May 2015 to 14th June 2015  |
| Purpose of Visit | Research network between Indian and Malaysia  |
|  |  |
| Institution | Konkuk University, SEOUL, 143-701, South Korea. |
| Country | South Korea  |
| Period | 10th May 2016 to 13th February 2017  |
| Purpose of Visit | Research work under Brainpool fellowship, South Korea  |
|  |  |
| Institution | Loughborough University, UK |
| Country | UK  |
| Period | 17th May 2017 to 2nd June 2017  |
| Purpose of Visit | Research Visit under Indo-UK Joint collaborative Research Project |
|  |  |
| Institution | University of Szged, Hungary  |
| Country | Hungary |
| Period | 14 th May 2022 to 28nd May 2022  |
| Purpose of Visit | Research Visit under Indo- Hungary Joint collaborative Research Project |

**Ph.D. Thesis Supervision-Ongoing**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl.NO** | **Name** | **Reg.****Year**  | **Title** | **Role/Status** |
|  | Siva Prasad  | **2021** | Nanocomposite grafted Membrane  | Supervisor/ on going |
|  | Mr. S. A. Gokula Krishnan | 2019 | Surface-Constructing of Visible-Light Photocatalytic Nanocomposite grafted Membrane for Degradation of Tetracycline and Humic Acid | Supervisor/ on going |
|  | Mr.G Gopi | 2016 | Identifying and improving the sustainability of water production using solar powered membrane distillation | Co-Supervisor/ on going |
|  | Mr. G. Mahendran  | 2016 | Process intensification by coupling photocatalysis and pervaporation | Supervisor/ on going |
|  | Mr. Govardhanan | 2015 | Application of membranes for hemodialysis  | Co-Supervisor/On going |

**Ph.D. Thesis Supervision-Completed**

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| --- | --- | --- | --- | --- |
| **Sl.NO** | **Name** | **Reg.****Year**  | **Title** | **Role/Degree awarded**  |
|  | Mr.B. SasiKumar  | 2017 | Enhancement of Membrane performance for CO2 Separation by Incorporating Ionicliquid and Amine Functionalized Metal-Organic Frameworks (MOFs) | Supervisor/ 2022 |
|  | Ms. K. Deepa, | 2016 | Study of relationship between nanoparticle size and shape anisotropy influences on the membrane performance for fuel cell and salt rejection studies | Supervisor/ 2022 |
|  | Ms. S. Elakkiya | 2016 | Multifunctional polymer mixed matrix membranes tailored with metal oxide and clay nanomaterial for fuel cell and water application | Supervisor/ 2022 |
|  | Mr. K.Venkatesh | 2014 | Hierarchical structured electrospun membrane modified with nanomaterials for efficient oil in water emulsion separation | Co-Supervisor/2022 |
|  | Mrs. S.Suchithra | 2014 | Performance evaluation of differentModifiers in polymer membranes forWastewater treatment | Supervisor/2021 |
|  | Mr. R.Sathish Kumar | 2013 | Quorum Sensing Inhibitors Embedded Polyethersulfone Membranes for Enhancement of Biofouling Resistance in Wastewater Treatment | Supervisor/2020 |
|  | Mr.K.Sriram | 2013 | Hydrophobically modified chitosan with inorganic Metal oxide as hybrid nanocarriers for controlled Curcumin (drug) delivery | Co-Supervisor2017 |
|  | Mr. Om Ariara Guhan C. P. | 2013 | Numerical optimization and CFD to improve emissions of IC engines | Supervisor/2017 |
|  | Mr. Y.Lukka Thuyavan | 2011 | Study on synthesis of polymeric porous membrane with nanoparticles and its applications | Co-Supervisor/2017 |
|  | Ms. R.Saranya | 2012 | Modification of polymeric membrane by mixed matrix method for recovery and reuse of Industrial Effluents | Supervisor/ 2016 |
|  | Mr.Harsh P. Srivastava | 2009 | Preparation and Characterization of modified PVDF membranes by DIPS method and its application for treatment of Industrial Effluents | Supervisor/ 2012 |

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| Post graduate thesis guidance |
| **Sl****No** | **Name** | **Year**  | **M.Tech thesis Title** | **Role/Status** |
|  | Mr. Akilash  | 2022 | ANN and machine learning for ultrafiltration process  | Supervisor/ ongoing |
|  | Mr. M.Muhammaed | 2022 | Development of COF based membranes for gas sensors | Supervisor/ongoing  |
|  | Ms.C.Shanmathi | 2021 | Comparison of artificial neural Networks (ANN) and mathematical Hermia’s models for the Performance evaluation of polymer ultrafiltration Membranes  | Supervisor/ Awarded |
|  | Mr. Sanjay Bisht | 2020 | Estimation of Gas Permeability of Polysulfone/ZIF-8 Hollow Fiber Membrane Using Gas Permeation Models | Supervisor/ Awarded |
|  | Mr. M Vasanthkumar | 2019 | Modelling and simulation of airgap membrane distillation | Supervisor/ Awarded |
|  | Mr. D.Teja Nayak | 2019 | Amino acid and ionic liquid embededPolymeric membrane for treatment ofToxic waste | Supervisor/ Awarded |
|  | Mr.G. Gnanaselvan  | 2018 | Performance of composite PES/MOF-5 membranes for the treatment of textile wastewater | Supervisor/ Awarded |
|  | Mr. Anirudh Singh | 2018 | Performance evaluation of photocatalytic membranes for the treatment of pharmaceutical waste | Supervisor/ Awarded |
|  | Ms. Fahmi Anwar | 2017 | Carbon Membrane for Nitrogen and Methane Separation | Supervisor/ Awarded |
|  | Mr. Yohannan Subin Sabilon | 2017 | Synthesis and characterisation of PEI/ZIF8 Membranes for removal Bisphenol A from water | Supervisor/ Awarded |
|  | Mr. Mayank Shukla | 2017 | Dynamic modelling and experimental validation of Direct Contact Membrane Distillation (DCMD) using Computational Fluid Dynamics (CFD) and Monte Carlo Simulations | Supervisor/ Awarded |
|  | Ms. Srividhya Saragadam | 2017 | Indirect Control of Substrate Concentration of Waste Water Treatment Plant by Dissolved Oxygen Tracking | Supervisor/ Awarded |
|  | Mr. Robin Raj | 2017 | Sodium CMC/ZnO Nanocomposite for Enhanced Removal Performance of Membrane | Supervisor/ Awarded  |
|  | Mr.Vikas Kumar | 2016 | Sulfonated polyether ether ketone/clays nanocomposite membranes for fuel cell application | Supervisor/Awarded |
|  | Mr. M. Satya Narayana | 2016 | Empirical modelling and optimization of lignin removal by cross flow ultrafiltration | Supervisor/Awarded |
|  | Miss. S Aditya Kiran | 2015 | Influence of bentonite in polymer membranes for effective treatment of car wash effluent | Supervisor/Awarded |
|  | Miss. A Sumisha | 2015 | Functionalized titanate nanotube for improved salt rejection under low pressure nanofiltration | Supervisor/Awarded |
|  | Miss. Aruna Padigagi | 2014 | Development membranes dairy waste water treatment | Supervisor/Awarded |
|  | Miss. Lakra Reshma | 2013 | Novel Ultrafiltration membrane technology for separation of organic acids and reducing sugars from rice husk | Supervisor/ Awarded |
|  | Mr. K.Sriram | 2012 | Studies on modified sulfonated Polyethersulfone membrane for fuel cell applications | Supervisor/ Awarded |
|  | Miss. R.Saranya | 2012 | An Integrated membrane treatment system for recovery and reuse of kraft paper mill effluent | Supervisor/Awarded |
|  | Mr. T.Vamsi Krishna | 2012 | Modeling for fouling control in ultrafiltration cell | Supervisor/Awarded |
|  | Mr. D.Deepak | 2011 | Modeling of Performance characteristics of Ultrafiltration Process | Supervisor/ Awarded |
|  | Miss. K.Udaya Kranthi | 2010 | Modification of batch membrane filtration process | Supervisor/Awarded |
|  | Mr. A. Sheik Alaudin | 2009 | Development of Polymeric membranes for wastewater treatment | Supervisor/ Awarded |
|  | Mr. U. Ashok Kumar | 2009 | Studies on gel polarized layer resistance through flat sheet UF membrane using egg albumin solution | Supervisor/Awarded |
|  | Miss. T.K. Sriyamuna Devi | 2008 | Performance studies on ultrafiltration membrane process | Supervisor/Awarded |
|  | Miss. K.Vijayalakshmi | 2007 | Studies on the removal of hexavalent chromium using polymers | Supervisor/Awarded |
|  | Mr. K.Balamurugan | 2006 | Molecular modeling of Polymer blends | Supervisor/Awarded |
|  | Mr. N.S. Gowrishankar | 2006 | Modeling of ultrafiltration membrane process | Supervisor/Awarded |
|  | Mr. J. Abdoul Raguime | 2005 | Removal of toxic heavy metal from waste water by ultrafiltration | Supervisor/ Awarded |

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| International Conference Organized |  |
| **Seminar/Conference**  | **Role**  |  **Organized by**  | **Venue/Duration** |
| INDIA-UK Scientific seminar onCurrent development of wastewater treatment in India | **Chairman** | The Royal Society, UK and, DST, India  | NIT-Tiruchirappalli 30th August 2011 to 2nd September 2011 |
| International Conference on Green Technology for Environmental Pollution Prevention and Control (ICGTEPC-2014)  | **Secretary** | Self-supported  | NIT-Tiruchirappalli September 27-29,, 2014 |
| International Conference on Membrane Technology and Its Applications (MemSep2017) | **Secretary** | Indian Membrane Society  | NIT-Tiruchirappalli 2017-02-21 To 2017-02-23 |
| International Conference on Desalination (InDACON 2018)  | **Secretary** | Indian Desalination Association  | NIT-Tiruchirappalli April 20-21, 2018 |
| International conference on multifunctional and hybrid composite materials for energy, Environment and medical applications (ICMHCEE 2019) | **Convenor** | Self-supported | 9 to 11 September 2019. |

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| **Plenary Lecture/Keynote address abroad** |  |
| **Title/event**  | **Seminar/Conference/university** | **Year**  |
| Keynote address at Regional Congress on Membrane Technology 2020 (RCOM 2020 | Universiti Teknologi Malaysia, Malaysia | **2021** |
| Keynote address at Chemicals & Materials for Emerging Technologies (CheMET) 2020  | Qatar University, Qatar | **2020** |
| Keynote address at The 10th International Conference of Muhammadiyah and Aisyiah Higher Education Association (ICMAHEA)  | Universitas Muhammadiyah Palembang, Indonesia | **2020** |
| Invited Talk | Jeju National University, South Korea  | **2020** |
| Invited Talk | SKKU, South Korea | **2020** |
| Invited Talk | Konkuk University, South Korea | **2019** |
| Invited Lecture  | University Szeged, Hungary  | **2019** |
| Invited Lecture  | Prince of Songkla University, Thailand | **2019** |
| Invited Lecture Water Research day | Loughborough University, UK | **2018** |
| Invited Lecture Water Research day | Loughborough University, UK | **2017** |
| 13th International Conference On Membrane Science And Technology(MST 2017) | Keynote Speaker/ Diponegoro University, Indonesia | **2017** |
| Invited Seminar Series | Invited Seminar/ Kyungpook National University ,South Korea | **2015** |
| Invited Seminar Series | Invited Seminar/ Kyungpook National University ,South Korea | **2014** |
| 11th International Conference on Membrane Science & Technology Malaysia on 27- 29 August 2013 | Invited Talk, UTM, Malaysia | **2013** |
| International Scientific Collaboration Programme  | Loughborough University, UK | **2010** |

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| Invited Lecture in conference in India  |
| **Title/event**  | **Seminar/Conference/university** | **Year**  |
| India-Canada Bilateral Virtual Conference On "Waste To Wealth" (W2w-2021), | SASTRA University, Tanjore, India | **2021** |
| International Online Congress On Membranes And Membrane Assisted Processes(ICMMAP 2021) | MG University, Kottayam, India | **2021** |
| INDO-ISRAEL SPARC Workshop “Membranes in Water Treatment: Opportunities & Challenges  | Cochin University of Science and Technology (CUSAT), Kochi, Kerala, India | **2020** |
| International Online Conference onSustainable Technologies in Water Treatment and Desalination (STWTD – 2020) | National Institute of Technology Calicut, India | **2020** |
| Indo-German Bilateral Workshop on Membranes for Water and Energy (IGWMWE-19), 18-20 February, 2019  | CSIR-CSMCRI, Bhavnagar-364002 (Gujarat) India. | 2019 |
| National Conference on Advances in Bioprocess & Downstream Process/ Advances in Bioprocess and Down | PSG College of Technology Coimbatore, India  | **2016** |
| National workshop on nanoscience and nanotechnology (NWNST-2016) | Pondicherry University,Pondicherry, India  | **2016** |
| Treatment of pollutant from water and air performance enhanced membrane separations /International conference on WATER from Pollution to Purification | MG University, Kottayam, India | **2015** |
| International conference on Recent Advances in Physics for Interdisciplinary Developments/ Emerging nanotechnology for membrane development and its application on energy efficient processes | Sathyabama University, India | **2014** |
| National conference on “National technologies for ecotechnologies for wastewater treatment: present challenges and future horizons/ Membrane separation technology for sustainable | Bharathiyar University, Coimbatore | **2014** |
| Second International conference on Membranes/ Application of bio polymer membrane materials for advance membrane separation process | Mahatma Gandhi University, Kottayam,India | **2013** |
| International conference on Membranes; Biological and Environmental Applications | MG University, Kottayam, India | **2011** |

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| **Plenary lecture/Keynote address in India** |  |
| **Title/event**  | **Seminar/Conference/university** | **Year**  |
| Future of membrane process in green technologies and for water reuse, | International Conference on Recent Advances in Space Technology Applications & Climate Change, Sathyabama University, Chennai, India,14th November, 2010 | Key note address |
| Emerging Technology of Nano membranes for promising Environmental Applications | 2nd National Conference on nanotechnology: applications and its advantages in natural science, Manonmaniam Sundaranar University, India 5th February, 2011 | Plenary Lecture  |
| Membrane Separation Technologies, Application of Membranes to the Industrial Effluent Treatment | Short Term Training Programme on Industrial Effluent Treatment - Emerging Trends & Challenges Ahead, Annamalai University, India,15th June, 2012 | Key note address |
| Emerging membrane technology for wastewater reuse and environmental protection  | 4th National conference on Application of the derivatives of chitin and chitosan 22nd and 23rd August 2014, held in India | Key note address |

**Editor Responsibilities**

|  |  |  |  |
| --- | --- | --- | --- |
| **Journal Name** | **Role and Responsibilities**  | **Publishers**  | **SCI/SCIE/Scopus** |
| Jurnal Teknologi | Editorial Board Member | UTM press | Scopus |
| Journal of Membrane and Separation Technology | Editorial Board Member | Lifescience global | Scopus |
| Journal of Applied Membrane Science & Technology, | Editorial Board Member | UTM press | Scopus |
| Membrane Water treatment | Guest Editor | Techno Press | SCIE |
| Ecotoxicology and Environmental Safety, | Guest Editor | Elsevier, | SCI |
| Desalination, | Guest Editor | Elsevier, | SCI |
| Pharmaceutics | Guest Editor | MPDI | SCIE |
| Desalination and water treatment | Guest Editor | Springer | SCIE |
| Asia‐Pacific Journal of Chemical Engineering | Guest Editor | Wiley and Sons | SCIE |
| Emergent Materials | Associate Editor | Springer Nature | Scopus |

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|  Evaluation of doctoral thesis from other Universities |
| **Sl.No** | **PhD Thesis Title** | **University/Institute** | **Year** |
| 1 | Synthesis, Optimization and re-usability of bulk and supported Cesium Tungstophosphoric acid catalysis for trans-esterification reactions in Bio-Diesel production | Sathyabama University, India | 2009 |
| 2 | A study on excess thermodynamic properties of binary liquid mixtures containing dissolved inorganic salts | Anna University, India  | 2010 |
| 3 | Studies on preparation and performance of biopolymeric membranes | Anna University, India  | 2010 |
| 4 | Studies on removal of textile dyes from aqueous solution using minerals | Anna University, India  | 2010 |
| 5 | Experimental Investigation on cold start emissions using electrically heated catalyst  | M.G.R Educational and Research Institute University, Chennai, India | 2010 |
| 6 | Direct Conversion of tapioca stems Variance 226 white rose to ethanol by Fusarium oxysporum | Annamalai University, India | 2010 |
| 7 | Chemical and biological approaches in removal of dyestuff and metal ions from effluent treatment plant | Manonmaniam Sundaranar University, India | 2013 |
| 8 | Microbial decolourization of textile dyeing effluent | Annamalai University, India | 2013 |
| 9 | Development and characterisation of thermoplastic polyurethane-natural rubber / epoxidised natural rubber blends and their chitin reinforced composites | Calicut University, India | 2013 |
| 10 | Fermentative production and modeling of xylitol | Annamalai University, India | 2013 |
| 11 | Adsorption of textile dye effluent using activated carbon obtained from biomass | Anna University, India | 2014 |
| 12 | Batch fermentation studies on alkaline protease production using synthetic and complex medium by newly isolated *Bacillus Subtilis* AKRS3 | Anna University, India | 2014 |
| 13 | Studies on idly batter fermentation-kinetics and modelling  | Annamalai University, India | 2014 |
| 14 | Chromium (VI) adsorption from aqueous solution by Codium Tomentosum biomass | Anna University, India | 2015 |
| 15 | Flux decline and fouling of nanofiltration membranes during salt reclamation from dye wasterwater | Karunya UniversityCoimbatore, India | 2015 |
| 16 | Analysis of toxic heavy metal contamination in an aquatic system | Sathyabama University, India | 2015 |
| 17 | Design and Experimental studies on variable header solar water heater system | Anna University, India | 2017 |
| 18 | Modeling, Simulation and Optimization of the Removal of Volatile Organic Compounds from Aqueous Solutions Pervaporation: Influence of permeate side pressure build-up | Jawaharlal Nehru Technological University Anantapur, India | 2017 |
| 19 | Phytofabrication of silver nanoparticles with modified clay nanocomposites for dye adsorption from aqueous solution: Equilibrium modeling and kinetic studies | Manonmaniam Sundaranar University, India  | 2017 |
| 20 | Synthesis and Investigation on Effect of Mn Substitution Cobalt Ferrites Ferrofluidsand its Applications | Anna University, India | 2018 |
| 21 | Studies on bio-oil from microalgae and cashew nut shell | Pondicherry University, India  | 2018 |
| 22 | Investigations on ZnO-Graphene Oxide Nanomaterials and Nanocomposites: Synthesis, Functional Properties and Applications | Cochin university of science and technology, India  | 2019 |
| 23 | Facile synthesis and characterization of compositionally modified Titania based nano materials to enhance sunlight photocatalytic activity | Anna University, India | 2020 |
| 24 | Experimental study on biodegradation of dairywastewater using upflow anaerobic sludge fixed film reactor | Annamalai University, India | 2020 |
| 25 | Adsorption of methylene blue from aqueous solution using polyacrylonitrile based nanofibrous composites | Anna University, India | 2021 |

**LEADERSHIP EXPERIENCE**

**Member- Board of Studies (BoS)**

* IFET College of Engineering (Autonomous Institution), Villupuram – 605108, Tamil Nadu
* Kamaraj College of Engineering and Technology, Vellakulam, Tamil Nadu 625701, India
* Veltech High Tech Dr.Rangarajan Dr.Sakunthala Engineering College, Chennai, India

 **Member of Important Committee:**

* Co-opted Member of Programme Advisory Committee on Chemical and Environmental Engineering (PAC-CEE). Science and Engineering Research Board (SERB), DST, New Delhi, 12/07/2021 on ward for 3 years.
* Expert Committee (ECC) member of Tamil nadu pollution control Board, Tamil Nadu, India.