Ammar H. Elsheikh

List of Publications by Year
in descending order

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135 papers	7,867 citations	34105 52 h-index	60623 81 g-index
136 all docs	136 docs citations	136 times ranked	3187 citing authors

#	Article	IF	Citations
1	Modeling of solar energy systems using artificial neural network: A comprehensive review. Solar Energy, 2019, 180, 622-639.	6.1	476
2	Applications of nanofluids in solar energy: A review of recent advances. Renewable and Sustainable Energy Reviews, 2018, 82, 3483-3502.	16.4	356
3	Enhancing the solar still performance using nanofluids and glass cover cooling: Experimental study. Applied Thermal Engineering, 2017, 113, 684-693.	6.0	284
4	Thin film technology for solar steam generation: A new dawn. Solar Energy, 2019, 177, 561-575.	6.1	195
5	Experimental study on tubular solar still using Graphene Oxide Nano particles in Phase Change Material (NPCM's) for fresh water production. Journal of Energy Storage, 2020, 28, 101204.	8.1	185
6	An enhanced productivity prediction model of active solar still using artificial neural network and Harris Hawks optimizer. Applied Thermal Engineering, 2020, 170, 115020.	6.0	183
7	Energy and exergy analysis of solar stills with micro/nano particles: A comparative study. Energy Conversion and Management, 2018, 177, 363-375.	9.2	159
8	Thermal performance and exergy analysis of solar stills â€“ A review. Renewable and Sustainable Energy Reviews, 2017, 73, 521-544.	16.4	148
9	Review on applications of particle swarm optimization in solar energy systems. International Journal of Environmental Science and Technology, 2019, 16, 1159-1170.	3.5	147
10	Novel approach of the graphene nanolubricant for energy saving via anti-friction/wear in automobile engines. Tribology International, 2018, 124, 209-229.	5.9	142
11	Forecasting the prevalence of COVID-19 outbreak in Egypt using nonlinear autoregressive artificial neural networks. Chemical Engineering Research and Design, 2020, 141, 1-8.	5.6	141
12	A review on meta-heuristics methods for estimating parameters of solar cells. Journal of Power Sources, 2019, 435, 126683.	7.8	138
13	A mini review of techniques used to improve the tubular solar still performance for solar water desalination. Chemical Engineering Research and Design, 2019, 124, 204-212.	5.6	137
14	Utilization of LSTM neural network for water production forecasting of a stepped solar still with a corrugated absorber plate. Chemical Engineering Research and Design, 2021, 148, 273-282.	5.6	128
15	Applications of cascaded phase change materials in solar water collector storage tanks: A review. Solar Energy Materials and Solar Cells, 2019, 199, 24-49.	6.2	125
16	A new optimized artificial neural network model to predict thermal efficiency and water yield of tubular solar still. Case Studies in Thermal Engineering, 2022, 30, 101750.	5.7	115
17	Prediction of laser cutting parameters for polymethylmethacrylate sheets using random vector functional link network integrated with equilibrium optimizer. Journal of Intelligent Manufacturing, 2021, 32, 1377-1388.	7.3	114
18	Recent progress in phase change materials storage containers: Geometries, design considerations and heat transfer improvement methods. Journal of Energy Storage, 2020, 30, 101341.	8.1	103

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19	Bistable Morphing Composites for Energy-Harvesting Applications. Polymers, 2022, 14, 1893.	4.5	100
20	A new optimized predictive model based on political optimizer for eco-friendly MQL-turning of AISI 4340 alloy with nano-lubricants. Journal of Manufacturing Processes, 2021, 67, 562-578.	5.9	97
21	Deep learning-based forecasting model for COVID-19 outbreak in Saudi Arabia. Chemical Engineering Research and Design, 2021, 149, 223-233.	5.6	95
22	Eco-friendly coffee-based colloid for performance augmentation of solar stills. Chemical Engineering Research and Design, 2020, 136, 259-267.	5.6	93
23	Productivity forecasting of solar distiller integrated with evacuated tubes and external condenser using artificial intelligence model and moth-flame optimizer. Case Studies in Thermal Engineering, 2021, 28, 101671.	5.7	85
24	Investigation and performance analysis of solar still with energy storage materials: An energy- exergy efficiency analysis. Case Studies in Thermal Engineering, 2022, 29, 101687.	5.7	84
25	Modeling of friction stir welding process using adaptive neuro-fuzzy inference system integrated with harris hawks optimizer. Journal of Materials Research and Technology, 2019, 8, 5882-5892.	5.8	83
26	Prediction of power consumption and water productivity of seawater greenhouse system using random vector functional link network integrated with artificial ecosystem-based optimization. Chemical Engineering Research and Design, 2020, 144, 322-329.	5.6	82
27	Surface quality measures analysis and optimization on machining titanium alloy using CO2 based laser beam drilling process. Journal of Manufacturing Processes, 2021, 62, 1-6.	5.9	82
28	Wall-suspended trays inside stepped distiller with Al2O3/paraffin wax mixture and vapor suction: Experimental implementation. Journal of Energy Storage, 2020, 32, 102008.	8.1	80
29	Performance augmentation of flat plate solar water collector using phase change materials and nanocomposite phase change materials: A review. Chemical Engineering Research and Design, 2019, 128, 135-157.	5.6	78
30	Improving the performance of solar still using different heat localization materials. Environmental Science and Pollution Research, 2020, 27, 12332-12344.	5.3	77
31	Noise prediction of axial piston pump based on different valve materials using a modified artificial neural network model. AEJ - Alexandria Engineering Journal, 2019, 58, 1077-1087.	6.4	73
32	Performance prediction and techno-economic analysis of solar dish/stirling system for electricity generation. Applied Thermal Engineering, 2020, 164, 114427.	6.0	70
33	Influence of basin metals and novel wick-metal chips pad on the thermal performance of solar desalination process. Journal of Cleaner Production, 2020, 248, 119224.	9.3	70
34	An Optimized Multilayer Perceptrons Model Using Grey Wolf Optimizer to Predict Mechanical and Microstructural Properties of Friction Stir Processed Aluminum Alloy Reinforced by Nanoparticles. Coatings, 2021, 11, 1476.	2.6	70
35	A new fine-tuned random vector functional link model using Hunger games search optimizer for modeling friction stir welding process of polymeric materials. Journal of Materials Research and Technology, 2021, 14, 1482-1493.	5.8	69
36	Improved prediction of oscillatory heat transfer coefficient for a thermoacoustic heat exchanger using modified adaptive neuro-fuzzy inference system. International Journal of Refrigeration, 2019, 102, 47-54.	3.4	68

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37	Modeling ultrasonic welding of polymers using an optimized artificial intelligence model using a gradient-based optimizer. Welding in the World, Le Soudage Dans Le Monde, 2022, 66, 27-44.	2.5	68
38	Prediction of residual stresses in turning of pure iron using artificial intelligence-based methods. Journal of Materials Research and Technology, 2021, 11, 2181-2194.	5.8	67
39	Fine-tuned artificial intelligence model using pigeon optimizer for prediction of residual stresses during turning of Inconel 718. Journal of Materials Research and Technology, 2021, 15, 3622-3634.	5.8	67
40	A comprehensive review on Dish/Stirling concentrated solar power systems: Design, optical and geometrical analyses, thermal performance assessment, and applications. Journal of Cleaner Production, 2021, 283, 124664.	9.3	66
41	Utilization of Random Vector Functional Link integrated with Marine Predators Algorithm for tensile behavior prediction of dissimilar friction stir welded aluminum alloy joints. Journal of Materials Research and Technology, 2020, 9, 11370-11381.	5.8	65
42	Recent progresses in wood-plastic composites: Pre-processing treatments, manufacturing techniques, recyclability and eco-friendly assessment. Cleaner Engineering and Technology, 2022, 8, 100450.	4.0	65
43	Predicting kerf quality characteristics in laser cutting of basalt fibers reinforced polymer composites using neural network and chimp optimization. AEJ - Alexandria Engineering Journal, 2022, 61, 11005-11018.	6.4	65
44	Improving laser cutting quality of polymethylmethacrylate sheet: experimental investigation and optimization. Journal of Materials Research and Technology, 2020, 9, 1325-1339.	5.8	64
45	Performance assessment of a novel solar distiller with a double slope basin covered by coated wick with lanthanum cobalt oxide nanoparticles. Case Studies in Thermal Engineering, 2022, 32, 101859.	5.7	64
46	Temperature field sensing of a thin-wall component during machining: Numerical and experimental investigations. International Journal of Heat and Mass Transfer, 2018, 126, 935-945.	4.8	63
47	Boosting COVID-19 Image Classification Using MobileNetV3 and Aquila Optimizer Algorithm. Entropy, 2021, 23, 1383.	2.2	62
48	Industrial reheating furnaces: A review of energy efficiency assessments, waste heat recovery potentials, heating process characteristics and perspectives for steel industry. Chemical Engineering Research and Design, 2021, 147, 1209-1228.	5.6	61
49	A new random vector functional link integrated with mayfly optimization algorithm for performance prediction of solar photovoltaic thermal collector combined with electrolytic hydrogen production system. Applied Thermal Engineering, 2021, 193, 117055.	6.0	61
50	Efficient artificial intelligence forecasting models for COVID-19 outbreak in Russia and Brazil. Chemical Engineering Research and Design, 2021, 149, 399-409.	5.6	60
51	Advanced Metaheuristic Techniques for Mechanical Design Problems: Review. Archives of Computational Methods in Engineering, 2022, 29, 695-716.	10.2	60
52	Machine learning algorithms for improving the prediction of air injection effect on the thermohydraulic performance of shell and tube heat exchanger. Applied Thermal Engineering, 2021, 185, 116471.	6.0	58
53	Modeling of drilling process of GFRP composite using a hybrid random vector functional link network/parasitism-predation algorithm. Journal of Materials Research and Technology, 2021, 14, 298-311.	5.8	58
54	Experimental investigation on laser cutting of PMMA sheets: Effects of process factors on kerf characteristics. Journal of Materials Research and Technology, 2021, 11, 235-246.	5.8	55

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55	Augmenting the productivity of stepped distiller by corrugated and curved liners, CuO/paraffin wax, wick, and vapor suctioning. Environmental Science and Pollution Research, 2021, 28, 56955-56965.	5.3	54
56	Machine learning-based prediction and augmentation of dish solar distiller performance using an innovative convex stepped absorber and phase change material with nanoadditives. Chemical Engineering Research and Design, 2022, 162, 112-123.	5.6	54
57	Optimal design parameters and performance optimization of thermodynamically balanced dish/Stirling concentrated solar power system using multi-objective particle swarm optimization. Applied Thermal Engineering, 2020, 178, 115539.	6.0	53
58	Extracting water content from the ambient air in a double-slope half-cylindrical basin solar still using silica gel under Egyptian conditions. Sustainable Energy Technologies and Assessments, 2020, 39, 100712.	2.7	52
59	Improving the tribological properties of AISI M50 steel using Sns/Zno solid lubricants. Journal of Alloys and Compounds, 2020, 821, 153494.	5.5	50
60	A Novel Method for Predicting Tensile Strength of Friction Stir Welded AA6061 Aluminium Alloy Joints Based on Hybrid Random Vector Functional Link and Henry Gas Solubility Optimization. IEEE Access, 2020, 8, 79896-79907.	4.2	50
61	Predicting the performance of solar dish Stirling power plant using a hybrid random vector functional link/chimp optimization model. Solar Energy, 2021, 222, 1-17.	6.1	49
62	An extensive analysis of mechanical, thermal and physical properties of jute fiber composites with different fiber orientations. Case Studies in Thermal Engineering, 2021, 28, 101612.	5.7	48
63	Investigation and TGRA based optimization of laser beam drilling process during machining of Nickel Inconel 718 alloy. Journal of Materials Research and Technology, 2022, 18, 720-730.	5.8	46
64	Performance enhancement of stepped basin solar still based on OSELM with traversal tree for higher energy adaptive control. Desalination, 2021, 502, 114926.	8.2	45
65	A hybrid adaptive neuro-fuzzy inference system integrated with equilibrium optimizer algorithm for predicting the energetic performance of solar dish collector. Energy, 2021, 235, 121289.	8.8	43
66	Utilization of random vector functional link integrated with manta ray foraging optimization for effluent prediction of wastewater treatment plant. Journal of Environmental Management, 2021, 298, 113520.	7.8	43
67	Modeling of a solar-powered thermoelectric air-conditioning system using a random vector functional link network integrated with jellyfish search algorithm. Case Studies in Thermal Engineering, 2022, 31, 101797.	5.7	43
68	Performance improvement of solar distiller using hang wick, reflectors and phase change materials enriched with nano-additives. Case Studies in Thermal Engineering, 2022, 31, 101856.	5.7	43
69	Biodegradable magnesium metal matrix composites for biomedical implants: synthesis, mechanical performance, and corrosion behavior â€“ a review. Journal of Materials Research and Technology, 2022, 20, 650-670.	5.8	42
70	Social Media Toxicity Classification Using Deep Learning: Real-World Application UK Brexit. Electronics (Switzerland), 2021, 10, 1332.	3.1	41
71	Thermal investigation of a solar box-type cooker with nanocomposite phase change materials using flexible thermography. Renewable Energy, 2021, 178, 260-282.	8.9	39
72	Effect of cutting parameters on surface residual stresses in dry turning of AISI 1035 alloy. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2019, 41, 1.	1.6	38

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73	A review of the tribological and thermophysical mechanisms of bio-lubricants based nanomaterials in automotive applications. Journal of Molecular Liquids, 2021, 339, 116717.	4.9	38
74	Performance enhancement and economic analysis of pyramid solar still with corrugated absorber plate and conventional solar still: A case study. Case Studies in Thermal Engineering, 2022, 35, 101966.	5.7	38
75	Evaluating the effect of minimum quantity lubrication during hard turning of AISI D3 steel using vegetable oil enriched with nano-additives. AEJ - Alexandria Engineering Journal, 2022, 61, 10925-10938.	6.4	38
76	Fabrication techniques of polymeric nanocomposites: A comprehensive review. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 4843-4861.	2.1	37
77	Investigation of mechanical properties of dual-fiber reinforcement in polymer composite. Journal of Materials Research and Technology, 2022, 18, 3908-3915.	5.8	37
78	Tribological Performance of Gradient Ag-Multilayer Graphene/TC4 Alloy Self-Lubricating Composites Prepared By Laser Additive Manufacturing. Tribology Transactions, 2021, 64, 819-829.	2.0	34
79	Improving the solar still performance by using thermal energy storage materials: A review of recent developments. , 0, 165, 1-15.		34
80	Effect of surface preparation on the strength of vibration welded butt joint made from PBT composite. Polymer Testing, 2020, 83, 106319.	4.8	33
81	Effect of dispersion of alumina nanoparticles and graphene nanoplatelets on microstructural and mechanical characteristics of hybrid carbon/glass fibers reinforced polymer composite. Journal of Materials Research and Technology, 2021, 14, 2624-2637.	5.8	33
82	Artificial Intelligence for Forecasting the Prevalence of COVID-19 Pandemic: An Overview. Healthcare (Switzerland), 2021, 9, 1614.	2.0	33
83	Comprehensive parametric analysis, design and performance assessment of a solar dish/Stirling system. Chemical Engineering Research and Design, 2021, 146, 276-291.	5.6	32
84	Thermal deflection and thermal stresses in a thin circular plate under an axisymmetric heat source. Journal of Thermal Stresses, 2019, 42, 361-373.	2.0	31
85	Kinetics, thermodynamics and synergistic effects analyses of petroleum coke and biomass wastes during H2O co-gasification. International Journal of Hydrogen Energy, 2020, 45, 24502-24517.	7.1	31
86	Predicting the yield of stepped corrugated solar distiller using kernel-based machine learning models. Applied Thermal Engineering, 2022, 213, 118759.	6.0	31
87	A new M50 matrix composite sintered with a hybrid Sns/Zno nanoscale solid lubricants: an experimental investigation. Materials Research Express, 2019, 6, 116523.	1.6	28
88	Effect of curved segmental baffle on a shell and tube heat exchanger thermohydraulic performance: Numerical investigation. International Journal of Thermal Sciences, 2021, 165, 106922.	4.9	28
89	A comprehensive review on residual stresses in turning. Advances in Manufacturing, 2022, 10, 287-312.	6.1	28
90	Optimization of Abrasive Water Jet Machining of SiC Reinforced Aluminum Alloy Based Metal Matrix Composites Using Taguchiâ€“DEAR Technique. Materials, 2021, 14, 6250.	2.9	28

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91	Experimental investigation on surface characteristics of Ti6Al4V alloy during abrasive water jet machining process. AEJ - Alexandria Engineering Journal, 2022, 61, 7529-7539.	6.4	27
92	Minimization of fume emissions in laser cutting of polyvinyl chloride sheets using genetic algorithm. International Journal of Environmental Science and Technology, 2022, 19, 6331-6344.	3.5	26
93	Revealing prediction of perched cum off-centered wick solar still performance using network based on optimizer algorithm. Chemical Engineering Research and Design, 2022, 161, 188-200.	5.6	26
94	A new eco-friendly mechanical technique for production of rice straw fibers for medium density fiberboards manufacturing. International Journal of Environmental Science and Technology, 2021, 18, 979-988.	3.5	24
95	Studies on the effect of applied load, sliding speed and temperature on the wear behavior of M50 steel reinforced with Al2O3 and / or graphene nanoparticles. Journal of Materials Research and Technology, 2021, 12, 283-303.	5.8	23
96	Performance Assessment and Chip Morphology Evaluation of Austenitic Stainless Steel under Sustainable Machining Conditions. Metals, 2021, 11, 1931.	2.3	23
97	An artificial neural network based approach for prediction the thermal conductivity of nanofluids. SN Applied Sciences, 2020, 2, 1.	2.9	22
98	Applications of Heat Exchanger in Solar Desalination: Current Issues and Future Challenges. Water (Switzerland), 2022, 14, 852.	2.7	22
99	Machinability Investigation of Nitronic 60 Steel Turning Using SiAlON Ceramic Tools under Different Cooling/Lubrication Conditions. Materials, 2022, 15, 2368.	2.9	21
100	Modeling of the Transient Temperature Field during Laser Heating. Lasers in Manufacturing and Materials Processing, 2021, 8, 97-112.	2.2	20
101	Improving the performance of a hybrid solar desalination system under various operating conditions. Chemical Engineering Research and Design, 2022, 162, 706-720.	5.6	20
102	Low-cost bilayered structure for improving the performance of solar stills: Performance/cost analysis and water yield prediction using machine learning. Sustainable Energy Technologies and Assessments, 2022, 49, 101783.	2.7	19
103	Experimental investigation on dish solar distiller with modified absorber and phase change material under various operating conditions. Environmental Science and Pollution Research, 2022, 29, 63248-63259.	5.3	19
104	Utilization of ensemble random vector functional link network for freshwater prediction of active solar stills with nanoparticles. Sustainable Energy Technologies and Assessments, 2021, 47, 101405.	2.7	18
105	Simultaneous reconstruction of the time-dependent Robin coefficient and heat flux in heat conduction problems. Inverse Problems in Science and Engineering, 2018, 26, 1231-1248.	1.2	15
106	Modeling of cooling and heat conduction in permanent mold casting process. AEJ - Alexandria Engineering Journal, 2022, 61, 1757-1768.	6.4	15
107	A biological sub-sequences detection using integrated BA-PSO based on infection propagation mechanism: Case study COVID-19. Expert Systems With Applications, 2022, 189, 116063.	7.6	15
108	Experimental investigations on indirect contact type liquid desiccant cooling systems for high latent heat load application. Case Studies in Thermal Engineering, 2022, 31, 101814.	5.7	15

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109	The effect of TaC and NbC hybrid and mono-nanoparticles on AA2024 nanocomposites: Microstructure, strengthening, and artificial aging. Nanotechnology Reviews, 2022, 11, 2513-2525.	5.8	15
110	Improving the mechanical properties and coefficient of thermal expansion of molybdenum-reinforced copper using powder metallurgy. Materials Research Express, 2021, 8, 096502.	1.6	14
111	Design and performance analysis of a thermoelectric air-conditioning system driven by solar photovoltaic panels. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2021, 235, 5146-5159.	2.1	13
112	A case study on experimental and statistical analysis of energy consumption of domestic refrigerator. Case Studies in Thermal Engineering, 2021, 28, 101636.	5.7	13
113	Effect of single-period overload parameters on fatigue crack retardation for high-density polyethylene. Theoretical and Applied Fracture Mechanics, 2022, 118, 103249.	4.7	13
114	Performance prediction of solar still with a high-frequency ultrasound waves atomizer using random vector functional link/heap-based optimizer. Advances in Engineering Software, 2022, 170, 103142.	3.8	13
115	Experimental investigation of the twist angle effects on thermo-hydraulic performance of a square and hexagonal pin fin array in forced convection. International Communications in Heat and Mass Transfer, 2021, 126, 105374.	5.6	12
116	SiO2/TiO2 nanolayer synergistically trigger thermal absorption inflammatory responses materials for performance improvement of stepped basin solar still natural distiller. Sustainable Energy Technologies and Assessments, 2022, 52, 101974.	2.7	12
117	Role of Nanolubricants Formulated in Improving Vehicle Engines Performance. IOP Conference Series: Materials Science and Engineering, 2019, 563, 022015.	0.6	11
118	A new artificial neural network model integrated with a cat swarm optimization algorithm for predicting the emitted noise during axial piston pump operation. IOP Conference Series: Materials Science and Engineering, 2020, 973, 012035.	0.6	11
119	Microcontroller PIC 16F877A standard based on solar cooker using PVâ€"evacuated tubes with an extension of heat integrated energy system. Environmental Science and Pollution Research, 2022, 29, 15863-15875.	5.3	10
120	Optimization and experimental analysis of drilling process parameters in radial drilling machine for glass fiber/nano granite particle reinforced epoxy composites. Materials Today: Proceedings, 2022, 62, 835-840.	1.8	9
121	Predicting Shale Volume from Seismic Traces Using Modified Random Vector Functional Link Based on Transient Search Optimization Model: A Case Study from Netherlands North Sea. Natural Resources Research, 2022, 31, 1775-1791.	4.7	9
122	A review on friction stir welding of thermoplastic materials: recent advances and progress. Welding in the World, Le Soudage Dans Le Monde, 2022, 66, 1-25.	2.5	8
123	In Vitro Degradability, Microstructural Evaluation, and Biocompatibility of Zn-Ti-Cu-Ca-P Alloy. Nanomaterials, 2022, 12, 1357.	4.1	8
124	The Influence of Boron Carbide on the Mechanical Properties and Bonding Strength of B4C/Nickel 63 Coatings of Brake Disc. Coatings, 2022, 12, 663.	2.6	6
125	The effect of rubber powder additives on mechanical properties of polypropylene glass-fiber-reinforced composite. Mechanical Sciences, 2021, 12, 461-469.	1.0	5
126	Development of Fatigue Machine to Accommodate the Application of Overloads During Fatigue Crack Propagation Tests of Polymeric Materials. Journal of Failure Analysis and Prevention, 2022, 22, 510-518.	0.9	5

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127	Electrochemical Behavior of Cu-MWCNT Nanocomposites Manufactured by Powder Technology. Coatings, 2022, 12, 409.	2.6	5
128	Reconstruction of the heat transfer coefficients and heat fluxes in heat conduction problems. Mathematics and Computers in Simulation, 2021, 187, 134-154.	4.4	4
129	Applications of Nanofluids in Direct Absorption Solar Collectors. , 2019, , 405-429.		3
130	Improving Clamping Accuracy of Thin-walled Workpiece in Turning Operation. IOP Conference Series: Materials Science and Engineering, 2020, 751, 012080.	0.6	2
131	Experimental investigation of drilling parameters for polymer matrix composite. AIP Conference Proceedings, 2021, , .	0.4	2
132	Experimental investigation of polymer matrix composite characterization using jute & carbon fiber in helmet application. AIP Conference Proceedings, 2021, , .	0.4	2
133	Investigations of friction stir welding for AA 6082 with various parameters. AIP Conference Proceedings, 2021, , .	0.4	1
134	High-temperature solar selective absorbing coatings for concentrated solar power systems. , 2022, , 361-398.		1
135	An experimental investigation on machinability of aluminium metal matrix composite Al6061 reinforced with SiC through wire electrical discharge machining (WEDM). AIP Conference Proceedings, 2021, , .	0.4	0