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Department of Mechanical Engineering

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### **LIST OF PUBLICATIONS**

#### **CAYM1(2020– 2021)**

1. Nagaraj.G, Manimaran Arunachalam, Vinayagar.K, Paramasamy.S, 'Enhancing performance of cell formation problem using hybrid efficient swarm optimization', Soft Computing, <https://link.springer.com/article/10.1007/s00500-020-05059-4>
2. Nandagopal Kaliappan, Kailasanathan Chidambarakuttalam, 'Environment effect on microstructure properties of gas tungsten arc welding for titanium and aluminium alloy joints', Indian Journal of Engineering & Materials Sciences, <http://nopr.niscair.res.in/handle/123456789/55231> , Vol. 27, June 2020, pp. 757-763,
3. Mohanavel.V, Kailasanathan.C, Sathish.T, Kannadhasan.V, Vinoth Joe Marshal.S, Sakthivel.K, 'Modeling and fabrication of automatic blackboard dust remover', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.05.487> ,
4. Vairamuthu.J, Senthilkumar.A, Stalin.B, Ravichandran.M, 'Optimization of powder metallurgy parameters of TiC and B4C reinforced aluminium composites by Taguchi method', Transactions of the Canadian Society for Mechanical Engineering, <https://DOI:10.1139/tcsme-2020-0091>
5. Vinayagar.K, Muthusamy.C, Nagaraj.G, Sridhar.R, 'Review on Crashworthiness Studies of Foam Filled Thin Walled Structures', International Advanced Research Journal in Science, Engineering and Technology, <https://doi:10.17148/IARJSET.2020.7608> ISSN (Online) 2393-8021 ISSN (Print) 2394-1588, Vol. 7, Issue 6, June 2020,
6. Antony Vincent.V, Kailasanathan.C, Shanmuganathan.V.K, Sai Prasanna Kumar.J.V, Arun Prakash.V.R., 'Strength characterization of caryota urens fibre and aluminium 2024-T3 foil multi-stacking sequenced SiC-toughened epoxy structural composite', Biomass Conversion and Biorefinery, <https://doi.org/10.1007/s13399-020-00831-w>
7. RajeshKanna.R, Sakthipandi.K, SenthilKumar.A, Dhineshbabu.N.R, Seeni Mohamed Aliar Maraikkayar.S.M, Sabah Afroze.A, Rajshree B. Jotania, Sivabharathy.M, 'Synthesis of dysprosium/Mn–Cu ferrite binary nanocomposite: Analysis of structural, morphological, dielectric, and optomagnetic properties', Ceramics International, <https://doi.org/10.1016/j.ceramint.2020.02.157>
8. Sudalai Suresh Pungaiah, Chidambara Kuttalam Kailasanathan, 'Thermal Analysis and Optimization of Nano Coated Radiator Tubes Using Computational Fluid Dynamics and Taguchi Method', Coatings, <https://doi:10.3390/coatings10090804>
9. Nagaraj.G, Manimaran.A, Vinayagar.K, Paramasamy.S, 'A novel hybrid DCMA-SSA paradigm for the multi-objective Cell Formation Problem', Interciencia, ISSN NO: 0378-1844.

10. Suresh Pungaiyah.S, Kailasanathan.C, 'Design of a Nano Coated Heat Exchanger Working with Organic Nanofluids Using Hybrid Technique', Transactions of the Canadian Society for Mechanical Engineering, <https://doi.org/10.1139/tcsme-2020-0080>,
11. Prithiviraj.M, Muralikannan.R, 'Investigation of Optimal Alkali-treated Perotis indica Plant Fibers on Physical, Chemical, and Morphological Properties', Journal Of Natural Fibers, <https://doi.org/10.1080/15440478.2020.1821291>,
12. Pritima.D, Stalin.B, Vairamuthu.J, Mallesham.P, Srinivasa Rao.M, Marichamy.S, 'Analysis of Parameters on Bend Force in Nickel-Coated Mild Steel Sheets Through Contour Plot', Advances in Industrial Automation and Smart Manufacturing, [https://doi.org/10.1007/978-981-15-4739-3\\_55](https://doi.org/10.1007/978-981-15-4739-3_55)
13. Stalin.B, Dhinakaran.V, Ravichandran.M, Sathiya Moorthi.K, Vairamuthu.J, 'Buckling Analysis of C-Stringer and Hat Stringer on the Load Carrying Vehicle', Advances in Industrial Automation and Smart Manufacturing, [https://doi.org/10.1007/978-981-15-4739-3\\_15](https://doi.org/10.1007/978-981-15-4739-3_15),
14. Saravanan.S.T, Kailasanathan.C, Elango Natarajan, Anbarasan Ramasamy, 'Crystallinity Change and ReducedWarpages on ThinWalled Parts-the Effect of Nano Fumed Silica on Polyacetal', Springer Nature B.V. 2020 - Silicon,: <https://doi.org/10.1007/s12633-020-00796-5>,
15. Karthikeyan.J, Selvaraj.P, Nagaraj.G, 'Day and night yield performance analysis of solar still for saline water using energetic materials with thermocol insulation', ELSEVIR - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.08.395>,
16. Stalin.B, Dhinakaran.V, Ravichandran.M, Sathiya Moorthi.K, Vairamuthu.J, 'Fracture Analysis of C-Stringer and Hat Stringer on the Load Carrying Vehicle', Advances in Industrial Automation and Smart Manufacturing, [https://doi.org/10.1007/978-981-15-4739-3\\_4](https://doi.org/10.1007/978-981-15-4739-3_4),
17. Loganathan.M, MadhavanV.M, Arun Balasubramanian.K, Thanigaivelan, Vikneswaran.M, Anbarasu.A, 'Investigation on the effect of diethyl ether with hydrogen-enriched cashew nut shell (CNS) biodiesel in direct injection (DI) diesel engine', ELSEVIR – Fuel, <https://doi.org/10.1016/j.fuel.2020.118165> ,
18. Stalin.B, Vishnu Vardhan.T, Marichamy.S, Vairamuthu.J, Ravichandran.M, Dhinakaran.V, 'Investigations on Ultrasonic Machining of Tellurium Copper Metal Matrix', International Conference on Recent Trends in Mechanical and Materials Engineering, <https://doi.org/10.1063/5.0024967>
19. Stalin.B, Vishnu Vardhan.T, Marichamy.S, Vairamuthu.J, Ravichandran.M, Dhinakaran.V, 'Material Synthesis, Characterization and Machining Performance of Terbium Metal Matrix Composite', International Conference on Recent Trends in Mechanical and Materials Engineering, <https://doi.org/10.1063/5.0024969>.]
20. Vairamuthu.J, Stalin.B, Ananda Natarajan.V, Mohmed Fazil.B, Balaji.R, 'Material synthesis and spark erosion behavior of tantalum carbide based duralumin metal matrix

21. Stalin.B, Vishnu Vardhan.T, Marichamy.S, Vairamuthu.J, Dhinakaran.V, 'Tribological Behaviour and Electric Discharge Drilling of Duplex Silicon Metal Matrix', Advances in Industrial Automation and Smart Manufacturing, [https://doi:10.1007/978-981-15-4739-3\\_48](https://doi:10.1007/978-981-15-4739-3_48)
22. Nigal Ashik.P.A, Manoj.N, Subashchandrabose.P, Vairamuthu.J, Suseendhar.P, 'Updatable features for two-wheeler's by IOT', International Conference on Recent Trends in Mechanical and Materials Engineering, <https://doi.org/10.1063/5.0026127>
23. Manimaran.P, Pitchayya Pillai.G, Vignesh.V, Prithiviraj.M, 'Characterization of natural cellulosic fibers from Nendran Banana Peduncle plants', International Journal of Biological Macromolecules, <https://doi.org/10.1016/j.ijbiomac.2020.08.111>
24. Stalin.B, Nagaprasad.N, Vignesh.V, Ravichandran.M, Nagarajan, Rajini, Sikiru Oluwarotimi Ismail, Faruq Mohammad, 'Evaluation of mechanical, thermal and water absorption behaviors of Polyalthia longifolia seed reinforced vinyl ester composites', Carbohydrate Polymers, <https://doi.org/10.1016/j.carbpol.2020.116748>
25. Ganesan Karuppiyah, Kailasanathan Chidambara Kuttalam, Murugesan Palaniappan, Carlo Santulli, and Sivasubramanian Palanisamy, 'Multiobjective Optimization of Fabrication Parameters of Jute Fiber/Polyester Composites with Egg Shell Powder and Nanoclay Filler', molecules, <https://doi:10.3390/molecules25235579>
26. Gopi Krishna.M, Kailasanathan. C, NagarajaGanesh.B, 'Physico-chemical and Morphological Characterization of Cellulose Fibers Extracted from Sansevieria roxburghiana Schult. & Schult. F Leaves', Journal Of Natural Fibers, <https://doi.org/10.1080/15440478.2020.1843102>
27. Joseph Daniel S, Senthil Kumar. A 'Tool Life Prediction of Ti [C, N] Mixed Alumina Ceramic Cutting Tool Using Gradient Descent Algorithm on Machining Martensitic Stainless Steel', Journal of Mechanical Engineering Science and Technology, ISSN 2580-0817, Vol. 4, No. 2, November 2020, pp. 144-152, <https://DOI:10.17977/um016v4i22020p144>
28. Samuel Tilahun, Vijayakumar.M.D, Ramesh Kannan.C, Manivannan.S, Vairamuthu.J, Manoj Kumar.K.P, 'Review On Ultrasonic Welding of Various Materials and Their Mechanical Properties', International Conference on Recent Development in Materials Science and Application - 2020, <https://doi:10.1088/1757-899X/988/1/012113>
29. Velmurugan.P, Janaki Manohar, Ramesh Kannan.C, Manivannan.S, Vairamuthu.J, and Stalin.B, 'A Study On development of Induction Welding of Thermoplastic Composites' International Conference on Recent Development in Materials Science and Application - 2020, <https://doi:10.1088/1757-899X/988/1/012109>
30. Mohanavel.V, Vairamuthu.J, Ramesh Kannan.C, Stalin.B, Balaji.R, Venkatesha.P, Suresh Kumar.S, 'CNC Machining parameters optimization of AA7050 with reinforcement of ZrO2 composites', International Conference on Recent Development in Materials Science and Application - 2020, <https://doi:10.1088/1757-899X/988/1/012120>
31. Janaki Manohar, Ramesh Kannan.C, Manivannan.S, Vairamuthu.J, Velmurugan.P, Stalin.B, 'Design and Analysis of Die for Brake Hose Bracket' International Conference

on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012108>

32. Stalin.B, Sudha.G.T, Kailasanathan.C, Ravichandran.M, 'Effect of MoO<sub>3</sub> ceramic oxide reinforcement particulates on the microstructure and corrosion behaviour of Al alloy composites processed by P/M route' ELSEVIER - Materials Today Communications, <https://doi.org/10.1016/j.mtcomm.2020.101655>.
33. Manivannan.S, Vairamuthu.J, Velmurugan.P. Janaki Manohar.N, Ramesh Kannan.C, and Stalin.B, 'Electrochemical studies and corrosion resistance of activated Tungsten inert gas AISI SS316L weldments', International Conference on Recent Development in Materials Science and Application - 2020, <https://doi:10.1088/1757-899X/988/1/012107>
34. Perumal.A, Kailasanathan.C, Stalin.B, Rajkumar.P.R, Gangadharan.T, Venkatesan.G, 'Evaluation of EDM process parameters on titanium alloy through Taguchi approach', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.10.737>
35. Vijayakumar.M.D, Ramesh Kannan.C, Manivannan.S, Vairamuthu.J, Samuel Tilahun, Bupathi Ram.P.M, 'Finite Element Analysis of Automotive Truck Chassis', International Conference on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012114>
36. Ramesh Kannan.C, Manivannan.S, Vairamuthu.J, Samuel Tilahun, Vijayakumar.M.D, Stalin.B, 'Investigation of cryogenic soaking period on flank wear in turning using Response Surface Methodology', International Conference on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012110>
37. Muthu chozha rajan.B, Indran.S, Divya.D, Narayanasamy.P, Anish Khan, Abdullah M. Asiri, & Nagarajan.S, 'Mechanical and Thermal Properties of Chloris barbata flower fiber /Epoxy Composites: Effect of Alkali treatment and Fiber weight fraction', Journal of Natural Fibers, <https://doi.org/10.1080/15440478.2020.1848703>
38. Mohanavel.V, Ramesh Kannan.C, Vairamuthu.J, Stalin.B, Balaji.R, Rajarajan.S, Ganeshan.P, 'Optimization of Wear Parameters of aluminium composites (AA6082/12wt%ZrO<sub>2</sub>) utilizing Taguchi technique', International Conference on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012124>
39. Mohanavel.V, Suresh Kumar.S, Vishnukumar.R, Sivaraman.V, Vairamuthu.J, Ravichandran.M, 'Optimization of CNC machining process parameters for AA2014/WC composite', International Conference on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012121>
40. Manivannan.S, Vairamuthu.J, Samuel Tilahun, Vijayakumar.M.D, Ramesh Kannan.C, Stalin.B, 'The influence of rare earth cerium addition on mechanical and corrosion properties cast Mg-6Al-1Zn magnesium alloy', International Conference on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012111>
41. Vairamuthu.J, Samuel Tilahun, Vijayakumar.M.D, Ramesh Kannan.C, Manivannan.S, Stalin.B, 'The squeeze casting parametric effect on magnesium metal matrix composite', International Conference on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012112>

42. Ramesh Kannan.C, Manivannan.S, Vairamuthu.J, Velmurugan.P, Janaki Manohar.N, Stalin.B, 'Vibration Analysis of Cutting Tool insert in Turning of 42CrMo4 alloy steel', International Conference on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012105>
43. Arravind.R, Vairamuthu.J, Stalin.B, Shanmugam.S, Balaji.R, Dhinakaran.V, 'Wear experimentation on Tantalum carbide-based Niobium MMC', International Conference on Recent Development in Materials Science and Application – 2020, <https://doi:10.1088/1757-899X/988/1/012129>
44. Anix Joel Singh.J, Vishnu Vardhan.T, Vairamuthu.J, Stalin.B, Ram Subbiah, 'Analyses of particle size and abrasive water jet drilling of synthesized chromel metal matrix', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.08.441>,
45. Sadhasivam.C, Murugan.S, Vairamuthu.J, Mohana Priyadharshini.S, 'Design and analysis of two-cylinder exhaust manifold with improved performance in CFD', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.07.574>,
46. Paidar.M, Ashraff Ali.K.S, Ojo.O.O, Mohanavel.V, Vairamuthu.J, Ravichandran.M, 'Diffusion brazing of Inconel 617 and 321 stainless steel by using AMS 4772 Ag interlayer', ELSEVIER - Journal of Manufacturing Processes, <https://doi.org/10.1016/j.jmapro.2020.11.013>,
47. Perumal.A, Kailasanathan.C, Stalin.B, Rajkumar.P.R, Gangadharan.T, Venkatesan.G, 'Evaluation of EDM process parameters on titanium alloy through Taguchi approach', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.10.737>,
48. Santhanakrishnan Raman, Vairamuthu.J, Stalin.B, Ram Subbiah, Maniraj.S, 'Hardness performance analysis of chromel composite using end and lateral quenching method', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.09.037>,
49. Mohanavel.V, Vairamuthu.J, Jegan.A, Sathish.T, Rajesh.K, Tamilselvam.S, 'Modelling and manufacturing of light weight materials based stretcher cum wheelchair', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.05.720>,
50. Dhinakaran.V, Stalin.B, Swapna Sai.M, Vairamuthu.J, Marichamy.S, 'Recent developments of graphene composites for energy storage devices', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.08.63>
51. Vairamuthu.J, Stalin.B, Sivakumar.G.D, Mohmed Fazil.B, Balaji.R, Ananda Natarajan.V, 'The effect of process parameters for synthesized copper metal matrix using stir casting process', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.09.262>,
52. Arunachalam.U, Vairamuthu.J, 'Tribological analysis on magnesium alloy AZ31B with reinforced ZrSiO4 through Taguchi technique', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.08.436>,
53. Vairamuthu.J, Stalin.B, Adam Khan.M, Mohmed Fazil.B, Sathiyam.S, 'Wear study and elaborate the parametric effect on cupronickel metal matrix', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.09.282>,
54. Nagaraj Nagaprasad, Balasubramaniam Stalin, Venkataraman Vignesh, Manickam Ravichandran, Nagarajan Rajini, Sikiru Oluwarotimi Ismail, 'Applicability of cellulosic-

based Polyalthia longifolia seed filler reinforced vinyl ester biocomposites on tribological performance', Polymer Composites, <https://doi.org/10.1002/pc.25865>

55. Sivakumar.S, Vignesh.V, Vijay Arasu.I, Venkatesan.G, Raja Mohamed Rabi.B, Adam Khan.M, 'Experimental investigation on tensile and flexural properties of randomly oriented treated palmyra fibre reinforced polyester composites', ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2021.01.511>,
56. Mohanavel.V, Suresh Kumar.S, Vairamuthu.J, Ganeshan.P, NagarajaGanesh.B, 'Influence of Stacking Sequence and Fiber Content on the Mechanical Properties of Natural and Synthetic Fibers Reinforced Penta-Layered Hybrid Composites', Journal of Natural Fibers, <https://doi.org/10.1080/15440478.2021.1875368>
57. Vignesh.V, Balaji.A.N, Nagaprasad.N, Sanjay.M.R, Anish Khan, Abdullah M Asiri, Ghulam M Ashraf, Suchart Siengchin, 'Indian Mallow Fiber Reinforced Polyester Composites: Mechanical And Thermal Properties', Journal of Materials Research and Technology, <https://doi.org/10.1016/j.jmrt.2021.01.023>
58. Kailasanathan Chidambara Kuttalam, Ganesan Karuppiah, Murugesan Palaniappan, Carlo Santulli, Sivasubramanian Palanisamy, 'Mechanical and Impact Strength of Nanoclay-Filled Composites: A Short Review', Journal of Materials Science Research and Reviews, 7(3): 7-20, 2021; Article no.JMSRR.65831,
59. Perumal.A, Azhagurajan.A, Prithivirajan.R, Suresh Kumar.S, 'Experimental Investigation and Optimization of Process Parameters in Ti – (6242) Alpha–Beta Alloy Using Electrical Discharge Machining', Journal of Inorganic and Organometallic Polymers and Materials, <https://doi.org/10.1007/s10904-020-01786-1>,
60. Kannadhasan.V, Senthil Kumar.A, Vairamuthu.J, Nagarajan.R, 'Experimental research and CFD analysis on double pipe heat exchanger with CuO nano particle suspended in cold water', Journal of Thermal Analysis and Calorimetry, <https://doi.org/10.1007/s10973-021-10804-4>,
61. Suresh Kumar.V.P, Manikanda Subramanian.K, Stalin.B, Vairamuthu.J, 'Influence of ZnO nanoparticles on thermophysical and tribological properties of polyolester oil', IOP - Materials Research Express, <https://doi.org/10.1088/2053-1591/abf282>,
62. Perumal.A, Kailasanathan.C, Vincent Herald Wilson, Sampath Kumar.T, Stalin.B, Rajkumar.P.R, 'Machinability of Titanium alloy 6242 by AWJM through Taguchi method' ELSEVIER - Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2021.04.067>
63. Dinesh Kumar.S, Ravichandran.M, Jeevika.A, Stalin.B, Kailasanathan.C, Karthick.A, 'Effect of ZrB<sub>2</sub> on microstructural, mechanical and corrosion behaviour of aluminium (AA7178) alloy matrix composite prepared by the stir casting route', ELSEVIER – Ceramics International, <https://doi.org/10.1016/j.ceramint.2021.01.158>
64. Perumal.A, Azhagurajan.A, Suresh Kumar.S, Prithivirajan.R, Baskaran.S, Rajkumar.P.R, Kailasanathan.C, Venkatesan.G, 'Influence of Optimization Techniques on Wire Electrical Discharge Machining of Ti–6Al–2Sn–4Zr–2Mo Alloy using Modeling Approach', Journal of Inorganic and Organometallic Polymers and Materials, <https://doi.org/10.1007/s10904-021-01953-y>,

65. Ramesh Kannan.C, Manivannan.S, Stalin.B, Kailasanathan.C, 'Metallographic Characterization of SiC-Ni-Ti Layer Reinforced on Austenitic Stainless Steel (AISI 316L) by Two-step Laser Fabrication', Research Square, <https://doi.org/10.21203/rs.3.rs-524562/v1>,