

Lakshmaiya Natrayan

List of Publications by Year in descending order

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95
papers

2,470
citations

172207

29
h-index

264894

42
g-index

97
all docs

97
docs citations

97
times ranked

346
citing authors

#	ARTICLE	IF	CITATIONS
1	IoT enabled environmental toxicology for air pollution monitoring using AI techniques. Environmental Research, 2022, 205, 112574.	3.7	120
2	Optimization on Operation Parameters in Reinforced Metal Matrix of AA6066 Composite with HSS and Cu. Advances in Materials Science and Engineering, 2021, 2021, 1-12.	1.0	74
3	Effect of induction on exhaust gas recirculation and hydrogen gas in compression ignition engine with simarouba oil in dual fuel mode. International Journal of Hydrogen Energy, 2022, 47, 37635-37647.	3.8	71
4	Additive Manufacturing of Biopolymers for Tissue Engineering and Regenerative Medicine: An Overview, Potential Applications, Advancements, and Trends. International Journal of Polymer Science, 2021, 2021, 1-20.	1.2	70
5	Metaheuristic Optimization-Based Resource Allocation Technique for Cybertwin-Driven 6G on IoE Environment. IEEE Transactions on Industrial Informatics, 2022, 18, 4884-4892.	7.2	70
6	Experimental Investigation on Mechanical Properties of Carbon Nanotube-Reinforced Epoxy Composites for Automobile Application. Journal of Nanomaterials, 2021, 2021, 1-7.	1.5	65
7	Improvement on Mechanical Properties of Submerged Friction Stir Joining of Dissimilar Tailor Welded Aluminum Blanks. Advances in Materials Science and Engineering, 2021, 2021, 1-6.	1.0	61
8	Influence of SiC Particles on Mechanical and Microstructural Properties of Modified Interlock Friction Stir Weld Lap Joint for Automotive Grade Aluminium Alloy. Silicon, 2022, 14, 1617-1627.	1.8	57
9	Experimental study on removal of phenol formaldehyde resin coating from the abrasive disc and preparation of abrasive disc for polishing application. Advances in Materials Science and Engineering, 2022, 2022, 1-8.	1.0	57
10	Deep Learning with Backtracking Search Optimization Based Skin Lesion Diagnosis Model. Computers, Materials and Continua, 2022, 70, 1297-1313.	1.5	54
11	Experimental Investigation on Tribological Behaviour of Various Processes of Anodized Coated Piston for Engine Application. Journal of Nanomaterials, 2022, 2022, 1-8.	1.5	53
12	Combined Economic Emission Dispatch of Microgrid with the Incorporation of Renewable Energy Sources Using Improved Mayfly Optimization Algorithm. Computational Intelligence and Neuroscience, 2022, 2022, 1-22.	1.1	49
13	Characterization of prickly pear short fiber and red onion peel biocarbon nanosheets toughened epoxy composites. Polymer Composites, 2022, 43, 4899-4908.	2.3	49
14	Effect of Aluminium Tetrahydrate Nanofiller Addition on the Mechanical and Thermal Behaviour of Luffa Fibre-Based Polyester Composites under Cryogenic Environment. Journal of Nanomaterials, 2022, 2022, 1-10.	1.5	49
15	Energy Auditing for Efficient Planning and Implementation in Commercial and Residential Buildings. Advances in Civil Engineering, 2021, 2021, 1-10.	0.4	48
16	An integrated artificial neural network and Taguchi approach to optimize the squeeze cast process parameters of AA6061/Al ₂ O ₃ /SiC/Gr hybrid composites prepared by novel encapsulation feeding technique. Materials Today Communications, 2020, 25, 101586.	0.9	46
17	Experimental investigation on wear behaviour of bio-waste reinforced fusion fiber composite laminate under various conditions. Materials Today: Proceedings, 2021, 37, 1486-1490.	0.9	46
18	Influence of silicon carbide on tribological behaviour of AA2024/Al ₂ O ₃ /SiC/Gr hybrid metal matrix squeeze cast composite using Taguchi technique. Materials Research Express, 2019, 6, 1265f9.	0.8	44

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19	Analysis of RCC T-beam and prestressed concrete box girder bridges super structure under different span conditions. <i>Materials Today: Proceedings</i> , 2021, 37, 1507-1516.	0.9	44
20	Pervasive computing in the context of COVID-19 prediction with AI-based algorithms. <i>International Journal of Pervasive Computing and Communications</i> , 2020, 16, 477-487.	1.1	43
21	Experimental investigation on mechanical properties of Epoxy/graphene/fish scale and fermented spinach hybrid bio composite by hand lay-up technique. <i>Materials Today: Proceedings</i> , 2021, 37, 1578-1583.	0.9	43
22	Sustainable Development of Carbon Nanocomposites: Synthesis and Classification for Environmental Remediation. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-21.	1.5	43
23	Structural Behavior of Nanocoated Oil Palm Shell as Coarse Aggregate in Lightweight Concrete. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-7.	1.5	43
24	Optimization of cardanol oil dielectric-activated EDM process parameters in machining of silicon steel. <i>Biomass Conversion and Biorefinery</i> , 2023, 13, 14087-14096.	2.9	42
25	Experimental Investigation on Mechanical Properties of Glass Fiber Hybridized Natural Fiber Reinforced Penta-Layered Hybrid Polymer Composite. <i>International Journal of Chemical Engineering</i> , 2022, 2022, 1-9.	1.4	40
26	Optimization of squeeze cast process parameters on mechanical properties of Al ₂ O ₃ /SiC reinforced hybrid metal matrix composites using taguchi technique. <i>Materials Research Express</i> , 2018, 5, 066516.	0.8	39
27	Effect of waste tyre particles reinforcement on mechanical properties of jute and abaca fiber- epoxy hybrid composites with pre-treatment. <i>Materials Today: Proceedings</i> , 2021, 37, 1377-1380.	0.9	36
28	Synthesis and Characterization of Polypropylene/Ramie Fiber with Hemp Fiber and Coir Fiber Natural Biopolymer Composite for Biomedical Application. <i>International Journal of Polymer Science</i> , 2021, 2021, 1-8.	1.2	34
29	Experimental Investigation to Utilize Adsorption and Absorption Technique to Reduce CO ₂ Emissions in Diesel Engine Exhaust Using Amine Solutions. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	34
30	An Effective Charger for Plug-In Hybrid Electric Vehicles (PHEV) with an Enhanced PFC Rectifier and ZVS-ZCS DC/DC High-Frequency Converter. <i>Journal of Advanced Transportation</i> , 2022, 2022, 1-14.	0.9	34
31	Performance enhancement of selective layer coated on solar absorber panel with reflector for water heater by response surface method: A case study. <i>Case Studies in Thermal Engineering</i> , 2022, 36, 102093.	2.8	33
32	Optimization of Squeeze Casting Process Parameters to Investigate the Mechanical Properties of AA6061/Al ₂ O ₃ /SiC Hybrid Metal Matrix Composites by Taguchi and Anova Approach. <i>Advances in Intelligent Systems and Computing</i> , 2020, , 393-406.	0.5	32
33	Optimization of wear behaviour on AA6061/Al ₂ O ₃ /SiC metal matrix composite using squeeze casting technique – Statistical analysis. <i>Materials Today: Proceedings</i> , 2020, 27, 306-310.	0.9	29
34	Evaluation of Mechanical Properties of E-Glass and Coconut Fiber Reinforced with Polyester and Epoxy Resin Matrices. <i>International Journal of Mechanical and Production Engineering Research and Development</i> , 2017, 7, 13-20.	0.1	29
35	Processing and Characterization of Carbon Nanofibre Composites for Automotive Applications. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-7.	1.5	29
36	Investigation of Mechanical and Electrical Properties of Kevlar/E-Glass and Basalt/E-Glass Reinforced Hybrid Composites. <i>International Journal of Mechanical and Production Engineering Research and Development</i> , 2018, 8, 591-598.	0.1	27

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37	Effectiveness of Nanosilica on Enhancing the Mechanical and Microstructure Properties of Kenaf/Carbon Fiber-Reinforced Epoxy-Based Nanocomposites. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	27
38	Force-Deformation Study on Glass Fiber Reinforced Concrete Slab Incorporating Waste Paper. <i>Advances in Civil Engineering</i> , 2022, 2022, 1-10.	0.4	26
39	Annealed peanut shell biochar as potential reinforcement for aloe vera fiber-epoxy biocomposite: mechanical, thermal conductivity, and dielectric properties. <i>Biomass Conversion and Biorefinery</i> , 2024, 14, 4155-4163.	2.9	26
40	Influence of Waste Glass Powder as an Aluminosilicate Precursor in Synthesizing Ternary Blended Alkali-Activated Binder. <i>Silicon</i> , 2022, 14, 7799-7808.	1.8	24
41	Electrochemical corrosion and tribological behaviour of AA6063/Si ₃ N ₄ /Cu(NO ₃) ₂ composite processed using single-pass ECAPA route with 120Å° die angle. <i>Journal of Materials Research and Technology</i> , 2022, 16, 715-733.	2.6	24
42	Evolution and Recent Scenario of Nanotechnology in Agriculture and Food Industries. <i>Journal of Nanomaterials</i> , 2022, 2022, 1-17.	1.5	24
43	Optimization of process parameters in TIG welding of AISI 4140 stainless steel using Taguchi technique. <i>Materials Today: Proceedings</i> , 2021, 37, 1550-1553.	0.9	23
44	Investigation on Interlaminar Shear Strength and Moisture Absorption Properties of Soybean Oil Reinforced with Aluminium Trihydrate-Filled Polyester-Based Nanocomposites. <i>Journal of Nanomaterials</i> , 2022, 2022, 1-8.	1.5	23
45	Evaluating the Mechanical and Tribological Properties of DLC Nanocoated Aluminium 5051 Using RF Sputtering. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-7.	1.5	22
46	Effect of printing characteristics for the incorporation of hexagonal-shaped lattice structure on the PLA polymeric material. <i>Journal of Thermoplastic Composite Materials</i> , 2023, 36, 2009-2030.	2.6	22
47	Effect of Mechanical Properties on Fibre Addition of Flax and Graphene-Based Bionanocomposites. <i>International Journal of Chemical Engineering</i> , 2022, 2022, 1-8.	1.4	22
48	Guided container selection for data streaming through neural learning in cloud. <i>International Journal of Systems Assurance Engineering and Management</i> , 0, , 1.	1.5	20
49	Energy Audit of a Residential Building to Reduce Energy Cost and Carbon Footprint for Sustainable Development with Renewable Energy Sources. <i>Advances in Civil Engineering</i> , 2022, 2022, 1-10.	0.4	20
50	Experimental investigations on mechanical and microstructural properties of Al ₂ O ₃ /SiC reinforced hybrid metal matrix composite. <i>IOP Conference Series: Materials Science and Engineering</i> , 0, 402, 012123.	0.3	19
51	Experimental Investigation on Mechanical Properties of TiAlN Thin Films Deposited by RF Magnetron Sputtering. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-7.	1.5	19
52	Reduction of 1/f Noise in Single-Walled Carbon Nanotubes (SWCNTs) Using Gas Adsorption Technique. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	19
53	Influence of Different Frequency Pulse on Weld Bead Phase Ratio in Gas Tungsten Arc Welding by Ferritic Stainless Steel AISI-409L. <i>Journal of Nanomaterials</i> , 2022, 2022, 1-11.	1.5	19
54	Development of Active CO ₂ Emission Control for Diesel Engine Exhaust Using Amine-Based Adsorption and Absorption Technique. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	18

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55	Durability Studies on Fly Ash Based Geopolymer Concrete Incorporated with Slag and Alkali Solutions. <i>Advances in Civil Engineering</i> , 2022, 2022, 1-13.	0.4	18
56	Experimental Investigation on Tribological Behaviour of AA6066: HSS-Cu Hybrid Composite in Dry Sliding Condition. <i>Advances in Materials Science and Engineering</i> , 2022, 2022, 1-9.	1.0	16
57	Free Vibration Analysis of Thick Rectangular and Elliptical Plates with Concentric Cut-Out. <i>Advances in Materials Science and Engineering</i> , 2021, 2021, 1-14.	1.0	15
58	Seismic Fragility and Life Cycle Cost Analysis of Reinforced Concrete Structures with a Hybrid Damper. <i>Advances in Civil Engineering</i> , 2021, 2021, 1-17.	0.4	15
59	Multiresponse Optimization of Mechanical and Physical Adsorption Properties of Activated Natural Fibers Hybrid Composites. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	15
60	An Experimental Investigation on Mechanical Behaviour of SiCp Reinforced Al 6061 MMC using Squeeze Casting Process. <i>International Journal of Mechanical and Production Engineering Research and Development</i> , 2017, 7, 663-668.	0.1	14
61	Study on Squeeze Casting of Aluminum Matrix Compositesâ€”A Review. <i>Lecture Notes on Multidisciplinary Industrial Engineering</i> , 2018, , 75-83.	0.4	13
62	Mechanical Behavior of Silica Fume Concrete Filled with Steel Tubular Composite Column. <i>Advances in Materials Science and Engineering</i> , 2021, 2021, 1-9.	1.0	13
63	Influence of Process Parameter on Carbon Nanotube Field Effect Transistor Using Response Surface Methodology. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-9.	1.5	13
64	Investigation of Tribological Behaviour on DLC Coatings for AA5051 using DC Sputtering. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	13
65	Development of Novel Bio-mulberry-Reinforced Polyacrylonitrile (PAN) Fibre Organic Brake Friction Composite Materials. <i>Bioinorganic Chemistry and Applications</i> , 2022, 2022, 1-11.	1.8	12
66	Effect of graphene reinforcement on mechanical and microstructure behavior of AA8030/graphene composites fabricated by stir casting technique. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	11
67	Mechanical and Tribological Behaviour of Al ₂ O ₃ &SiC Reinforced Aluminium Composites Fabricated via Powder Metallurgy. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 561, 012038.	0.3	11
68	Electrochemical Anodic Synthesis and Analysis of TiO ₂ Nanotubes for Biomedical Applications. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-10.	1.5	11
69	Photovoltaic Industrial Waste as Substitutional Reinforcement in the Preparation of Additively Manufactured Acrylonitrile Butadiene Styrene Composite. <i>Arabian Journal for Science and Engineering</i> , 2022, 47, 15851-15863.	1.7	11
70	Experimental Investigation on the Effectiveness of Solar Still and Its Effect on Adsorption with Various Dyes. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	11
71	Effect of Silica Content on Mechanical and Microstructure Behaviour of Resistance Spot Welded Advanced Automotive TRIP Steels. <i>Silicon</i> , 2022, 14, 3429-3438.	1.8	10
72	Analyzing the Uterine physiological With MMG Signals using SVM. <i>International Journal of Pharmaceutical Research (discontinued)</i> , 2019, 11, .	0.7	9

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73	Processing and characterization mechanical properties of AA2024/Al ₂ O ₃ /ZrO ₂ /Gr reinforced hybrid composite using stir casting technique. <i>Materials Today: Proceedings</i> , 2021, 37, 1562-1566.	0.9	8
74	Dynamic analysis and structural simulation of aluminum composite material based automobile chassis. <i>Materials Today: Proceedings</i> , 2022, 62, 2244-2249.	0.9	8
75	Power-Sharing Analysis of Hybrid Microgrid Using Iterative Learning Controller (ILC) considering Source and Load Variation. <i>Mathematical Problems in Engineering</i> , 2022, 2022, 1-6.	0.6	8
76	Enhancement of Mechanical Properties on Novel Friction Stir Welded Al-Mg-Zn Alloy Joints Reinforced with Nano-SiC Particles. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-10.	1.5	7
77	Influence of Nanographite on Dry Sliding Wear Behaviour of Novel Encapsulated Squeeze Cast Al-Cu-Mg Metal Matrix Composite Using Artificial Neural Network. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-14.	1.5	7
78	Evaluation of mechanical and wear properties of AA6063/(Si ₃ N ₄) ₆ “12%/(Cu ₂ O ₆) ₂ “4% composite via PM route and optimization through robust design technique. <i>Materials Research Express</i> , 2022, 9, 076502.	0.8	7
79	Wear Behaviour and Mechanical Properties of AA2024/Al ₂ O ₃ /SiC/Gr HMMC Using Advanced Squeeze Casting Technique. <i>Springer Proceedings in Materials</i> , 2021, , 159-167.	0.1	6
80	Experimental Testing on Mechanical, Durability, and Adsorption Dispersion Properties of Concrete with Multiwalled Carbon Nanotubes and Silica Fumes. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	6
81	Optimization of Plasma Arc Cutting Parameters on Machining of Inconel 718 Superalloy. <i>Journal of Nanomaterials</i> , 2022, 2022, 1-13.	1.5	6
82	A novel feeding technique in squeeze casting to improve reinforcement mixing ratio. <i>Materials Today: Proceedings</i> , 2021, 46, 1335-1340.	0.9	5
83	Synthesis and Optimization of Cr (VI) Removal from Aqueous Solution by Activated Carbon with Magnetic Fe ₃ O ₄ Nanoparticles by Response Surface Methodology. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	5
84	Surface State Treatment of Carbon Dots Using Sulphur Dioxide Isotherm. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	5
85	Optimization of wear parameters of aluminium hybrid metal matrix composites by squeeze casting using Taguchi and artificial neural network. , 2021, , 223-234.		4
86	Studies on Corrosion Behavior of Mg-Al-Zn-RE Cast Alloy with Powder-Coated Al and CED Mg by Salt Spray Test, Immersion Test, and Electrochemical Test. <i>International Journal of Chemical Engineering</i> , 2022, 2022, 1-11.	1.4	4
87	Environmental Impact and Carbon Footprint Assessment of Sustainable Buildings: An Experimental Investigation. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	3
88	Investigation on Efficient Removal of Fluoride from Ground Water Using Activated Carbon Adsorbents. <i>Adsorption Science and Technology</i> , 2022, 2022, .	1.5	3
89	Evaluation of Prestrain Annealing Impact on Nanomaterial Sensitization. <i>Journal of Nanomaterials</i> , 2021, 2021, 1-13.	1.5	2
90	A POTENTIAL REVIEW ON INFLUENCE OF PROCESS PARAMETER AND EFFECT OF REINFORCEMENT ON MECHANICAL AND TRIBOLOGICAL BEHAVIOUR OF HMMC USING SQUEEZE CASTING METHOD. <i>Journal of Critical Reviews</i> , 2020, 7, .	0.7	2

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91	Adsorption of SO ₂ on ZnO Nanowires Using Activated Carbon by Langmuir Adsorption Isotherm. Adsorption Science and Technology, 2022, 2022, .	1.5	2
92	Effect of Pineapple/Coconut Sheath Fiber Reinforced with Polyester Resin Matrix on Mechanical and Microstructure Properties of Hybrid Polyester Composite. Springer Proceedings in Materials, 2021, , 315-323.	0.1	1
93	Mechanical, Microstructure and Wear Behaviour of LM25/SiC/Mica Metal Matrix Composite Fabricated by Squeeze Casting Technique. Applied Engineering Letters, 2019, 4, 72-77.	0.4	1
94	ANALYSIS AND OPTIMIZATION OF CONNECTING TIE ROD ASSEMBLY IN AGRICULTURE APPLICATION. Acta Mechanica Malaysia, 2019, 2, 06-10.	0.8	0
95	Structural and dynamic analysis of automotive quarter car model suspension system for different materials. Materials Today: Proceedings, 2022, , .	0.9	0