

Cellphone : 9444954151

e-Mail ID : nbsbala@annauniv.edu

Address : Department of Chemical Engineering A.C Tech
Campus Anna University Chennai-600 025



Present Position

Professor, Department of Chemical Engineering, Alagappa College of Technology, Anna University, Chennai from June-2012.

Present Additional Responsibility

- Coordinator - Centre for Advance Studies (CAS-I), Department of Chemical Engineering, Anna University, Chennai.
- Professor In Charge, ACTECH Computing Facility, Department of Chemical Engineering, Anna University, Chennai.

Previous Additional Responsibility

- Head Of The Department, Department of Chemical Engineering, Anna University, Chennai during March-2013 and May-2016.
- Deputy Director, Centre for Research, Anna University, Chennai during August-2006 and May-2008.
- Placement And Training Officer Ac Tech Campus, Centre for University Industry Collaboration, Anna University, Chennai during May-2005 and October-2005.
- Professor In Charge M .tech- Est, Department of Chemical Engineering, Anna University, Chennai during April-2005 and May-2008.

Other Employment

- Visiting Faculty, Monash University Australia for June 2008.
- Visiting Faculty, Seikei University Japan for Nov 2007.
- Senior Lecturer, Monash University Sunway Campus Malaysia for 2008-2009.
- Postdotal Fellow, National Cheng Kung University Taiwan for 2001-2003.
- Scientist, Central Electrochemical Research Institute for 1997-2004.

Degree

- ❖ M.Tech. in CHEMICAL ENGINEERING , National Institute of Technology, Trichy, National Institute of Technology, Trichy (1989 - 1991).

Research Degree

- ❖ Ph.D. in Chemical Engineering, Fluidization, Drying from Faculty of Technology, Indian Institute of Technology Madras, Indian Institute of Technology Madras, Chennai (1991 - 1996).
Title: .

Area of Specialisation

- > Advanced Oxidation
- > Electrochemical Treatment of Organic Effluent
- > Integrated Membrane Bioreacor
- > Graphene based polymer nano composite for energy storage
- > Safety and Risk Assessment of Chemical Process industry

Membership in Professional Organization

- > Associate Member: Institute of Chemical Engineers UK
- > Fellow: International Congress of Chemistry and Environment, India
- > Life Member: Society for Advancement of Electrochemical Science and Technology, India
- > Life Member: Indian Institute of Chemical Engineers, India

Research Guidance

Number of Ph.D Scholars Guided	: 16
Number of Ph.D Scholars Guiding	: 6
Number of M.S (By Research) Students Guided	: 1
Number of M.E./ M.Tech. Projects Guided	: 45

Papers Published in Journals

Research Papers Published in International Journals	: 124
Research Papers Published in National Journals	: 5

1. N.Balasubramanian, C.Srinivasa Kannan,, "Slip velocity characteristics in the riser of circulating fluidised bed", Chemical Engineering Technology , Vol. 20, Issue 7, pp. 491-494 (1997).
2. C.Srinivasakannan, N.Balasubramanian,, "Drying aspects of Multistage Fluidized Beds. ", Chemical Engineering Technology, Vol. 21, pp. 961. (1998).
3. N.Balasubramanian, C.Srinivasakannan, "Hydrodynamic aspects of a circulating fluidized bed with internals", Industrial Engineering Chemistry, Vol. 37, pp. 2548. (1998).
4. N.Balasubramanian, K.Madhavan, "Arsenic removal from industrial effluent through electrocoagulation", Chemical Engineering & Technology: Industrial Chemistry‐Plant Equipment‐Process Engineering‐Biotechnology, published by wiley. Vol. 24, Issue 5, pp. 519-521. (2001).
5. N.Mohan, N.Balasubramanian, V.Subramanian, "Electrochemical treatment of simulated textile effluent", Chemical Engineering Technology, published by wiley. Vol. 24, pp. 749-753. (2001).
6. N.Balasubramanian, Chuei-Tin Chang, Yi-Feng Wang, " Petri-Net Models for Risk Analysis of Hazardous Liquid Loading Operations ", Industrial Engineering Chemistry Research, published by American chemical society. Vol. 41, pp. 4823-4836 (2002).
7. C.Srinivasakannan, N.Balasubramanian,, "Particle growth in fluidised bed granulation", biochemical engineering, published by Elsevier . Vol. 17, pp. 201-205. (2003).
8. B.Vijayasekaran, C. Ahmed Basha, and N.Balasubramanian, " Optimization of Electrochemical Reactors Using Genetic Algorithms", Chemical and biochemical engineering , Vol. 18, Issue 4, pp. 337 (2004).
9. N.Balasubramanian, C. Srinivasakannan, C. Ahmed Basha, "Transition velocities in the riser of a circulating fluidized bed", Advanced Powder Technology , published by Elsevier . Vol. 16, Issue 3, pp. 247-260. (2005).
10. N.Balasubramanian, Li Yeh, and C.T.Chang, S.J. Chen, "Hierarchical Petri Nets for Modeling Metabolic Phenotype in Prokaryotes", Industrial Engineering Chemistry Research, published by American chemical society. Vol. 44, Issue 7, pp. 2218-2240. (2005).
11. C.Srinivasakannan, N.Balasubramanian, "Effect of different cooling modes on crystal size distribution in a batch cooling crystallizer for DL-Malic acid", Particulate Science and Technology, published by taylor and francis. Vol. 23, Issue 2, pp. 159-167. (2005).
12. N.Mohan, N.Balasubramanian, V. Subramanian, "In situ electrocatalytic oxidation of acid violet 12 dye effluent", Journal of Hazardous Materials , published by Elsevier . pp. 239-243 (2006).
13. C.Srinivasakannan, N.Balasubramanian, " An Experimental and Modeling Investigation on Drying of Ragi (Eleusine Corocana) in Fluidized bed", Drying Technology. , published by taylor and francis. Vol. 24, pp. 1683 - 1689 (2006).
14. C.Srinivasakannan, N.Balasubramanian, " Drying of Rubber Wood Saw Dust in Tray Dryers. ", Particulate Science and Technology, published by taylor and francis. Vol. 24, Issue 4, pp. 427 - 439. (2006).

15. Mohan, N., Balasubramanian, N., Ahmed Basha. C, " Electrochemical oxidation of textile wastewater and its reuse", Journal of Hazardous Materials , published by Elsevier . Vol. 47, Issue 207, pp. 644-651 (2007).
16. Chitra, K. Aulmurugan, R.Thilakavathi, N. Balasubramaniam, "Teatment of dyehouse effluent using electro coagulation method. ", Bulletin of Electrochemistry , published by springer. Vol. 23, pp. 247-252 (2007).
17. C.Srinivasakannan, N.Balasubramanian,, "Analysis of various experimental methods and preparation of mesoporous activated carbon powders from sawdust using phosphoric acid", Particulate Science and Technology, published by taylor and francis. Vol. 25, Issue 6, pp. 535 - 548. (2007).
18. R. Saravanathamizhan, N. Mohan, N.Balasubramanian, V. Ramamurthi, C. Ahmed Basha, "Evaluation of Electro#8208;Oxidation of Textile Effluent Using Response Surface Methods", clean, published by wiley. Vol. 35, pp. 355-361 (2007).
19. N.Balasubramanian, C. Srinivasakannan, C. Ahmed Basha,, "Drying kinetics in the riser of circulating fluidized bed with internals", Drying Technology. , published by taylor and francis. Vol. 18, Issue 2, pp. 135-142. (2007).
20. Saravanan, A. Balasubramanian, N, Srinivasakannan, C., "Drying Kinetics in a Vertical Gas#8208;Solid System", Chemical Engineering Technology, published by wiley. Vol. 30, Issue 2, pp. 176-183. (2007).
21. N.Balasubramanian, C. Srinivasakannan, "Drying of granular materials in circulating fluidized beds", Advanced Powder Technology , published by Elsevier . Vol. 18, Issue 2, pp. 135-142. (2007).
22. Saravanathamizhan, R., Paranthaman, R., Balasubramanian, N., Ahmed Basha, C., "Residence time distribution in continuous stirred tank electrochemical reactor", chemical engineering journal, published by Elsevier . Vol. 142, Issue 2, pp. 209-216 (2008).
23. Saravanathamizhan, R., Paranthaman, R., Balasubramanian, N., Ahmed Basha, C., "Tanks in series model for continuous stirred tank electrochemical reactor ", Industrial Engineering Chemistry Research, published by American chemical society. Vol. 47, pp. 2976-2984 (2008).
24. Manickaraj, J, Balasubramanian, N., "Estimation of the heat transfer coefficient in a liquid–solid fluidized bed using an artificial neural network", Advanced Powder Technology , published by Elsevier . Vol. 19, Issue 2, pp. 119-130. (2008).
25. C.Srinivasakannan, N.Balasubramanian, "An analysis on modeling of fluidized bed drying of granular material", Advanced Powder Technology , published by Elsevier . Vol. 19, Issue 1, pp. 73-82 (2008).
26. 41. K.Sivakumar, R.Thilakavathi, N.Balasubramanian, C. Ahmed Basha,, "Studies on Fluidized bed Electrode.", Int. JI Chem. Reac. Engg, Vol. 6, Issue 41, (2008).
27. Saravanathamizhan, R., Soloman, P. A., Balasubramanian, N. Ahmed Basha.C., "Optimization of in-situ electro-oxidation of formaldehyde by the response surface method", Journal of Chemical Engineering and Biochemical Engineering Quarterly., Vol. 22, Issue 2, pp. 213-220 (2008).

28. A Arul Murugan, Thilakavathi Ramamurthy, B Subramanian, CS Kannan, M Ganesan, " Electrocoagulation of textile effluent: RSM and ANN modeling", International Journal of Chemical Reactor Engineering , published by De Gruyter. Vol. 7, Issue 1, (2009).
29. N.Balasubramanian, Toshinori Kojima, C.Ahmed Bash, C. Srinivasakannan,, "Removal of arsenic from aqueous solution using electrocoagulation", Journal of Hazardous Materials , published by Elsevier . Vol. 167, pp. 966-969 (2009).
30. Chandrasekar Srinivasakannan, N Balasubramanian, " Estimation of diffusion parameters in fluidized bed drying", Advanced Powder Technology , published by Elsevier. Vol. 20, Issue 4, pp. 390-394 (2009).
31. KS Parama Kalyani, N Balasubramanian, C Srinivasakannan, " Decolorization and COD reduction of paper industrial effluent using electro-coagulation", Chemical Engineering Journal , published by Elsevier. Vol. 151, Issue 1, pp. 97-104 (2009).
32. R.Thilakavathi, N.Balasubramanian, C. Ahmed Basha, "Modeling electrowinning process in an expanded bed electrode", Journal of Hazardous Materials , published by Elsevier . Vol. 162, pp. 154-160 (2009).
33. Lizhang Wang, N.Balasubramanian, "Electrochemical regeneration of granular activated carbon saturated with organic compounds", chemical engineering journal, published by Elsevier . Vol. 155, pp. 763-768 (2009).
34. Arul Murugan, R.Thilakavathi, N.Balasubramanian, C. Srinivasakannan, " RSM and ANN modeling of electro-coagulation in parallel plate electrochemical reactor, ", International Journal of Chemical Reactor Engineering, Vol. 7, pp. A83 (2009).
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39. P.A.Soloman, C. Ahmed Basha, M. Velan, N.Balasubramanian, "Electrochemical degradation of pulp and paper industry waste‐water", Journal of Chemical Technology and Biotechnology, published by wiley. Vol. 84, pp. 1303-1313 (2009).
40. Solomon, P.A., Basha, C.A., Velan, M., Ramamurthy, V., Koteeswaran, K., Balasubramanian, "Electrochemical degradation of Remazol Black B dye effluent", clean, published by wiley. Vol. 11, pp. 889-900 (2009).

41. Basha, C.A., Solomon, P.A., Velan, M., Balasubramanian, N., Kareem, R.L., "Participation of electrochemical steps in treating tannery wastewater", *Industrial Engineering Chemistry Research*, published by American chemical society. Vol. 48, pp. 9786-9796 (2009).
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43. C. Srinivasakannan, N.Balasubramanian, "Estimation of moisture diffusion parameters for fluidized bed drying of pepper", *Advanced Powder Technology* , published by Elsevier . Vol. 20, pp. 390-394 (2009).
44. V. Preethi, K. S. Parama Kalyani, C. Srinivasakannan, N.Balasubramanian, N.Vedaraman, "Ozonation of tannery effluent for removal of cod and color", *Journal of Hazardous Materials* , published by Elsevier . Vol. 166, pp. 150-154 (2009).
45. Basha C.A., Solomon, P.A., Velan, Lima Rose Miranda, Balasubramanian, N., Sive, " Electrochemical Degradation of Specialty Chemical Industry effluent", *Journal of Hazardous Materials* , published by Elsevier . Vol. 176, pp. 154-164 (2010).
46. C Srinivasakannan, N Balasubramanian, " The significance of indirectly heated gasifiers for the generation of medium calorific value syngas through biomass gasification", *Energy Sources* , published by Taylor & Francis Group. Vol. 32, Issue 17, pp. 1579-1586 (2010).
47. P. Antony Soloman, C. Ahmed Basha, M. Velan,a and N.Balasubramanian, " Electro oxidation of Malachite Green and Modeling Using ANN ", *chemical and biochemical engineering quarterly*, published by chemical and biochemical engineering quarterly. Vol. 24, pp. 445-452 (2010).
48. C.Srinivasakannan, N.Balasubramanian, "Variations in the Design of Dual Fluidized Bed Gasifiers and the Quality of Syngas from Biomass", *Energy sources*, published by Taylor and Francis. pp. 1579 - 1586 (2010).
49. Jimmy Lim, C. Srinivasakannan, N.Balasubramanian, "Activation of palm shells by phosphoric acid impregnation for high yielding activated carbon", *Journal of Analytical and Applied Pyrolysis*, published by Elsevier . Vol. 88, pp. 181-186 (2010).
50. Fiona Chai Foong Lowa, Ta Yeong Wua,Chee Yang Teha , Joon Ching Juanb, N.Balasubramanian, "Investigation into photocatalytic decolorization of Reactive Black 5 (RB5) using TiO₂ nanopowder", *Coloration Technology*, published by Wiley. pp. 1478-4408 (2011).
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52. J. Narendranath, R. Muruganatham, "Nitrogen doped graphene supported Pt-Pd nanoparticle modified GC electrode for electrochemical determination of tramadol and paracetamol", *Indian Journal of Chemistry - Section A Inorganic, Physical, Theoretical and Analytical Chemistry*, published by NiSCAIR. Vol. 56, Issue 1, pp. 63-68 (2011).

53. DS Ibrahim, N Sakthipriya, N Balasubramanian, " Electro-coagulation treatment of oily wastewater with sludge analysis", *Water Science and Technology* , published by IWA Publishing. Vol. 66, Issue 12, pp. 2533-2538 (2012).
54. Fiona Chai Foong Low, Ta Yeong Wu, Chee Yang Teh, Joon Ching Juan, N Balasubramanian, " Investigation into photocatalytic decolorisation of CI Reactive Black 5 using titanium dioxide nanopowder", *Coloration Technology* , published by Blackwell Publishing Ltd. Vol. 128, Issue 1, pp. 44-50 (2012).
55. Dhorgham Skban Ibrahim, N. Sakthipriya, and N. Balasubramanian, " Electrocoagulation treatment of oily wastewater with sludge analysis", *Water Science and Technology*, published by Elsevier . Vol. 66, pp. 2533-2538 (2012).
56. Antony Solomon and Natesan Balasubramanian, " Optimization of integrated Electro-Bio process for bleaching effluent treatment", *Industrial Engineering Chemistry Research*, published by American chemical society. Vol. 51, pp. 8211-8221 (2012).
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59. Keerthi, V. Suganthi, M. Mahalakshmi, N. Balasubramanian, " Development of Hybrid Membrane Bioreactor for Tannery Effluent Treatment", *Desalination* , published by Elsevier . Vol. 309, pp. 231-236 (2012).
60. R.Thilakavathi, D. Rajasekhar, N.Balasubramanian, C. Srinivasakannan, Ahmed Al Shoaibi, " CFD Modeling of Continuous Stirred Tank Electrochemical Reactor", *International Journal of Electrochemical Society*, published by International journal of electrochemical science. Vol. 7, pp. 1386 - 1401 (2012).
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62. C.Srinivasakannan, Ahmed Al Shoaibi N.Balasubramanian, "Continuous fluidized bed drying with and without internals: Kinetic model", *Chemical Biochemical Engineering (Quartely)*, Vol. 26, pp. 97-104 (2012).
63. R.Thilakavathi, N.Balasubramanian, C. Srinivasakannan, Ahmed Al Shoaibi, " Modeling Particulate Bed Electrode for Metal Recovery ", *International Journal of Electrochemical Society*, Vol. 7, pp. 1371 - 1385 (2012).
64. Dhorgham Skban Ibrahim, C. Veerabahu, R. Palani, Seethala Devi, N. Balasubramanian, "Flow Dynamics and Mass Transfer Studies in a Tubular Electrochemical Reactor with a Mesh Electrode", *Computers and fluids* , published by Elsevier. Issue 73, pp. 97-103 (2013).

65. V Vinduja, N Balasubramanian, " Removal of heavy metals by hybrid electrocoagulation and microfiltration processes.", *Environmental technology* , Vol. 34, Issue 17, pp. 2897-2902 (2013).
66. V Vinduja, N Balasubramanian, " Electrocoagulation-integrated hybrid membrane processes for the treatment of tannery wastewater", *Environmental Science and Pollution Research* , published by Springer Berlin Heidelberg. Vol. 20, Issue 10, pp. 7441-7449 (2013).
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70. Keerthi, V. Suganthi, M. Mahalakshmi, N. Balasubramanian, "Development of Hybrid Membrane Bioreactor for Tannery Effluent Treatment ", *Desalination*, published by Elsevier. Issue 309, pp. 231-236 (2013).
71. Divya, Keerthi, N. Balasubramanian, "Electro-Catalytic Treatment of Phenols", *Research Journal of Chemistry and Environment*, published by International Congress of Chemistry and Environme. Vol. 17, Issue 2, pp. 19-24 (2013).
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74. Nagham Amer Sami, Kousik Das Jitendra S. Sangwai , N. Balasubramanian, "Phase equilibria of methane and carbon dioxide clathrate hydrates in the presence of (methanol+ MgCl₂) and (ethylene glycol+ MgCl₂) aqueous solutions", *The Journal of Chemical Thermodynamics*, published by Elsevier. Vol. 65, pp. 198-203 (2013).
75. M. Vanitha and N. Balasubramanian, "Waste minimization and recovery of valuable metals from spent lithium-ion batteries—a review", *Environmental Technology Reviews*, published by Taylor & Francis. Vol. 2, pp. 101-115 (2013).
76. Dhorgham Skban Ibrahim, P. Seethala Devi, C. Veerababhu and N. Balasubramanian, "Treatment of petroleum effluent using a tubular electrochemical reactor", *Petroleum Science and Technology*, published by Taylor and Francis. Vol. 32, Issue 16, pp. 1932 - 1939 (2013).

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83. Vadivel.S, Keerthi, Vanitha M, Muthukrishnaraj A, Balasubramanian.N,, "Solvothermal synthesis of Sm-doped BiOBr/RGO composite as an efficient photocatalytic material for methyl orange degradation", *Materials Letters*, published by Elsevier. Vol. 128, pp. 287-290 (2014).
84. Vadivel.S, Vanitha M, Muthukrishnaraj A, Balasubramanian.N, "Graphene oxide–BiOBr composite material as highly efficient photocatalyst for degradation of methylene blue and rhodamine-B dyes", *Journal of Water Process Engineering*, published by Elsevier. Vol. 1, pp. 17-26 (2014).
85. Vadivel.S, Kamalakannan V.P Keerthi, Balasubramanian.N,, "D-Pencillamine assisted microwave synthesis of Bi₂S₃ microflowers/RGO composites for photocatalytic degradation—A facile green approach", *Ceramic International*, published by Elsevier. (2014).
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129. J Narendranath, J Manokaran, S Shanmuga Sundar, R Muruganatham, Ahmed Al Shoabi, C Srinivasakannan, N Balasubramanian, " Electrochemical recovery of hydrogen and elemental sulfur from hydrogen sulfide gas by two-cell system", *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, published by Taylor & Francis. pp. 1-14 (2019).

Books Published

1. "Chapter 9: Electrocoagulation/Electroflotation: fundamentals, present and future perspectives in 'Electrocatalysis' in *Electrolysis: Theory, Types and*" authored by Edr. Shing Kuai and Ji Meng, Edr. Shing Kuai and Ji Meng and C Srinivasakannan and published by ISBN 978-1-60876-619-2, USA.(2010)

Current Sponsored Projects

1. "Recovery of Hydrogen and Elemental Sulfur from Hydrogen Sulfide by Indirect Electrolysis ", funded by Petroleum Institute - Abu Dhabi.. Project Cost: 2471042.00.
2. "Functionalized Polymer /Ceramic Matrix Hybrid Composite (P/C- MHC) Membranes for Environmental Applications", funded by DST-Indo- Korea (June-2018 - May-2021). Project Cost: 29.10.
3. "Study of reaction kinetics by dielectric spectroscopy technique", funded by Indian Space Research Organization, RESPOND (May-2020 - May-2021). Project Cost: 910000.00.

Sponsored Projects Completed

1. "Improved Chrome recovery system integrated with water recovery for reuse in tanneries under zero liquid discharge concept - Networking project", funded by Ministry of Environment and Forest (July-2013.. Project Cost: 9000000.00.
2. "Development of Integrated Membrane process for wastewater treatment and reuse", funded by Department of Science and Technology (July-2013.. Project Cost: 2698800.00.
3. "Poly-ethylenedioxythiophene (PEDOT)/ Nitrogen doped Graphene composites for high performance Supercapacitor Applications", funded by UGC, India-NewZealand.. Project Cost: 2500000.00.
4. "Petroleum Pitch as a binder material for anode manufacture", funded by University Grants Commission.. Project Cost: 1495000.00.
5. "Development of Hybrid photocatalytic Membrane Bioreactor for Textile Wastewater Treatment", funded by DST (May-2016 - May-2019). Project Cost: 3500000.00.
6. "Development of anode from Petroleum Pitch for High Temperature Electrolysis", funded by DST-WMT (November-2017 - November-2018). Project Cost: 9.02.
7. "CAS- Special Assistance Programme II ", funded by UGC SAP (April-2015 - March-2020). Project Cost: 162.50.

Programme Organized

1. Organizing Committee, International level conference on "World Congress on Engineering and Technology , China" from 27-May-2012 to 30-May-2012.
2. Organizing Committee, International level conference on "International Conference on Chemical , Biological and Environmental Studies , Taiwan" from 08-Jan-2013 to 10-Jan-2013.
3. International Advisory Board, International level conference on "The 9 th Asia Pacific Conference on Sustainable Energy and Environmental Technologies , Japan" from 05-Jul-2013 to 08-Jul-2013.
4. Technical Program Committee, International level conference on "World Congress on Engineering and Technology , China" from 25-Oct-2013.
5. Organizing Secretary, National level conference on "CHEMCON2016" from 27-Dec-2016 to 30-Dec-2016.
6. Organizing Secretary, International level seminar on "Indo –Canada International symposium on Sustainable Energy – Energy for all" from 29-Dec-2016 to 29-Dec-2016.
7. Organizing Secretary, International level seminar on "Indo-US International symposium on "Membrane Technology"" from 29-Dec-2016 to 29-Dec-2016.

Programme Attended

1. Attended a National level Short Course on "Environmental Engineering" organized by Anna University, India from 13-Dec-2004 to 14-Dec-2004.
2. Attended a National level seminar on "Waste Management" organized by IGCAR , Kalpakkam , India from 09-Feb-2006.
3. Attended a International level seminar on "International Seminar on Development of Liquid Filtration and Purification Industry in Japan and India " organized by Anna University - MEMSEP 2006, India from 27-Nov-2006.
4. Attended a National level seminar on "National Seminar on Safety , Health and Environment" organized by SHE 2008, India from 14-Feb-2008 to 15-Feb-2008.
5. Participated in a National level workshop on "Green Chemistry" organized by Anna University, India from 04-Oct-2012 to 05-Oct-2012.
6. Participated in a National level workshop on "Radio Chemistry" organized by Anna University, India from 01-Dec-2012.

Special Representations

1. Fellow Member in International Congress on Chemistry and Environment from 02-Feb-2009
2. Member- Project Review Committee in Chilean Government Commission for Scientific and Technology
3. Editorial Board in Advances in Environmental Research from 02-Jan-2012
4. Editor in Journal of Advances in Chemistry from 01-Jan-2013
5. Advisory Board in Journal of Electrochemistry and Plating Technology from 25-Sep-2013

Honours

1. "CSIR Young Scientist paper presenter " given by CECRI-CSIR from India (1996).
2. "National Science Council Fellowship " given by NSC Taiwan from Taiwan (2001).
3. "PVC Award For Excellence in Research" given by Monash University from Malaysia (2009).
4. "Active Researcher " given by Anna University from India (2015).

Experience Abroad

1. Visited National Cheng Kung University , TAIWAN from 30-Jan-2001 to 10-Jan-2003. Purpose of visit :Postdoctoral Fellow.
2. Visited Seikei University, JAPAN from 03-Nov-2007 to 27-Nov-2007. Purpose of visit :Visiting Scientist.

3. Visited Monash University Sunway Campus, MALAYSIA from 05-May-2008 to 28-Dec-2009. Purpose of visit :Senior Lecturer.
4. Visited Monash University Clayton Campus, AUSTRALIA from 09-Jun-2008 to 19-Jun-2008. Purpose of visit :Visiting Faculty.
5. Visited San Carlous University, Philippines from 20-Nov-2017 to 30-Nov-2017. Purpose of visit :INSA Bilateral Exchange .

Extension & Outreach Programme

1. Co-ordinator, The state of the art- analytical instruments, and funded by University Grants Commission at A.C.Tech campus, Anna University during 26-Oct-2015 and 30-Oct-2015. No. of participants: 0.
2. Coordinaor , The state of the art- analytical instruments, at AC Tech during 10-Feb-2020 and 15-Feb-2020. No. of participants: 50.