

BIO-DATA

DR.A.MATHIAZHAGAN

Present Designation: Professor

Date of Joining at CUSAT: 22-09-1994

Professional Experience: 30 years of Professional experience

Administrative position: Head of the Department, Department of Ship Technology (three years from 2019 to 2022)

Contact Details:

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Academic Background:

M.Sc., Applied Science-Anna University, Chennai-25

M.E., Metallurgical Engg (Materials Science as specialization)-NIT, Trichy (Formerly REC-Trichy)

Ph.D in Technology (Materials Technology-Interdisciplinary)-Cochin University-Kochi-22.

Area of interest in Teaching:

Materials Science and Engineering, Marine corrosion and Prevention, Joining Technology in Ship Building, Marine Pollution, Soft skills for Engineers, Professional ethics and Human Values.



Areas of Interest in Research:

Materials Technology, Corrosion Engineering, Welding Technology, Failure analysis, Nanocomposites, Materials testing and characterisation, Marine Pollution and control, Environmental Management.

Highlights in Teaching:

Introduced course on Marine corrosion and prevention for both UG and PG

Introduced course on Marine Pollution and Prevention

Significant Projects:

- ❖ Development and Modelling of Cathodic protection system for ship under UGC grant -two years.
- ❖ Consultancy: Failure Analysis of boilers components and infrastructures
- ❖

Patents:

- ❖ 1. Method of Preparing Flux Composition for Applying on Welding Region and Flux Composition Thereof- Patent No.202441051726, 05 July 2024

Invited talks delivered in conference, seminar and short term courses:

1. Delivered a Talk on Corrosion control Methods in the short Term Training Programme on Modern Materials and Methods in Engineering, SOE, Cochin University of Science and Technology, Kochi-22, Kerala, 3rd , May 2011.
2. Delivered a Talk on Corrosion of Structures and in the short Term Training Programme on Advanced Engineering Materials and Their Application, SOE, Cochin University of Science and Technology, Kochi-22, Kerala, 23, January, 2013.
3. Delivered a Talk on Surface Treatments for Metal Protection on Advancements in National Workshop on Metal Forming, Anna University, Coimbatore, Tamil Nadu, 9, April, 2014. 2011.
4. Delivered a Talk on Prevention and Control of Corrosion of Marine Installations in the National Seminar on Corrosion of Marine Installations, Intuition of Engineers(India), Kochi Chapter, SOE ,Cochin University of Science and Technology, Kochi-22, Kerala, 22, February, 2014.
5. Delivered a Talk on Recent Developments in Materials for Future in the International Conference on Current Innovations in Engineering and Technology, IAETSD, Hotel Nahar Manchester Inn, Coimbatore, 29, March, 2015.

6. Delivered a Talk on Innovations in Materials Technology in the International Conference on Current Innovations in Engineering and Technology, RVS College of Engineering/IAETSD, Coimbatore,27,December,2015.
7. Delivered a Talk on Sustainable Materials Technology in the International Conference on Current Innovations in Engineering and Technology, National college of Engg,IAETSD, Tirunelveli, 31January,2016.
8. Delivered a Talk on Corrosion Protection for Marine Structures in the International Maritime Seminar on Marine Pollution and Environment(IMS"16), KM School of Marine Engineering, CUSAT, Kochi-22, Kerala, 4, August,2016.
9. Delivered a Talk on Corrosion Health Monitoring of Concrete Structure in the short Term Training Programme on Health Monitoring of RCC/Concrete Structure , College of Engg, Trivandrum , Kerala, 26,November,2016.
10. Delivered a Talk on Corrosion Health Monitoring of Concrete Structure in the short Term Training Programme on Health Monitoring of RCC/Concrete Structure , TKM College of Engg, Kollam , Kerala, 25,February,2017.
11. Delivered a Talk on Bio-inspired materials for construction Industry in the short Term Training Programme on Technological Advancements in Materials for Construction Industry, TKM College of Engg, Kollam , Kerala, 13,January,2018.
12. Delivered a lecture (Webinar) on Impact of Marine pollution on society as a part of world environmental day held on 04-06-2022 organised by Institution Innovation Council, Vel's Tech, R&D Institute of Science and Technology, Chennai.
13. Delivered a talk on Creative Skill for professionals in Induction Programme to First Year B.Tech Students and Integrated M.Sc students on 28- 10-2022 at CUSAT,Kochi, Kerala.
14. Delivered a lecture on Role of Materials for sustainable Technology in National Seminar on Recent Advances in Chemistry organised by PG and Research Department of Chemistry, Alagappa Govt Arts College, Karaikudi, Tamil Nādu on 24-03-2023
15. Delivered a lecture (Webinar) on Sustainable Development as a part of world environmental day held on 05-06-2023 organised by Institution Innovation Council, Vel's Tech, R&D Institute of Science and Technology, Chennai.
16. Delivered a talk on Creative Skill for in Induction Programme to First Year B.Tech Students and on 04-09-2024 at CUSAT,Kochi, Kerala.

Supervision of Ph.D:

PhD degree awarded – 8

1. **Dr.Preetha Nair**, “studies on the use of Nanokaolin, MWCNT and grapheme in NBR and SBR” awarded on 12-12-2014.
2. **Dr.Abhilash G**, “Preparation of Low protein laex:Effect of different cure systems and fillers on its properties” awarded on 05-07-2016.
3. **Dr. Dennyamol P.V**, Hydroxyapatite, Exfoliated graphite Reinforced Polyolefins for high performance applications” awarded on 17-02-2017.
4. **Dr. Neena George**, “Segregated and Random Network formation of MWCNT and Nanosilca in NR and XNBR” awarded on 03-03-2018.
5. **Dr. Satheesh Babu, P.K**, “Assessment and Monitoring of Corrosion Condition of steel Ship Structure” awarded on 10-09-2018.
6. **Dr. Dhanya Vijayan**, “Aluminium Trihydride and Expandable Graphite based Elastomer Composites with special Reference to Fluorocarbon Rubber, Nitrile Rubber, Neoprene Rubber and Natural Rubber” awarded on 08-02-2019.
7. **Dr. Elias George K**, “Studies on Epoxy Nanocomposite coating for Corrosion Protection” awarded on 25-01-2022.
8. **Dr. Bhagyesh V.B**, “Mechanical and anti corrosive studies of Unsaturated Polyester Resin modified with Reduces Graphene oxide, Halloysite Nanotube and Halloysite Graphene Hybrid System” awarded on 11- 07-2022.
9. **Mr.Krishnaprasad S**, Studies on the effect of Activated and flus bounded welding on the structure-property correlation and Corrosion Behaviour in Aluminium 5083 and stainless steel 304- Synopsis submitted.
10. **Ms. Aiswarya Poulouse**, Fabrication of cellulose nanofibre based functional constructs for multifunctional application-Thesis submitted on14-08-2024.

M.Tech students supervision:

1. **Ms. Geena J.Perumal.**, “ The Development of expert system for corrosion protection of Ship structure”
2. **Mr. Syam Krishnan** , The effects of Reinforcement in Aluminium metal matrix composites for marine application

3. **Mr.Amalraj. S**, Advanced Composites with interleaved Electrospun Nano-fibers
4. **Mr .Deepak Thomas**, Study on effects of Fluxes on a TIG and FB-TIG Welding on Al-5083
5. **Mr. Midhun Jose**, Corrosion Behaviour of Al-Mg-Mn/Zr Alloys for Marine Applications
6. **Mr.Sreekanth k.u.**,Hybrid Structural Composites : Realization of a representative component through Resin film infusion Moulding
7. **Mr.Akhil V.S**, Corrosion Control on 316L stainless steel in Marine Environment
8. **Mr.Krishnadas P.S**, Activated and Flux bounded TIG Welding in automated and Manual mode on Aluminium alloy 5083
9. **Mr.Jishnu Menon**, Galvanic Corrosion of Marine Alloys with CFRP composites
10. **Ms.Sinai Michel**, Assessment of Corrosion of Mild steel in Cochin Marine Environment

Professional accomplishments:

1. Acted as one of the coordinators of the conferences and seminar organized in the Department of ship Technology, CUSAT-22.
2. Department placement coordinator for students (NA/SB)
3. Organized one day workshop on Marine corrosion and its control under DST Purse scheme on 24th-March 2012 at CUSAT, Kochi.
4. Member of World Academy of Science, Engineering and Technology.
5. Participated in Common admission test for B.Tech admission
6. Faculty Advisor for Society of Naval Architect Students
7. Member, Board of Studies (NA/SB) in CUSAT.
8. Functioned as Member in various Enquiry Committees on Students' Problems in CUSAT campus.
9. Member, Executive Council, PTA, DOST, CUSAT, 2012-13.
10. Organized An International Maritime Technical Conference-MAST, on 6th August-2016 at CUSAT
11. Attended twenty one Short term training programmes/workshops in my area of interest.
12. Innovations in teaching: Teaching by ICT-Moodle Platform
13. Member of Board of Examiners for PhD Thesis for Anna University, Chennai, M.S University, Tirunelveli, Pondicherry University,NIT,Trichy.

14. Acted as one of the coordinators of seminar on Inland Waterways-Prospects and Problems organized in the Department of ship Technology, CUSAT-22, 04 March-2017.
16. Conducted academic audit for the Department of Naval Architecture and Ocean Engineering at AMET University, Chennai
17. External member of Patent Committee for evaluation of Invention at Kerala University, Trivandrum.
18. Coordinator of Setting of Electrochemical Lab
19. Member of Bureau of Indian Standards for Ship Building Selection Committee
20. Academic council Member, Board of Studies (NA/SB) in CUSAT.
21. Chairman, Board of studies,(NA/SB) in CUSAT (2019-22).
22. Chairman of Conference Session in various National and International Conferences
23. Member, Board of studies, (Defence Technology) in CUSAT.
24. Reviewer of International Conferences – IAETST, ICSOE 2021. iCANOE ,
25. Co-Chair in International Conference on Advances in Naval and Ocean Engineering (ICANOE'23), Department of Ship Technology Cochin University of Science and Technology, 03-04 November, 2023.
26. Research Collaboration-CSL Kochi, NPOL Kochi, CECRI Karaikudi, NITT
27. Course offered on Marine Corrosion and prevention for M.Tech Marine Engineering Students
28. Distinguished Expert in AICTE for Technical Institution approval
29. Co-ordinator of One day seminar on Intellectual Property Rights jointly organised by STIC , Department of Ship Technology, CUSAT KSCSTE & on 15-03-2024.
30. NAAC Peer team member for assessment of Universities and colleges
31. Member of Technical selection committee in various Technical Recruitments
32. AICTE Peer team member for assessment of Technical Institutions
33. Member of Review committee in DRDO Lab for Materials Research

Achievements as head of the Department during 2019-2022:

1. Introduced the outcome based education in the Department for B.Tech (NA&SB) and M.Tech(CASAD)

2. Implemented Department modernisation with Alumni support
3. Conducted DIMS Lite 2021 with DOSTAS alumni network
4. Conducted International Conference Ocean Engg 2021
5. High Placement -99% for students
6. Initiated and implemented NBA accreditation process
7. Initiated and implemented NAAC accreditation process
8. Initiated and implemented MoU between CUSAT and Saint Petersburg state University, Russia
9. Modernisation of seminar Hall using Alumni
10. Strengthened research activities in the Department
11. Nominated as Evaluator for research proposals in University Grants Commission (UGC) research schemes for the year 2022-23
12. Member of Inspection committee for affiliation of College under IMU ,Chennai.

Book Published:

1. Marine Corrosion and Its Prevention, DPRA, 2014 , ISBN : 1978-93-80095-53-0
2. Corrosion of Steel Ship Structures, APS, 2019

Book Chapter:

Aravind, K.R, Mathiazhagan A, Overview of Circular Economy with an Emphasis on the Basel and Hong Kong Conventions of the IMO-Sustainability Approach** with Chapter ID **E19S3G16-25AU1RSSP19, Futuristic Trends in Management” Volume 3, 2023.

List of Publications in Journals:

1. **Mathiazhagan, A.**, “Marine fouling on submerged Structure”, Journal of Ships Technic, Vol XIII, pp 75-78, Jan (1997).
2. **Mathiazhagan, A.**, “Cathodic protection for corrosion control of ships and other offshore structure in seawater”, Journal of Ships Technic, Vol. XIV, pp. 85-89 (1998).
3. **Mathiazhagan, A.**, “Thermal spray coating for repair of ship propeller”, Journal of Ships Technic, Vol-xx, pp. 101-110 (2004).
4. **Mathiazhagan, A.**, “Mathematical Modeling of Cathodic Protection for Ship Hull ”, Journal of Ship Technology, Vol.4, No.1, pp.56-60, Jan (2008).

5. **Mathiazhagan**, A., Rani Joseph, Narayanan, K.P., "Corrosion Behaviour of brass in Vembanad Estuary", *Journal of Marine Science and Technology*, Vol. 18, No. 5, pp. 719-722 (2010) .
6. **Mathiazhagan**, A., Rani Joseph, Narayanan, K.P., "Dezincification of brass in Cochin Estuary, India", *Journal of Ship Technology*, Vol.6, No.1, pp.36-48, (2010)
7. **Mathiazhagan**, A., Rani Joseph, Narayanan, K.P., "Dezincification of Epoxy coated brass in Cochin Estuary, India", *International Journal of Chemical Engineering and application*, Vol.6, No.1, pp.36-48,(2010)
8. **Mathiazhagan**, A., Rani Joseph, "Nanotechnology –New Prospective in polymer coating –Review" *International Journal of Chemical Engineering and Applications*, Vol. 2 , No. 4 , August (2011)
9. **Mathiazhagan**, A.,– Design and Programming of Cathodic Protection for Ships", *International Journal of Chemical Engineering and Applications*, Vol. 1, No. 3, October (2010)
10. Satheesh Babu P.K, Dr A **Mathiazhagan**, Dr C.G. Nandakumar, Corrosion Health Monitoring System for Steel Ship Structures, *International Journal of Environmental Science and Development*, Vol. 5, No. 5, October (2014).
- 11.Satheesh Babu P.K, Dr A **Mathiazhagan**, Integrated Corrosion Protection System for Ship Structures, *International Journal of Design and Manufacturing Technology*, pp.29-34,Vol. 5, Issue No. 3, December, (2014)
12. Neena George , **A.Mathiazhagan**, Julie Chandra C.S., Rani Joseph, "High performance natural rubber composites with conductive segregated network of multiwalled carbon nanotubes", *Journal of Composite Science and Technology*,pp.33-40,Vol.116,8, (2015).
13. Sindhu Radhakrishnan¹, **A.Mathiazhagan** and G. Annadurai, "*Achyranthes Aspera*: A Potent Immunostimulating Plant for Herbal Formulation and Management of Wounds", *European Journal of Biomedical AND Pharmaceutical sciences*, Vol. 2 Issue. 4, pp 730-742, (2015)
15. J.Uthaya Chandirika¹, P.Seetha Lakshmi, **A.Mathiazhagan**, G. Annadurai,"Design and Development of Chitosan Nanoparticle in Target Novel Drug Delivery Systems for Urolithiasis", *European Journal of Biomedical and Pharmaceutical sciences*, Vol. 2 Issue. 4, pp. 528-537, (2015)
16. M. Revathy, **A.Mathiazhagan** and G. Annadurai, Biosynthesis, Characterization and Antibacterial Activity of Silver Nanoparticles using the Lichen *Parmotrema Perlatum*, *European Journal of Biomedical and Pharmaceutical sciences*, Vol. 2 Issue. 4, pp. 348-361 (2015).
17. Neena George, **A. Mathiazhagan** and Rani Joseph "Natural rubber nanocomposites based on multiwalled carbon nanotube/nanosilica hybrid". *Plastics and Rubber Srilanka* 15,20-23,(2016).
18. Neena George , Bipinbal P. K., Bhavya Bhadran, **A.Mathiazhagan**, Rani Joseph, Segregated network

formation of multiwalled carbon nanotubes in natural rubber through surfactant assisted latex compounding: A novel technique for multifunctional properties , Journal of Polymer , 264-277,112 (2017)

19. Dhanya Vijayan., **A. Mathiazhagan**, and Rani Joseph, “ Aluminium trihydroxide: Novel reinforcing filler in Polychloroprene rubber” Journal of Polymer 132 , 143-156 (2017)

20. Neena George, B. Venugopal , Honey John, **A. Mathiazhagan**, Rani Joseph, Nanosilica decorated multiwalled carbon nanotubes (CS hybrids) in natural rubber latex, Journal of Polymer 161 170–180(2019)

21. Neena George, Honey John, **A. Mathiazhagan**, and Rani Joseph, “Dielectric property enhancement by nanosilica decorated multiwalled carbon nanotubes in natural rubber”. *Composites Science and Technology (Under review)*

22. Krishnaprasad.s, **A.Mathiazhagan**, Krishnadas P.S "Effect of manual and automatic Activated Tungsten Inert Gas welding using single component fluxes on stainless steel AISI-304" in the Journal of Ship Production and Design(SNAME) ,pp 1-9 (2019).

23. Binsu Sukumaran , Dr. Nubesh Khan , Dr. Moataz M Barakat , Rebecca Ann Abraham , Dr. K. Chandrasekharan Nair , **Dr. A. Mathiazhagan** “Effects of dental implant corrosion- A Review”, European Journal of Molecular & Clinical Medicine, ISSN 2515-8260, Volume 07, Issue 07, 2020.

24. S., Krishna Prasad, **Mathiazhagan, A.** Underwater Welding: A Review Paper. Indian Welding Journal . Vol. 54 Issue 1, pp 56-63, Jan (2021).

25. Elias George., **A.Mathaizhagan**, Evaluation of Reaction Kinetics and Properties of Epoxy Resin with Two Hardeners, International Journal of Science and Research, Vol. 10,Issue 5, pp. 256-261,May 2021.

26. Elias George., , Bhagyesh V Bhaskaran, **A.Mathaizhagan**, Modification of Epoxy coatings by conducting polymers for improved corrosion protection of Mild Steel, International Journal of Recent Research and Applied Studies, Volume 8, Issue 4(20),pp.122-126, April (2021).

27. Bhagyesh V Bhaskaran., Rani Joshep, **A.Mathaizhagan**, Elias George., Unsaturated polyester resin reinforced reduced graphene oxide composite for anti-corrosive applications, International Journal of Research and Analytical Reviews, Volume 6, Issue 2, pp.829-836, April (2019).

28. Elias George., **A.Mathaizhagan**, Evaluation of Reaction Kinetics and Properties of Epoxy Resin with Two Hardeners, International Journal of Science and Research, Vol. 10,Issue 5, pp. 256-261,May (2021).

29. Elias George., Bhagyesh V Bhaskaran, **A.Mathaizhagan**, Modification of Epoxy coatings by conducting polymers for improved corrosion protection of Mild Steel, International Journal of Recent Research and Applied Studies, Volume 8, Issue 4(20),pp.122-126, April (2021).

30. Krishna Prasad. S, **A. Mathiazhagan**, Krishnadas. P S.Effect of Manual Flux Bounded TIG Welding on Austenitic stainless steel AISI 304 and its comparison with Automated Flux Bounded TIG Welding, Indian Welding Journal, Volume 54, No. 3, pp.59-77, July (2021) .
31. G. Neena, S. R. Amrutha, J. Rani, P. M. Jose , **A. Mathiazhagan**, Nano-silica as reinforcing filler in NR latex: Role of processing method on filler morphology inside the rubber and properties of the nanocomposite, eXPRESS Polymer Letters Vol.15, No.11 1101–1112,(2021)
32. Vysakh Kadayath Bijukumar, **A.Mathiazhagan**, Pallichakkalayil Sasidharan Krishnaprasad, “A Systematic overview on Activated Tungsten Inert Gas Welding”, Journal of International welding (Taylor& Francis) Vol.36, No.10, pp 597-615, Nov 2022.
33. Mathiazhagan A, Comprehensive strategies for Enhancing Corrosion Protection of Concrete Structures,Recent Trends in Civil Engineering and Technology,Vol.13,No.2(2023)
34. Aiswarya Poulouse, Ajith Mathew, Arya Uthaman, Hiran MayookhLal, Jyotishkumar P., **A.Mathiazhagan** , Yves Grohens , Daniel Pasquini f , Deepu Gopakumar * , Jinu Jacob George , “*Facile fabrication of arecanut palm sheath based robust hydrophobic cellulose nanopapers via self-assembly of ZnO nanoflakes and its shelf-life prediction for sustainable packaging applications*” *International Journal of Biological Macromolecules*, November 16, 2023.
35. Vysakh Kadayath Bijukumar, **A.Mathiazhagan**, Pallichakkalayil Sasidharan Krishnaprasad, “A Critical overview on Fracture mechanics Characterisation on Marine Grade Structural materials and the welds ”, Journal of International welding (Taylor& Francis) Vol.38, Issue-5, pp335-346, April 2024.
36. Vysakh Kadayath Bijukumar, **A.Mathiazhagan**, Pallichakkalayil Sasidharan Krishnaprasad, “Flux-bound TIG Welding on UNS S32760 Super Duplex Stainless Steel using activated fluxes”, Journal of International welding (Taylor& Francis) Vol.38, Issue No.11, pp1-15, Oct 2024.
37. C. V. Vishnu., Rahna K Shamsudeen., R. Rajeswari., N.R Manoj., K.C Unnikrishnan., A Mathiazhagan , “Underwater acoustic performance of a planar PVDF hydrophone: Simulation and experimental validation” Journal of measurement, Communicated- Aug-2024
38. C.A. Shefeena ,C.B. Sudheer, P.K. Satheesh Babu ,A. Mathiazhagan, Comparative study of Corrosion Resistance of Marine Grade Carbon Steels X65 and MS in the Cochin Estuary Environment, Journal of Pipeline Systems Engineering and Practice, Communicated-Aug 2024.
39. *Aravind K.R. A. Mathiazhagan, C.B.Sudheer*, Feasibility and Environmental Impact of Composite Materials in Inland Vessel Construction: A Case Study of Kerala's Inland Waterways" Journal of Offshore Structure and Technology, accepted Nov-2024

List of Publications in Conferences:

1. **Mathiazhagan**, A., Somasundara Nair, E.M., “Glass reinforced plastics for marine application and

maintenance”, National Symposium, J-1, Southern Naval Command, Kochi, 20th Jan (1995).

2. **Mathiazhagan**, A., Sivaprasad, K., “Condition monitoring of ships hull for corrosion”, National Congress on corrosion control, NCCI&CECRI, Kochi, pp.6.1- 69, Sep 9- 11(1998).

3. **Mathiazhagan**, A., Sunil Kumar, P.G., “Thermal spray coating for repair of shafts” National Congress on corrosion control, Sep-20-22, NCCI/CECRI, vizak (2004)

4. **Mathiazhagan**, A., Rani Joseph, “Zinc powder filled coatings for corrosion protection”, International Conference on advances in polymer Technology (APT-08), pp.86, CUSAT, Kochi, Kerala, India (2008)

5. **Mathiazhagan**, A., Rani Joseph, Narayanan, K.P., “Biofouling and Corrosion of brass in Cochin Estuary”, National Congress on corrosion assessment and its control, Dec -21-22, NCCI/CECRI, karaikudi and TCE, Madurai (2009)

6. **Mathiazhagan**,A., “Corrosion Management for Effective Mitigation of Corrosion in Ships – Overview” International conference on Management Technology and Applications held at Singapore, Sep-10-12, IACSIT, Singapore (2010).

7. **Mathiazhagan**,A., “Corrosion Control” ISTE-Short Term Training Programme on Modern Materials and Methods in Engg, 02-12,May,CUSAT-Kochi-22(2011).

8. Bhagyesh V B, Rani Joseph, **A. Mathiazhagan** “Anticorrosive coating performance of reduced graphene oxide - Polyester nano composite” **National Conference on Material Science &Technology**, Department of Chemistry, Indian Institute of Science and Technology,Thiruvanthapuram-695547,kerala, July 6-8, 2013.

9.**Mathiazhagan**, P.K. Satheesh Babu, “New Horizon in ship safety and reliability-corrosion management approach”,3rd Asian Symposium on Materials and Processing,30-31,August , IIT Chennai,India (2012).

10. Bhagyesh V Bhaskaran¹, **Mathiazhagan**. A, Rani Joseph, Synthesis of reduced graphene oxide: An effective corrosion inhibiting coating, Proceedings of International Conference on Advances in Materials, Manufacturing and Applications (AMMA 2015), NIT Trichy, April 9-11, (2015).

11.Neena George , **A.Mathiazhagan**, Rani Joseph, “Reinforcement of Natural Rubber with Multiwalled Carbon nanotube/Nanosilica hybrid filler, Seminar on Advanced Functional Materials,15-16-Sep, Mar Athanasius College, Kothamangalam,Kerala,India (2015).

12.**A.Mathiazhagan**, Impact of chemicals in antifouling paints on the life of Marine organisms, International Conference on Recent Advances in Engineering Science and Management,30th August, New Delhi,(2015).

13. **A.Mathiazhagan**, Marine Corrosion and Its Management, International Conference on Science,Technology and Management,27th Sep, New Delhi,(2015)

14. Sajitha N. R ., Kurup M. R. P, **Mathiazhagan A.** “Synthesis, Characterization and Corrosion Inhibition of 4-benzyloxy salicylaldehyde-N(4)-methylthiosemicarbazone” International Conference on Materials for the Millennium-MATCON-2016 during January 14th-16th, Cochin University of Science and Technology(2016).
15. Bhagyesh V. B., Rani J., **Mathiazhagan A.** Anti-Corrosion Performance of Graphene Reinforced-Polyester Composite, International Conference on Materials for the Millennium-MATCON-2016 during January 14th-16th, Cochin University of Science and Technology(2016).
16. Dennyamol.P.Y., **Mathiazhagan.A.**, Rani Joseph, Enhanced Properties of Egg Shell Derived Nanohydroxyapatite Reinforced High Density polyethylene Composites, International conference on Advances in Mathematics, Materials Science, and Nano Technology for Engineering and Industrial Application, at Federal Institute of Science and Technology, Angamaly January, 7-9, (2016).
17. Bhagyesh V B, Rani Joseph, **A. Mathiazhagan** “Ethylene diamine reduced graphene oxide: Preparation and Anticorrosion effect on polyester resin”. International Conference on Advance in Polymer Technology [APT-16]. Department of Polymer Science & Rubber Technology, CUSAT, Kochi-22, February 25-26, 2016.
18. Dennyamol.P.Y., **Mathiazhagan.A.**, Rani Joseph, Mechanical and Thermal Properties of High Density Polyethylene-Exfoliated Graphite Composites, UGC Sponsored National Seminar Proceeding”Modern Trends in Chemistry at Sree Kerala VARMA College, Trichur, Kerala , 7-9,(2016).
19. Dhanya Vijayan., **Mathiazhagan, A.**, Rani Joseph, “Effects of Nano Aluminium Hydroxide in Fluorocarbon Rubber Composites”, International Conference on advances in polymer Technology Feb.25-26, 2016 (APT-2016) CUSAT, Kochi, Kerala, India (2016).
20. Dhanya Vijayan., **Mathiazhagan, A.**, Rani Joseph, “ Mechanical and Thermal studies of Nitrile Rubber/Aluminium Hydroxide Nanocomposites”, International Symposium on New Trends in Applied Chemistry, Feb.09-11, 2017 (NTAC-2017) , Sared Heart College, Thevara, Kochi, Kerala, India (2017).
21. Bhagyesh V B, Rani Joseph, **A. Mathiazhagan** “Reduced graphene oxide decorated with halloysite nanotube hybrid composite preparation and its application”, 26th Swedeshi Science Congress. Swedeshi Science Movement, Kerala ,kochi18, November 7-9, (2016).
22. Dhanya Vijayan., **Mathiazhagan, A.**, Rani Joseph, “ Use of Aluminium Hydroxide as Reinforced Filler in Viton”, India Rubber Industry Forum 2016, Dec.05-06, 2016, at Capitol Hotel, Bangalore , India (2017).
23. Dhanya Vijayan., **Mathiazhagan, A.**, Rani Joseph, “ Preparation and Comparison of Fluorocarbon Rubber Composites based on Aluminium Hydroxide and Medium Thermal Black”, International Conference on Advanced Materials(SCICON-2016), Dec.19-21, 2016, Amrita Vishwa Vidyapeetham, Combatore , India (2016).
24. Dhanya Vijayan., **Mathiazhagan, A.**, Rani Joseph, “ Sorption and Dynamic Studies of Viton/Aluminium

Hydroxide Nanocomposites, 26th Swadeshi Science Congress-National Seminar, Nov 07-09, 2016, Amrita Vishwa Vidyapeetham, Swedish Science Movement, Kerala Unit of Vijnana Bharathi, Kochi, Kerala, India (2017).

25. Sinai Michel, S. Packialakshmi, **A. Mathiazhagan**, Rajesh.P.Nair, "Assessment of corrosion in steel under marine environment" International Conference on Energy ,Environment, Materials and Safety(ICEEMS), 25-27, April, School of Engg, CUSAT, Kochi-22, Kerala, 2019.

26. Sinai Michel, S. Packialakshmi, **A. Mathiyazhagan**, Rajesh.P.Nair, "Assessment of Effect of Marine Corrosion on Impact Energy of Mild Steel Using Experimental Method and Finite Element Method" INCAM 2019 Conference, 3-5 July, IISc Bangalore, (2019).

27. Elias George., **A.Mathaizhagan**, Modification of Epoxy Resin using Nano Materials for improved Corrosion Resistance, NACE Conference-CORCON 23-26, , Mumbai, India (2019).

28. P Jyothimol, R Hazeena, Manoj T Issac and **A Mathiazhagan**, "Effect of reduced graphene oxide on the mechanical properties of concrete", IOP Conf. Series: Earth and Environmental Science : 5th International Conference on Modelling and Simulation in Civil Engineering, 1-8 ,491 (2020).

29. Vysakh Kadayath Bijukumar, **Andy Mathiazhagan**, Pallichakkalayil Sasidharan Krishnaprasad, "A Review on Activated Tungsten Inert Gas Welding Technique" National Seminar on Welding Science and Technology -NSWEST-2021, Organised by IIM, Chennai Chapter, 23-24 July (2021)

30. Krishnaprasad.S, **Mathiazhagan.A.**, HariKrishnan. R, "Experimental validation and comparative study of activated tungsten inert gas welding on Marine grade aluminium alloy," International Conference on advances in Naval and ocean Engineering, iCANOE' 21 ,DST,CUSAT, 19-20 November(2021)

31. Krishna Prasad. S, . **Mathiazhagan, A**, Nikhil S.Nair, "Effect of Manual Flux Bounded A-TIG Welding on using single component fluxes on Marine grade Stainless Steel" International Conference on advances in Naval and ocean Engineering, iCANOE' 21 ,DST,CUSAT, 19-20 November(2021)

32. Jishnu Menon,A., Ramesh Kumar.V., **Mathiazhagan.A.**, Reji John, "Galvanic corrosion of Marine alloys with CFRP composites" International Conference on advances in Naval and ocean Engineering, iCANOE' 21 ,DST,CUSAT, 19-20 November(2021)

33. P.A.Akram, Beena Mary John, Teresa Siby Madathil, Prakasan, **A.Mathiazhagan**, P.S.Tide, D.D.Ebenezer "Numerical Model of a Multi Layer Shock and Vibration Isolator" Oceans '22, Research Park Organised by IIT, Madras&NIOT Chennai, Feb 21-24 (2022)

34. *Aravind K.R. , Satheesh Babu P.K. and A. Mathiazhagan* , Effective Corrosion Management in Inland Ships: A Case Study-Based Approach, Integrating Materials, Methods, and Management, CORCON 2023 * 25th– 28th October* Mumbai, India.

35. Krishnaprasad S, Mathiazhagan A, Donni Dominnic A.T, Experimental Investigation on Potentiodynamic Polarisation studies on A-TiG welded AISI 304 Steel, CORCON 2023 * 25th– 28th October* Mumbai, India.

36. Vysakh K B, Mathiazhagan A, Comparison studies on the corrosion characteristics of 32760 Super Duplex Stainless Steel, GR A Mild Steel, 304 Stainless Steel and 5083 Aluminium Alloy in marine environment, International Conference on Advances in Naval and Ocean Engineering (ICANOE'23), Department of Ship Technology Cochin University of Science and Technology, 03-04 November, 2023.
37. Krishna Prasad, Mathiazhagan A, Potentio-dynamic Polarization Studies of A-TIG Welded AL 5083: An Experimental Investigation, International Conference on Advances in Naval and Ocean Engineering (ICANOE'23), Department of Ship Technology Cochin University of Science and Technology, 03-04 November, 2023.
38. Thajudeen A,K, Satheesh Babu P.K, Mathiazhagan A, Repair Welding of Aluminium Alloys in Marine industries –A Critical Review, International Conference on Advances in Naval and Ocean Engineering (ICANOE'23), Department of Ship Technology Cochin University of Science and Technology, 03-04 November, 2023.
39. *Aravind K.R. A. Mathiazhagan, C.B.Sudheer*, Viability and Environmental Sustainability of Composite Materials in Inland Vessel Construction: A Case Study of Kerala's Waterway Network, a two-day National Conference on "Advances in Polymer Composites" (APC 2024) on 23rd - 24th Feb at MIT Campus, Chrompet, Chennai (2024).
40. C.A. Shefeena ,C.B. Sudheer, P.K. Satheesh Babu ,A. Mathiazhagan, Mohamed Hatha Abdulla, "Corrosion Dynamics of X65 and MS Materials in Cochin Estury Sediment", International Conference on Structural Engineering and Construction Management-SECON-24,FISAT,05-07,June-2024.
41. Vysakh K B, Mathiazhagan A, "Investigation on the performance of UNS S32750 Super Duplex Stainless Steel and their welds for Marine Applications", International Conference on Recent Advanced Materials in Science and Technology, Sanskrithi School of Engineering, Puttaparthi, Andhrapradesh, 07th, May 2024.
42. Vysakh K. B., Mathiazhagan A, Investigation of effect of chromium oxide flux powders on corrosion characteristics of Flux Bound TIG weld of Super duplex stainless steel welds, CORCON 2024 * 20th– 23rd - November Chennai, India.
43. Krishna Kumar., Harideep Nambiar G.O.,Aravind K. R.,Mathiazhagan., "Sustainable Ship Design :Mitigating Marine Pollution Through Innovative Maritime Technologies," The National Conference on Marine Pollution and Ecotoxicology – NCMPE 24, CUSAT, Kochi,Kerala, Sep-25-27-2024.
44. *Aravind K.R. A. Mathiazhagan, C.B.Sudheer*, Investigating the Influence of Zircon Sand on the Properties of Al 6061 'O' Grade Metal Matrix Composites, 1st International Conference on Sustainable Materials, Methodologies, Technologies & Applications in Engineering, on January 24-25, 2025, at CVR College of Engineering, Hyderabad, India-Accepted.

Short Term Training courses attended:

1. Short term training on Non Destructive testing of Metals, 22-05-95 to 02-06-95(12 Days) **Advanced training institute, Madras.**

2. Winter School on Cryogenic Engg & Its application, 12-96 to 03-01-97 (5Days), AICTE & **IIT, Kharagpur**.
3. Short term course on Advances in polymer processing& product manufacture, 02-06-97 to13-06-97(12 Days), AICTE& PSRT, **CUSAT**.
4. Winter School on Institute Industry Linkage, 17-11-97 to 22-11-97(5Days), AICTE/ISTE & **PMCT**, Thanjavur, Tamil Nadu.
5. Short term course On Corrosion Control. 24-05-99 to 29-05-99 (5Days), AICTE /**IIT, Mumbai**.
6. Short term course on Industrial Pollution Control, 16-03-99 to28-03-99(13 Days), AICTE/ISTE&**NSS** Engg College, Palakkad, Kerala.
7. AICTE/ISTE-Short term course on Recent advances in metal shaping techniques, 15-11-99 to 28-11-99 (14 Days), **PSG** Engg College, Coimbatore, Tamil Nadu.
8. AICTE/ISTE-Short term Training on TQMM&ISO9000, 01-05-2000 to14-05-2000 (14 Days), **REC**, Calicut, Kerala.
9. Short term Training Programme on Industrial safety &Environmental Engg , 15to28 march 2004(14 Days), AICTE/ISTE, **AAM** Engg College,Thiruvarur, District, Tamil Nadu.
10. Refresher course on Polymer Science& Technology, 22-01-2003 to 13-02-2003(23 Days), PS&RT, **CUSAT-22**.
11. National work shop on Advanced Techniques for corrosion Studies, 05-01-06 to 07-01-06(3Days),**CECRI** Karaikudi, Tamil Nadu.
12. National Work shop on Nano-Materials: Properties And Application, 02-12-2006 to 03-12(2 Days), **NIT**,Trichy.
13. AICTE-Staff Development Programme on Quality through Six Sigma Concept and its implementation, 14-12-09to 18-12-09(5 Days), **NIT**,Trichy.
14. ISTE Short Term course on Safety Aspects in Engg-Needs and Practices, 28-03-2011-08-04-2011 (14 Days), **CUSAT**,Kochi-22.
15. ISTE Short Term course on Modern Materials and Methods, 02-05-2011-14-05-2011 (14 Days), **CUSAT**, Kochi-22.
16. Workshop on Role of Intellectual Property Rights in the Knowledge Era , 12-10-2011 (1 Day), **CUSAT**,Kochi-22.
17. Online Training Programme on "Implementation of OBE and Online teaching" 02.11.2020 to 06.11.2020 (One Week), **NITTTR**, Chennai

18. One week AICTE Short Term course on Outcome Based Education and autonomy, 16-21 Nov 2020, **RSET**,Kochi-22.

19. Webinar on Building a Trust against Rust: Materials Degradation and it's control, 18th July, 2020, **Saintgits** College of Engg, Kottayam, Kerala.

20. Webinar on Advances in Materials Engg,10-11 Aug-2020,**Toch** Institute, Kochi, Kerala

21. Five days FDP on the theme "Inculcating Universal Human Values in Technical Education" organized (Online mode) by All India Council for Technical Education (AICTE) from 27th June to 1st July, 2022.

Reviewer: Journal of Ship Production and Design, Journal of Anticorrosion methods and Materials

Membership in Professional institutes: Member in IACSIT, SPT, BIS

Any other information: Editor of IJET, IJCEA,

Place: Kochi-22

Date: 15-11-2024

(Dr. A.MATHIAZHAGAN)