



Dr. G. PARUTHIMAL KALAIANAN
Senior Professor & Head i/c

Contact

Address : Department of Industrial Chemistry
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Academic Qualifications: M.Sc., Ph.D

Teaching Experience: 28 Years

Research Experience: 32 Years

Additional Responsibilities

1. **Dean In-charge, Faculty of Science, Alagappa University, Karaikudi, 26.08.2016 To 31.08.2016**
2. **Deputy Co-ordinator – I for the Second Phase of DST – PURSE Scheme, 2016 To 2020.**
3. **Governing Council Member of SEAST, CECRI, Karaikudi, 2015 to 2017.**
4. **Chairperson for the School of Chemical Sciences, Alagappa University, Karaikudi from June 2015 to June 2017.**

5. **NAAC Co-ordinator, Department of Industrial Chemistry**, Alagappa University, Karaikudi, 2015 onwards.
6. **Head of Squad Team, Affiliated colleges Examinations**, Alagappa University, November 2015.
7. **Co-Ordinator for the Carrier Guidance and Counselling Cell**, Alagappa University, Karaikudi, May 2015 – May 2016.
8. **Chairperson for the Valuation Board of DDE Exams for M.Sc., (Chemistry)**, December 2014 onwards.
9. **Member of Health Club**, Alagappa University, Karaikudi, 2010 -2012.
10. **Convener/Coordinator** for the Social Responsibility & Citizenship Cell, 2011-2012
11. **Doctoral Committee Member for the Ph.D degree in Bharathidasan University, Trichy**, 2010 onwards.
12. **Additional Chief Superintend for the conduct of Ph.D Pre – Registration Exam**, 2010
13. **Chairman for Electroplating and Metal Finishing group, SAEST, CECRI**, Karaikudi, 2009 – 2011.
14. **Representative of the Department** for assisting HOD & Coordinators of the **NAAC committee**, Alagappa University, 2009 – 2010.
15. **IQAC-Academic Auditor**, 2008 – 2014.
16. **Advisory Committee member For the UGC- SAP Program**, 2008 Onwards.
17. **Vice Chairman**, SAEST Local Chapter, CECRI, Karaikudi, 2001 – 2003.
18. **University Representative** to Conduct the **Distance Education Examinations** at Various Centers located in India, For more than 20 Times.

Areas of Research

1. Development of Electrodes for lithium-ion battery systems.
2. Development of Electrodes for PEM Fuel Cell systems
3. Development of Nanocomposite Coatings

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	PDF	1	-
	Ph.D.	23	2
	M.Phil.	43	1
Project	PG	52	3

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
119	83	40	106	14

Cumulative Impact Factor (as per JCR) : 180.34

h-index : 21

i10 index : 35

Total Citations : 1460

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	CSIR, New Delhi	1996	1998	Development of vapour phase corrosion inhibitors for ferrous and non-ferrous metals (Co-Investigator)	5.20
2	AICTE, New Delhi	1996	1998	A novel route to prepare conducting polymers of good processibility (Co-Investigator)	5.50
3	TNSCST Chennai	1996	1999	Development of zinc electrodes for the alkaline secondary battery systems (Principal Investigator)	2.00
4	TNSCST, Chennai	1996	1999	Development of polymers for the treatment of cooling waters and boilers (Co-Investigator)	2.50
5	AICTE, New Delhi	1997	1999	Development of polymerization process for the preparation of commercially important polymers. (Co-Investigator)	5.00
6	AICTE, New Delhi	1997	2000	Development of electroless nickel composites. (Co-Investigator)	3.00
7	UGC, New Delhi	1998	2001	Development of new polymeric film coating on metal surfaces and its practical applications. (Co-Investigator)	3.00

8	DST New Delhi	1998	2001	Analysis of conducting co-polymers by UV-visible spectroscopy. (Co-Investigator)	10.00
9	DRDO, New Delhi	2001	2003	A study to develop lithium intercalated carbon electrodes and assess its property for high voltage lithium cells. (Principal Investigator)	8.80
10	DST New Delhi	2004	2006	Synthesis and preparation of Nano particle secondary cell materials of spinel structure and their compatibility to intercalation process. (Co-Investigator)	22.28
11	DST New Delhi	2005	2008	Development of Micro-porous PVDF-HFP based blend polymer electrolyte membranes for advanced Li-battery applications. (Co-Investigator)	15.40
12	DRDL Hyderabad	2006	2008	Development and Performance Evaluation of Alternatives to Chromate based Primers on Aluminium Aerospace alloys. (Co-Investigator)	9.80
13	UGC New Delhi	2007	2010	Preparation and characterization of Nano-crystalline Ni-Co composite coatings for the industrial applications. (Principal Investigator)	6.03
14	UGC New Delhi	2010	1013	Development of Acidizing inhibitors for Petroleum oil wells (Principal Investigator)	8.13
15	UGC-BSR , 'One time Grant' New Delhi	2014	2016	Synthesis and electrochemical characterizations of substituted nano $\text{LiNi}_{1/3}\text{Mn}_{1/3}\text{Co}_{1/3-x}\text{M}_x\text{O}_2$ cathode materials for the rechargeable lithium-ion batteries (Principal Investigator)	7.00
16	UGC Dr. D.S. Kothari Post- Doctoral Fellowshi p, New Delhi	2013	2016	Studies on Novel Polymer electrolyte membranes based on poly(arylene ether)s with benzimidazole group for high temperature fuel cell application	17.47

Patents

1. G. A. Pathanjali, M. Nagarajan and **G. Paruthimal Kalaigan** , Pt – WO_x/ C Nano composite Anode Electrocatalyst for fuel cell application , 217 Che 2011, 24 Jan 2011, 44 / 2012 & 02/11/2012.
2. G. A. Pathanjali, M. Nagarajan and **G. Paruthimal Kalaigan** , Pt – WO_x – TiO₂ / C Nano composite Anode Electrocatalyst for fuel cell application, 236 Che 2011, 25 Jan 2011, 45 / 2012 & 09/11/2012

Distinctive Achievements / Awards

1. **Visiting Researcher – KAIST, South Korea** for the period of one year (**2001 to 2002**).
2. **Visiting Scientist – KIST, South Korea** for the period of one year (**2004 to 2005**).
3. **Certificate of achievement and cash award** in due recognition of the academic performance during the year 2005- 06 (Alagappa University)
4. Elected as **Vice-Chairman** for the Society for Advancement of Electrochemical Science & Technology (**SAEST**), Local chapter, Karaikudi for two year term from 2001-2003
5. Elected as **Chairman** for the **Electroplating and Metal Finishing group** of the Society for Advancement of Electrochemical Science & Technology (**SAEST**), Local chapter, Karaikudi for two year term from July 2009 – 2011.
6. **Biography has been included in 27th Edition of MARQUIS WHO'S WHO** in the world, America's leading Biography Publisher New Jersey, USA (Year 2010), (VIP No. 34661100)
7. **Acted as Judge for the selection of Best Electroplater Award**, Institute of Metal Finishers Association of India, Mumbai
8. **SHIKSHA RATTAN PURASKAR (Education ICON Award) and CERTIFICATE OF EXCELLENCE** from India International Friendship Society (IIFS), New Delhi, 7, April, 2010.
9. **Certificate of Commemoration and Cash Award of Rs.2000** for the completion of 25 years of unblemished service on 30-12-2014 in Alagappa University, Karaikudi.
10. **Chairperson for the School of Chemical Sciences**, (Dept. of Industrial Chemistry & Dept. of Nanoscience and Technology), Alagappa University, Karaikudi from June 2015 To June 2017.
11. **"Alagappa Excellence Award for Research" for the year 2015-2016** – Certificate for Award, Gold Medal, Citation Book and Cash Award of Rs.15000/-.
12. **Certificate of Appreciation in the BRONZE Category for the Income Tax return** for the Assessment year 2016-17 by the Central Board of Direct Taxes, Ministry of Finance, Govt. of India.
13. **Biographical Note** has been Published in the **Famous India : Nation's Who's Who 2016**.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 31

1. International Seminar on Recent Advances in Textile and Electrochemical Sciences (RATES 2013), Alagappa University, Karaikudi, March 21-23, 2013.
2. International workshop on "Frontier Areas in Chemical Technologies-2014" (FACTs-2014), Alagappa University, Karaikudi, February 21-22, 2014.
3. Seminar on Advances in Electrochemical Science & Technology, Alagappa University, Karaikudi, Dec. 1991.
4. National Seminar on New Trends in Electrochemical Sciences, Alagappa University, Karaikudi, Dec. 1994
5. National Seminar on Status of Textiles, Dyes and Chemicals in India, Alagappa University, Karaikudi, April 1995.
6. National Seminar on Mathematical Applications in Chemistry, Alagappa University, Karaikudi, April, 1996.
7. National Seminar on Emerging Trends in Electrochemical, Textile and Polymer Industries, Alagappa University, Karaikudi, April 1996 (Organizing Secretary).
8. National Seminar on Recent Trends in Materials Science, Alagappa University, Karaikudi, May, 1999.
9. National conference on Application Oriented Nanomaterials (NANOMAT-2005), Alagappa University, March, 2005.
10. National workshop on Advanced Techniques for corrosion studies, Alagappa University, January, 2006.
11. National Seminar on Recent Advances in Textile and electrochemical Sciences (RATES 2007), June, 2007.
12. UGC Sponsored Workshop on Green Chemistry (AUWGC - 2008), March 31, 2008.
13. National Seminar on Recent Advances in Textile and electrochemical Sciences (RATES 2008), December 19th and 20th, 2008 (Convenor).
14. UGC Sponsored Workshop on Green Process Techniques for Industrial Applications (GREPTIA - 2009), March, 20 and 21, 2009.
15. National Seminar on Recent Advances in Textile and electrochemical Sciences (RATES 2009), December 4 and 5, 2009.
16. Nation conference on Yoga and Food habits organized by Health Club, Alagappa University, karaikudi on 31st March, 2010.
17. A Health Camp for staff and students organized by Health Club, Alagappa University, karaikudi on 30th March, 2010.
18. National workshop on Electroanalytical Techniques with the co-operation of SINSIL INTERNATIONAL, Alagappa University, Karaikudi October 11 – 13, 2010.
19. A Health Camp for staff and students organized by Health Club, Alagappa University, karaikudi on 7th April, 2011.
20. National Conference on Recent Trends in Green synthesis, Alagappa University, Karaikudi. August 5-6, 2011

21. UGC Sponsored Workshop on “Chemistry –Our Environment, Our Life and Our Future, Alagappa University, Karaikudi. December 22-23, 2011
22. National Seminar on Recent Advances in Textile and electrochemical Sciences (RATES 2012), March 22-23, 2012.
23. DST Sponsored Innovation in Science Pursuit for Inspired Research (INSPIRE) Internship Program – 2013, Sep. 6-10, 2013.
24. Science Academies (IASc, INSA & NASI) Sponsored Two days Lecture Workshop on “Advances in Chemistry” Alagappa University, Karaikudi, 20 & 21 Sep. 2013.
25. International workshop on “Frontier Areas in Chemical Technologies – 2014” (FACTs - 2014), 21 & 22 Feb 2014.
26. National Seminar on “Frontier Areas in Chemical Technologies – 2015” (FACTs - 2015), March 6 - 7, 2015 (Convenor).
27. Acted as Session **Chairman** in the International Conference on Advancement of Nanoscience and Nanotechnology (ICOANN - 2010), Alagappa University, Karaikudi, March, 1 – 3, 2010.
28. Acted as Session **Chairman** in the National conference on Recent trends in Green Synthesis (RTGS 2011), Alagappa University, Karaikudi, August, 5 – 6, 2011.
29. Acted as Session **Chairman** in the National conference on Recent trends in Textile and Electrochemical Sciences (RATES 2012), Alagappa University, Karaikudi, March 22 – 23, 2012.
30. **National Advisory committee member** in “National Conference on Recent Trends in Materials Science (RTMS-13)” Organized by M.Kumarasamy College of Engineering, Karur on 07-11-2013.
31. Acted as Session **Co-Chairperson** in the International Conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21 – 23, 2016.

Events Participated

Conferences / Seminars / Workshops:

International Seminars

1. B. Ranjith and **G. Paruthimal Kalaignan**, Modernism of Ni–WC nanocomposite coatings prepared from Pulse and Direct Current Methods, First International conference on composites and Nanocomposites (ICNC – 2011), Mahatma Gandhi University, Kottayam, Kerala, India, Jan 7 – 9, 2011.
2. B. Ranjith and **G. Paruthimal Kalaignan**, Corrosion Performance of heat treated Ni – Co nanocomposite coatings, First International conference on composites and Nanocomposites (ICNC – 2011), Mahatma Gandhi University, Kottayam, Kerala, India Jan 7 – 9, 2011, Jan 2011.

3. P. Mohan, **G. Paruthimal Kalaigan**, C. Marikannu and V. S. Muralidharan, Ecofriendly inhibitors for simulated cooling water, International Conference on Advanced Materials and its Applications (ICAMA 2011), Kalasalingam University, Krishnankoil, Tamilnadu, India, March 2011.
4. K. Arunsunai kumar, **G. Paruthimal Kalaigan**, C. Marikannu and V. S. Muralidharan, Role of Addition agents in Copper Plating bath a Voltametric study, International Conference on Advanced Materials and its Applications (ICAMA 2011), Kalasalingam University, Krishnankoil, March 2011.
5. Suthu Sundar Pethaiah, Aviers Lim, **G.Paruthimal Kalaigan**, Development of Durable Polymer Electrolyte Membrane Fuel Cell Electrodes For Marine Applications, International Maritime – Port Technology and Development Conference (MTEC 2011), Singapore, 13-15 April 2011, April 2011.
6. Suthu Sundar Pethaiah, **G.Paruthimal Kalaigan**, Aviers Lim, Electrochemical Characterizations of Platinum – Palladium Catalyzed Membrane Electrode Assembly for PEM Fuel Cell Applications, International Conference on Materials for Advanced Technologies (ICMAT 2011), Singapore, 26 June – 1 July 2011, June –July 2011.
7. **G.Paruthimal Kalaigan** and K. N. Srinivasan, Novelty of Ni – Co – WC nanocomposite coatings prepared from Pulse and Direct Current Methods. B.Ranjith , International Conference on Nanoscience and Nanotechnology (ICNN 2011), Coimbatore, 6-8 July 2011, July 2011.
8. P.Mohan, K.Arunsunai Kumar, **G.Paruthimal Kalaigan**, VS.Muralidharan, N'-(4-methoxy benzylidene) benzohydrazide as effective corrosion inhibitor for mild steel in 1 M HCl (AB 401-PP 174). International Conference on Global Trends in Pure and Applied Chemical Sciences (ICGTPACS-2012) Udaipur, Rajasthan, 3,4 March 2012, March 2012.
9. P.Mohan, K.Arunsunai Kumar, **G.Paruthimal Kalaigan**, VS.Muralidharan, The inhibition effect of mild steel corrosion in 1M HCl using 1, 4-bis (2-nitrobenzylidene) thiosemicarbazide inhibitor. 10th International Symposium on “Advances in Electrochemical Science and Technology (iSAEST-10)”, Chennai, Jan. 28-30, Jan. 2013.
10. K.Arunsunai Kumar, P.Mohan, **G.Paruthimal Kalaigan**, VS.Muralidharan, Preparation and Characterizations of Nickel-Tin oxide composite coatings by Pulse current, 10th International Symposium on “Advances in Electrochemical Science and Technology (iSAEST-10)”, Chennai, Jan. 28-30, Jan. 2013.
11. S.Kasturibai and **G.Paruthimal Kalaigan**, Electrodeposition and characterizations of Ni-ZrO₂ nanocomposite coatings, 10th International Symposium on “Advances in Electrochemical Science and Technology (iSAEST-10)”, Chennai, Jan. 28-30, Jan. 2013.
12. K.Arunsunai Kumar, S.Sangeetha **G.Paruthimal Kalaigan** and V.S.Muralidharan, Corrosion resistance of Ni-W alloy with the inclusion of TiN by Electrodeposition method, International conference on Recent Advance in Textile and Electrochemical sciences. (RATES-2013), Alagappa University, Karaikudi, March 21-23, March 2013.

13. P.Mohan, K.Arunsunai Kumar and **G.Paruthimal Kalaigan**, Structure and Electrochemical performances of Co-Substituted $\text{LiCo}_y\text{Li}_x\text{Mn}_{2-x}\text{O}_4$ cathode materials for the rechargeable lithium ions batterie, International conference on Recent Advance in Textile and Electrochemical sciences. (RATES-2013), Alagappa University, Karaikudi, March 21-23, March 2013
14. S.Kasturibai, K.Arunsunai Kumar and **G.Paruthimal Kalaigan**, Preparation and performance of Pulse electrodeposited Ni-SiO₂ composite coatings, International conference on Recent Advance in Textile and Electrochemical sciences. (RATES-2013), Alagappa University, Karaikudi, March 21-23, March 2013
15. P.Mohan, K.Kalaiselvi and **G.Paruthimal Kalaigan**, Corrosion Inhibition Effect of Mild steel in 1 M HCl by N'-(2-Hydroxybenzylidene) Benzohydrazide with iodide ions, International conference on Recent Advance in Textile and Electrochemical sciences. (RATES-2013), Alagappa University, Karaikudi, March 21-23, 2013, March 2013.
16. N.Nachiappan **G.Paruthimal Kalaigan** and G.Sasikumar, Influence of carbon monoxide, carbondioxide and methanol as fuel impurities on PEM fuel cell performance, International conference on Recent Advance in Textile and Electrochemical sciences. (RATES-2013), Alagappa University, Karaikudi, March 21-23, 2013, March 2013.
17. S.Sangeetha and **G.Paruthimal Kalaigan**, Physical and Electrochemical characterization of Ni-W-Si₃N₄ nanocomposite coatings prepared by pulse electrodeposition, International conference on chemistry in synergy with materials and biology (ICMB-2014), Bishop Heber College, Tiruchirappali, January 10-11, 2014, Jan 2014.
18. S.Sangeetha and **G.Paruthimal Kalaigan**, Electrochemical Characterization of Ni-W PTFE Nano composite coatings prepared by Pluse Current Deposition, International conference on Energy, Water and Environmental Science & Technology (ICEWEST - 2015), Presidency college, (Autonomous), Chennai, Feb. 5 & 6, Feburary 2015.
19. S.Sangeetha and **G.Paruthimal Kalaigan**, Surfactant assisted Pluse Electrodeposition of Ni-W nanocomposite coatings for Industrial Applications, International Conference on Nanoscience, Nanotechnology & Advanced Materials, GITAM Univerity, Visakapatnam. Dec.14-17, 2015, December 2015.
20. P. Mohan and **G. Paruthimal Kalaigan**, Structure and cycle stability of LaPO₄ coated LiMn₂O₄ cathode materials for rechargeable lithium ion batteries, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
21. P. Kandasamy, **G. Paruthimal Kalaigan** and K. Tharanikkarasu, Acid doped poly(fluorenyl ether sulfone) with pendent imidazole side groups for high temperature proton exchange membranes application, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.

22. K. Kalaiselvi, P. Mohan and **G. Paruthimal Kalaignan**, Improved electrochemical properties of LiMn_2O_4 with the La and Sm co-doping for rechargeable lithium-ion batteries, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
23. K. Arunsunai Kumar, **G. Paruthimal Kalaignan** and S.Senthilkumar, Corrosion resistance of heat treated Ni-W and Ni-W- TiO_2 nanocomposite coatings, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
24. S. Sangeetha and **G Paruthimal Kalaignan**, Multicomponent effect of Ni-W- MoS_2 -PTFE nanocomposite coatings prepared by direct and pulse current electrodeposition, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
25. K. Alex Mary, S. Sangeetha and **G Paruthimal Kalaignan**, Pulse electrodeposition and corrosion properties of Ni-W- ZrO_2 nanocomposite coatings, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
26. K.Mohana, S. Sangeetha and **G Paruthimal Kalaignan**, Characterizations of pulse deposited Ni-W-SiC nanocomposite coatings, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
27. S. Kasturibai and **G. Paruthimal Kalaignan**, Physical and electrochemical performances of pulse electrodeposited Ni- CeO_2 nanocomposite coatings, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
28. V. Jeyanthi, P. Naveenkumar and **G. Paruthimal Kalaignan**, Synthesis and Physical Characterization of LiCoVO_4 nano cathode materials for the rechargeable lithium ion batteries, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
29. P. Naveenkumar and **G. Paruthimal Kalaignan**, Development of poly-anionic nano cathode materials for the rechargeable lithium-ion batteries, International conference on Frontier Areas in Chemical Technologies – 2016 (FACTs - 2016), Alagappa University, Karaikudi, March 21-23, 2016, March, 2016.
30. P. Naveenkumar and **G. Paruthimal Kalaignan**, Structural and Electrochemical characterization of Bi doped $\text{Li}_2\text{NiTiO}_4$ cathode materials for the Rechargeable Lithium-ion Batteries, Asian Consortium on Computational Materials Science, (ACCMS – TM 2016), Theme Meeting on First-Principles Analysis & Experiment: Role in Energy Research, SRM University, Chennai, 22 – 24 September 2016, September 2016.

National Seminars

1. P.Mohan, R.Usha, **G.Paruthimal Kalaignan** and V.S.Muralidharan, Synthesis and Characterizations of novel corrosion inhibitors for mild steel corrosion in 1M HCl solution, National Conference on Recent Trends in Green Synthesis (RTGS 2011), Alagappa University, Karaikudi. Aug 5-6, Aug 2011.
2. K.Arumsunai Kumar, **G.Paruthimal Kalaignan**, S.Kasturibai and V.S. Muralidharan, Preparation and Characterizations of Nano structured Nickel-Zirconia Composite Coatings, National Conference on Recent Trends in Green Synthesis (RTGS 2011), Alagappa University, Karaikudi. Aug 5-6, Aug 2011.
3. N.Nachiappan, **G.Paruthimal Kalaignan**, G.Sasikumar, Studies of carbon monoxide as fuel impurity on PEM fuel cell performances, Recent Advances in Textile and Electrochemical Sciences (RATES 2012), Alagappa University, Karaikudi March 22-23, March 2012.
4. K.Arumsunai Kumar, **G.Paruthimal Kalaignan** and V.S. Muralidharan, Pulse electrodeposition of Ni-W alloy deposits obtained from tri-ammonium citrate bath, Recent Advances in Textile and Electrochemical Sciences (RATES 2012), Alagappa University, Karaikudi March 22-23. March 2012.
5. S.Kasturibai and **G.Paruthimal Kalaignan**, Electrodeposition and characterization of Ni-Si₃N₄ nanocomposite coating, Recent Advances in Textile and Electrochemical Sciences (RATES 2012), Alagappa University, Karaikudi March 22-23, March 2012.
6. K.Arumsunai Kumar, **G.Paruthimal Kalaignan** S.Senthilkumar and V.S. Muralidharan, Pulse and Pulse reverse current Electrodeposition of Ni-W-TiN composite coatings, Second National conference on advanced functional material and its applications (NCAFMA-2013), Kalasalingam University, krishnankoil, March 22&23, March 2013.
7. S.Sangeetha and **G.Paruthimal Kalaignan** , Corrosion resistance of Ni-W-BN (Hexagonal) Nano composite coatings prepared by pulse current eletrodeposition, "New Opportunities and Challenges in Chemical Research", A.V.V.M. Sri Pushpam College (Autonomous) Poondi-613 503, Thanjavur, Tamilnadu, India, December 29 – 30, December 2014.
8. K.Arumsunaikumar, **G.Paruthimal kalaignan**, and S.Senthilkumar, Heat treatment on Ni-W-TiN nano composite coatings and its characterization, "A Treatise on Emerging Trends in Bio-Inorganic Chemistry" (ETBIC - 2015) V.H.N.S.N College (Autonomous), January 2015.
9. N.Nachiappan, **G. Paruthimal Kalaignan** and G.Devasagayam, Studies of Methanol as fuel impurity on PEM Fuel Cell Performance, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
10. S. Sangeetha and **G Paruthimal Kalaignan**, Corrosion resistance properties Ni-W-BN-PTFE nanocomposite coatings prepared by pulse current electrodeposition, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.

11. M.Senthil Kumaran, S. Sangeetha and **G Paruthimal Kalaignan**, Pulse electro-deposition and corrosion properties of Ni-W-ZnO composite coatings, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
12. K.Dinesh Christy, S.Kasturibai and **G. Paruthimal Kalaignan**, Electrodeposition and Characterizations of Ni –SiO₂ Nanocomposite coatings, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
13. P.Malai Rani, S.Kasturibai and **G. Paruthimal Kalaignan** , Microstructure and corrosion behaviour of pulse electrodeposited Ni– Si₃N₄ composite coatings, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
14. P. Mohan, S.Kasturibai and **G. Paruthimal Kalaignan**, Li and Y- co- doped spinel, Li(Y_{0.10}Li_{0.10}Mn_{1.80})O₄ as high performance cathode for lithium ion batteries, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
15. K.Kalaiselvi , P. Mohan and **G. Paruthimal Kalaignan**, Structure and Electrochemical performance of Aluminium Substituted LiNi_{0.5}Mn_{0.5-x}Al_xO₂ Cathode materials for Rechargeable Lithium-ion batteries, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
16. S.Usha, P.Naveenkumar, P.Mohan and **G Paruthimal Kalaignan**, Electrochemical Behaviour of Newly Synthesized N'-(4-hydroxy-3-methoxy benzylidene) benzohydrazide as Inhibitor for Mild Steel in HCL Solutions, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
17. S.Kasturibai and **G. Paruthimal Kalaignan**, Physical and Electrochemical Characterizations of Ni –ZrO₂ Nanocomposite coatings, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
18. P.Kandasamy and **G.Paruthimal Kalaignan**, Studies on Side-Chain Liquid-Crystalline Polymers Containing Poly(acrylic acid) Intermolecular Hydrogen Bonds, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
- 19.K.Arunsunai Kumar, P.Pounraj, A.Sakthivel and **G.Paruthimal Kalaignan**, Preparation and characterization of Cu-TiO₂ nanocomposite by electrodeposition method, "Frontier Areas in Chemical Technologies – 2015" (FACTs - 2015), Alagappa University, Karaikudi. 6 & 7th March, March 2015.
20. P.Naveenkumar and **G.Paruthimal Kalaignan**, Synthesis and Electrochemical Characterization of Na Sabstituted Li₂CoSiO₄ cathode materials for the rechargeable Lithium ion Batteries, 18th National Symboisium in Chemistry, CRSI – 2016, Punjab University, Chandigarh, 5th & 7th Feburary 2016. (Abstract No: **P-195**), Feburary 2016.

Other Training Programs

1. **Computer Programming** (Correspondence cum Contact Class), Thiagarajar College of Engg., Madurai, One Year Nov' 1984 to 1985.
2. **Storage Battery Technology – Refresher Course**, C.E.C.R.I., Karaikudi, Four weeks 2.9.1985 to 1.10.1985.
3. **Corrosion Science and Engineering (Condensed) – Refresher Course**, C.E.C.R.I., Karaikudi, One Week 17.7.1986 - 23.7.1986.
4. **Industrial Metal Finishing (Condensed) – Refresher Course**, C.E.C.R.I., Karaikudi, One Week 28.7.1986 to 2.8.1986.
5. **Experimental techniques for Electrochemists-Refresher course**, C.E.C.R.I., Karaikudi, One Week 5.1.1987 to 9.1.1987.
6. **Powder Metallurgy – Refresher course**, I.I.T, Kanpur, Two Weeks 1.11.1987 to 15.11.1987.
7. **Orientation course** – UGC sponsored, Bharathidasan University, Trichy, Four Weeks 19.10.1990 to 15.11.1990.
8. **Refresher Course**, Bharathidasan University, Trichy, Four Weeks 28.2.1995 to 27.3.1995.
9. **Refresher Course** – UGC Sponsored, Madurai Kamaraj University, Madurai, Three Weeks 26.02.1996 to 18.03.1996.
10. **Physical Chemistry Curriculum workshop** – UGC sponsored, Annamalai University, Chidambaram, 23-25, March 1998.
11. **Refresher Course** – UGC Sponsored, Bharathiar University, Coimbatore, Three Weeks 21.01.2003 to 10.02.2003.

Overseas Exposure / Visits

1. **Visiting Researcher**, Korea Advanced Institute of Science and Technology (**KAIST**), **South Korea** from **Sep' 2001 to Aug' 2002** under the scheme of Brain Korea – 21 (**one year**), (Field: Photoluminescence)
2. **Visiting Scientist**, Korea Institute of Science and Technology (**KIST**), **South Korea** from **June 2004 to May 2005** under the scheme of Brain Pool, (**one year**), (Field: Dye-sensitised solar cells)

Membership in

Professional Bodies

1. Life member (LF 494) in Society for Advancement of Electrochemical Science & Technology (SAEST), CECRI, Karaikudi.
2. Life Member (L 14555) in Indian Science Congress Association. (ISCA), Kolkata.
3. Life member in Swadeshi Science Movement (SSM). Karaikudi

Editorial Board

Referee for the International Journals

1. Electrochimica Acta
2. Journal of Alloys and compounds
3. Ceramics International
4. RSC Advances
5. Journal of Electroanalytical Chemistry

Advisory Board

1. **Deputy Co-ordinator - I for the Second Phase of DST - PURSE Scheme, 2016 To 2020.**
2. **Governing Council Member of SEAST, CECRI, Karaikudi, 2015 to 2017.**
3. **IQAC-Academic Auditor, 2008 - 2014.**
4. **Chairman for Electroplating and Metal Finishing group, SAEST, CECRI, Karaikudi, 2009 - 2011.**
5. **Advisory Committee member for the UGC- SAP Program, 2008 Onwards.**
6. **Vice Chairman, SAEST Local Chapter, CECRI, Karaikudi, 2001 - 2003.**

Academic Bodies (such as Board of Studies etc.,)

1. **Chairperson of Board of Studies in B.Sc., Biochemistry** for affiliated colleges of Alagappa University, 2017-2020.
2. **Chairperson of Board of Studies in M.Phil., Chemistry** for affiliated colleges of Alagappa University, 2017-2020.
3. **Member of Inspection Committee** for the Revival of approved research centres for affiliated colleges of Alagappa University, Sep 2016.
4. **Member of Board of studies to frame the M.Sc and M.Phil syllabus,** Alagappa University, June 2016 to June 2019.
5. **Member Board of studies in M.Sc., Chemistry, DDE,** Alagappa University, Karaikudi, Sep. 2015 to Sep. 2018.
6. **Head of Squad Team, Affiliated colleges Examinations,** Alagappa University, November 2015.
7. **Member of Board of Studies for M.Phil Chemistry, College Development Council (CDC),** Alagappa University, 2014-2017.
8. **Chairperson for the Valuation Board of DDE Exams for M.Sc., (Chemistry),** December 2014 onwards.
9. **Board of Studies member for the Integrated M.Sc and Ph.D program,** Pondicherry University, Puducherry, 2012-2015.
10. **Member of Board of Studies for B.Sc Chemistry, College Development Council (CDC),** Alagappa University, 2011 - 2014.
11. **Co-ordinator** for PG Diploma in Electroplating Alagappa University, 2011 -2012.
12. **Inspection committee Member - Affiliation of B. Sc Chemistry course,** College Development Council (CDC), Alagappa University, 2011 onwards.
13. **Convener/Coordinator** for the Social Responsibility & Citizenship Cell, 2011-2012

14. **Doctoral Committee Member for the Ph.D degree in Bharathidasan University, Trichy, 2010 onwards.**
15. **Additional Chief Superintend for the conduct of Ph.D Pre – Registration Exam, 2010**
16. **Member of Board of Studies for M.Sc Chemistry, College Development Council (CDC), Alagappa University, 2009 – 2011.**
17. **Representative of the Department** for assisting HOD & Coordinators of the **NAAC committee**, Alagappa University, 2009 – 2010.
18. **Expert Committee member for the selection of Lecturer Post in Affiliated Colleges** of Alagappa University, 2008 Onwards.
19. **Member of Board of studies to frame the M.Sc and M.Phil syllabus**, Alagappa University, 2007 Onwards.
20. **Co-ordinator** for M.Sc Chemistry (Week –end Program), Alagappa University, 2001 – 2006.
21. **Co-ordinator** for PG Diploma in Materials Protection and Corrosion Engineering course, Alagappa University, 1996 – 2000.
22. **Board member** for the B. Tech Electrochemical Science & Engg. Course, Anna University, Chennai, 1995 – 2000.
23. **University Representative** to Conduct the **Distance Education Examinations** at Various Centers located in India, for more than 20 Times.
24. **Acted as External Examiner for the conduct of Ph.D viva – voce exams at various Universities.**
 - Avinasilingam University, Coimbatore.
 - Bharathidasan University, Trichy.
 - University of Kerala, Kerala.
 - NIT, Trichy.
25. **Serving as External Examiner for the Evaluation Ph.D Thesis in Various Universities**
 - Murdoch University, Perth, Australia
 - Avinasilingam University, Coimbatore
 - University of Kerala, Trivandram
 - Kuvembu University, Karnataka
 - Bharathidasan University, Trichy
 - Shivaji University, Kolhapur, Maharastra
 - NIT, Trichy.
26. Served as **Question setter, Paper Valuer, and External Practical Examiner** for the **M.Sc Chemistry** in various universities. (Annamalai University, Madurai – Kamaraj University, Bharathidasan University and Periyar University)

Others

1. Acted as **Stock verification officer** for Department of Computer Science and Engineering, Alagappa University, Aug 2016.
2. **Co-ordinator for Village Placement Program (VPP)**, Alagappa University (Alagapuri Village), 2013.
3. Acted as **Stock verification officer** for various departments of Alagappa University, 2007-2012.
4. **Co-ordinator for Village Placement Program (VPP)**, Alagappa University (O Siruvayal Village), 2006.

5. Served as **UPSC question setter**, New Delhi

Resource persons in various capacities

Number of Invited / Special Lectures delivered: **19**

Others

1. No. of PhD Thesis evaluated: **20**
2. No. of PhD Public Viva Voce Examination conducted: **25**

Recent Publications

1. S.Sangeetha and **G.Paruthimal Kalaigan**, Studies on electrodeposition and characterization of PTFE polymer inclusion in Ni-W-BN nanocomposite coatings for industrial Applications, RSC Advances, 5 (2015) 74115 – 741125. (Impact factor:3.8)
2. S.Sangeetha and **G.Paruthimal Kalaigan**, Tribological and Electrochemical corrosion behavior of Ni-W / BN (hexagonal) nano-composite coatings, Ceramics International 41(2015) 10415 – 10424. (Impact factor:2.6)
3. P. Mohan, S.Kasturibai and **G.Paruthimal Kalaigan**, Co-substituted (Y and Li) spinel Li (Y_{0.10}Li_{0.10}Mn_{1.80})O₄ high performance cathode for rechargeable lithium-ion batteries, Sci. Adv. Mater. 6 (2014) 1269 -1277. (Impact factor: 2.5)
4. S.Kasturibai and **G.Paruthimal Kalaigan**, Characterizations of Electrodeposited Ni-CeO₂ Nanocomposite Coatings, Mat. Chem. And Phys.147 (2014) 1042-1048. (Impact factor: 2.3)
5. P. Mohan, B.Ranjith and **G.Paruthimal Kalaigan**, Structure and electro-chemical performances of co-substituted LiSm_xLa_{0.2-x}Mn_{1.80}O₂ cathode materials for rechargeable lithium-ion batteries, J. Solid State Electrochem. 18 (2014) 2183-2192. (Impact factor: 2.1)
6. S.Kasturibai and **G.Paruthimal Kalaigan**, Pulse Electrodeposition and Characterization of Ni-Si₃N₄ nanocomposite coatings, Bulletin of Material Science 37 (2014) 721-728. (Impact factor: 1.01)
7. P. Mohan and **G.Paruthimal Kalaigan**, Electrochemical performances of surface modified CePO₄-coated LiMn₂O₄ cathode materials for rechargeable lithium ion batteries, Journal of Nanoscience and Nanotechnology 20 (2014) 5028-5035. (Impact factor: 1.3)

8. P. Mohan and **G.Paruthimal Kalaignan**, Structure and electrochemical performance of $\text{LiV}_x\text{Mn}_{2-x}\text{O}_4$ ($0.00 \leq x \leq 0.20$) cathode materials for rechargeable lithium-ion batteries, *Ionics* 20 (2014) 183-188. (Impact factor: 1.7)
9. P. Mohan and **G.Paruthimal Kalaignan**, Electrochemical performance of surface modified LaPO_4 -coated LiMn_2O_4 cathode materials for rechargeable lithium batteries, *Ceramics International* 40 (2014) 1415 -1421. (Impact factor: 2.6)
10. P. Mohan and **G.Paruthimal Kalaignan**, Electrochemical performance of surface modified LaPO_4 -coated LiMn_2O_4 cathode materials for rechargeable lithium batteries, *Ceramics International* 40 (2014) 1415 -1421. (Impact factor: 2.6)
11. P. Mohan, **G.Paruthimal Kalaignan**, Structure and electrochemical performance of $\text{LiFe}_x\text{Ni}_{1-x}\text{O}_2$ ($0.00 \leq x \leq 0.20$) cathode materials for rechargeable lithium-ion batteries, *Journal of Electroceramics* 31 (2013) 210-217. (Impact factor: 1.7)
12. P. Mohan and **G.Paruthimal Kalaignan**, 1,4-bis (2-nitro benzylidene) thio semicarbazide as an effective corrosion Inhibitor for Mild Steel, *Journal of Materials Science & Technology* 29 (11) (2013) 1096-1100. (Impact factor: 1.9)
13. S.Sundar Pethaiah, **G.Paruthimal Kalaignan**, G.Sasikumar, M.Ulaganathan & V. Swaminathan, Development of nano Catalyzed Membrane for PEM Fuel cell Applications, *J. Solid State Electrochem.* 17 (2013) 2917-2925. (Impact factor: 2.1)
14. P.Mohan and **G. Paruthimal Kalaignan**, Corrosion inhibition effect of mild steel in 1M HCl by N'-(2-hydroxybenzylidene) benzohydrazide with Iodide ions, *Advanced Science, Engineering and Medicine*, 5 (2013) 827-834. (Impact factor: 0.8)
15. P.Mohan, **G.Paruthimal Kalaignan**, and P.Manisankar, Preparation and Electrochemical performances of samarium substituted $\text{LiSm}_{1-x}\text{Ni}_x\text{O}_2$ ($0.00 > x > 0.20$) cathode materials for rechargeable lithium-ion batteries, *Science of Advanced Materials*, 5 (2013) 143-154. (impact factor: 2.6)
16. P.Mohan and **G.Paruthimal Kalaignan**, Structure and Electrochemical performances of co-substituted $\text{LiCo}_x\text{Li}_{1-x-y}\text{Mn}_{2-x}\text{O}_4$ cathode materials for the rechargeable lithium ion batteries, *Journal of Nanoscience and Nanotechnology* 13 (2013) 6694-6700. (Impact factor: 1.3)
17. K. Arunsunai Kumar, **G.Paruthimal Kalaignan**, and V.S. Muralidharan, Enhanced corrosion resistance of Ni-W alloy with the inclusion of TIN nanoparticle by Electrodeposition method, *Transaction Institute of Metal finishing* 91 (2013) 202-206. (Impact factor:1.2)

18. P.Mohan and **G.Paruthimal Kalaignan**, Electrochemical performances of co-substituted (La & Li) $\text{LiLa}_x\text{-yLi}_y\text{Ni}_{1-x}\text{O}_2$ cathode materials for rechargeable lithium-ion batteries, *Material Research Bulletin*, 48 (2013) 3049-3057. (impact factor: 2.3)
19. P.Mohan and **G.Paruthimal Kalaignan**, Electrochemical performance of La_2O_3 -coated layered LiNiO_2 cathode materials for rechargeable Lithium-ion batteries, *Ionics* 19 (2013) 895-902. (Impact factor: 1.7)
20. B.Ranjith Bose, **G. Paruthimal Kalaignan** and K.N. Srinivasan, Comparison of Ni-Co-WC nanocomposite coatings prepared by Direct, Pulse and Pulse Reversal Methods, *Journal of Electroplating and Finishing* 32 (2013) 9-13. (Impact factor: 0.6)
21. P.Mohan, **G.Paruthimal Kalaignan**, Electrochemical behavior of surface modified SiO_2 -coated LiNiO_2 cathode materials for rechargeable Lithium-ion batteries, *Journal of Nanoscience and Nanotechnology* 13(2013) 2765-2770. (Impact factor: 1.3)
22. S.Kasturibai and **G.Paruthimal Kalaignan**, Physical and Electrochemical Characterization of Ni- SiO_2 nanocomposite coatings, *Ionics*, 19(2013) 763-770. (Impact factor: 1.7)
23. N. Nachiappan, **G. Paruthimal Kalaignan** and G. Sasikumar, Influence of methanol impurity in hydrogen on PEMFC performance, *Ionics* 19 (2013) 517-522. (Impact factor: 1.7)
24. M.Nagarajan, **G. Paruthimal Kalaignan** and G. A. Pathanjali , Novel synthesis and characterization of nanocomposite $\text{Pt-WO}_3\text{-TiO}_2\text{/C}$ electrocatalyst for PEMFC, *Ionics* 19 (2013) 127-135. (Impact factor:1.7).
25. N. Nachiappan, **G. Paruthimal Kalaignan** and G. Sasikumar, Effect of nitrogen and carbon dioxide as fuel impurities on PEM fuel cell performance, *Ionics* 19 (2013) 351-354. (Impact factor: 1.7).
26. K. Arunsunai Kumar, **G.Paruthimal Kalaignan**, and V.S. Muralidharan , Direct and Pulse current Electrodeposition of Ni-W- TiO_2 nanocomposite coatings, *Ceramic International* 39 (2012) 2827-2834. (Impact factor: 2.6).
27. K. Arunsunai Kumar, P. Mohan, **G.Paruthimal Kalaignan**, and V.S. Muralidharan, Electrodeposition and characterization of Ni- ZrO_2 nanocomposites by direct and pulse current methods, *Journal of Nanoscience and Nanotechnology* 12 (2012) 8364-8371. (Impact factor: 1.3).
28. P. Mohan and **G.Paruthimal Kalaignan**, Electrochemical Performances of dual metal substituted nano $\text{LiCe}_x\text{-yLa}_y\text{Ni}_{1-x}\text{O}_2$ cathode materials for rechargeable Li-ion batteries, *J. Nanosci. Nanotechnol.* 12, (2012) 7832-7840. (Impact factor: 1.3).

29. P.Mohan, K. Arunsunai Kumar, **G.Paruthimal Kalaignan** and V.S. Muralidharan, Improved electro-chemical properties of chromium substituted in $\text{LiCr}_{1-x}\text{Ni}_x\text{O}_2$ cathode materials for rechargeable lithium-ion batteries, *Journal Solid State Electrochemistry* 16 (2012) 3695-3702. (Impact factor: 2.1).
30. K.Arunsunai Kumar, **G.Paruthimal Kalaignan**, and V.S. Muralidharan, Pulse and Pulse Reverse current Electrodeposition and characterization of Ni-W-TiN composites, *Science of Advanced Materials* 4 (2012) 1039-1046. (Impact factor: 2.5).
31. P. Mohan, K. Arunsunai Kumar, **G.Paruthimal Kalaignan**, and V.S. Muralidharan, N'-(4-Methoxy benzylidene)benzo hydrazide as Effective Corrosion Inhibitor for Mild Steel in 1 M HCl, *Asian Journal of Chemistry* 24 (2012), 5821-5823. (Impact factor: 0.3).
32. P.Mohan, R. Usha **G.Paruthimal Kalaignan**, and V.S. Muralidharan, Inhibition effect of benzohydrazide derivatives on corrosion behavior of mild steel in HCl, *Journal of Chemistry* 2013(Article ID 541691) (2012) 1-7. (Impact factor: 0.8).
33. P.Mohan, **G.Paruthimal Kalaignan**, and V.S. Muralidharan, Improved the Electrochemical Performance of $\text{LiCe}_{1-x}\text{Ni}_x\text{O}_2$ Cathode Material for Rechargeable Lithium Ion Battery, *J. Nanosci. Nanotechnol.* 12 (2012) 7052-7059. (Impact factor: 1.3).
34. K.Arunsunai Kumar, **G.Paruthimal Kalaignan** and V.S. Muralidharan, Pulse Electrodeposition and characterization of nano Ni-W alloy deposits, *Applied Surface Science* 259 (2012) 231-237. (impact factor: 2.7).
35. M. Nagarajan **G. Paruthimal Kalaignan** and G. A. Pathanjali, High performance carbon supported Pt-WO₃ nanocomposite electrocatalysts for polymer electrolyte membrane fuel cell, *Materials Chemistry and Physics* 133 (2012) 924-931. (Impact factor: 2.2).
36. D. Arumugam, **G.Paruthimal Kalaignan**, Synthesis and Characterizations of Surface modified LiMn_2O_4 cathode material for high temperature rechargeable Lithium battery applications, *Thin Solid Films* 520 (2011) 338-343. (Impact factor: 1.9).
37. D. Arumugam, **G.Paruthimal Kalaignan**, Synthesis and Characterizations of Surface modified LiMn_2O_4 cathode material for high temperature rechargeable Lithium battery applications, *Thin Solid Films* 520 (2011) 338-343. (Impact factor: 1.9).
38. Suthu Sundar Pethaiah, **G.Paruthimal Kalaignan**, G.Sasikumar and Aviers Lim, Preparation of Durable Nano Catalyzed Mea for PEM Fuel Cell Applications, *Ionics* 17 (2011), 361-366. (Impact factor: 1.7).

39. B. Ranjith and **G.Paruthimal Kalaignan** , Fortification of Ni-Y₂O₃ nanocomposite coatings prepared by Pulse and Direct current Methods, Ionics 17 (2011) 495- 501. (Impact factor:1.7).
40. J.Tennis Anthuvan **G.Paruthimal Kalaignan** and B. Joseph Vincent, Synthesis and Characteristics of two component Polyurethane coating systems based on epoxy Polyol with Polyisocyanate , Asian Journal of Chemistry Vol: 23 (2011) 4130 – 4134. (Impact factor: 0.3).
41. Sethu Sundar Pethaiah, **G.Paruthimal Kalaignan**, G.Sasikumar and Aviers Lim, Evaluation of Platinum Catalyzed MEAs for the Polymer Electrolyte Membrane Fuel Cell Applications, Solid state Ionics 190 (2011) 88 – 92. (Impact factor: 2.5).
42. K. Arunsunai kumar, **G.Paruthimal Kalaignan**, C. Marikannu and V. S. Muralidharan, Role of Addition agents in Copper Plating bath a Voltametric study, International Conference on Advanced Materials and its Applications (ICAMA 2011), Kalasalingam University, Krishnankoil, Tamilnadu, India P 623- 627, 2011.
43. P. Mohan, **G.Paruthimal Kalaignan**, C. Marikannu and V. S.Muralidharan, Eco-friendly inhibitors for simulated cooling water, International Conference on Advanced Materials and its Applications (ICAMA 2011), Kalasalingam University, Krishnankoil, Tamilnadu, India International Conference on Advanced Materials and its Applications (ICAMA 2011), Kalasalingam University, Krishnankoil, Tamilnadu, India P 1305- 1312, 2011.