

P Muthukumar

List of Publications by Year in descending order

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127
papers

4,631
citations

76031

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docs citations

132
times ranked

2448
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal performance and emission analysis of self-aspirated kerosene pressure stove with porous radiant burner using kerosene nanofuels. <i>International Journal of Environmental Science and Technology</i> , 2023, 20, 4851-4860.	1.8	1
2	Effect of combustion zone material on the thermal performance of a biogas-fuelled porous media burner: Experimental studies. <i>Biomass Conversion and Biorefinery</i> , 2022, 12, 1555-1563.	2.9	5
3	Design and performance analysis of an annular metal hydride reactor for large-scale hydrogen storage applications. <i>Renewable Energy</i> , 2022, 181, 1155-1166.	4.3	27
4	Thermodynamic Analysis on Hydrogen Storage System. , 2022, , 253-263.		1
5	Investigation of thermal performance in a solar air heater having variable arc ribbed fin configuration. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 52, 102069.	1.7	8
6	Parametric investigations on LCC1 based hydrogen storage system intended for fuel cell applications. <i>International Journal of Hydrogen Energy</i> , 2022, , .	3.8	0
7	Absorption based solid state hydrogen storage system: A review. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 52, 102204.	1.7	12
8	Life Cycle assessment of LPG Cook-stove with Porous Radiant Burner and Conventional Burner – A comparative study. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 52, 102255.	1.7	3
9	Performance tests on embedded cooling tube type metal hydride reactor for heating and cooling applications. <i>Thermal Science and Engineering Progress</i> , 2022, 33, 101349.	1.3	2
10	Numerical study on heat transfer augmentation techniques in concrete based thermal storage module for solar-thermal applications. <i>Thermal Science and Engineering Progress</i> , 2022, 33, 101350.	1.3	1
11	Experimental investigation on structured packed bed liquid desiccant dehumidifier: An optimal mixture design of experiments strategy. <i>International Journal of Refrigeration</i> , 2021, 122, 232-244.	1.8	10
12	Experimental investigations on active solar dryers integrated with thermal storage for drying of black pepper. <i>Renewable Energy</i> , 2021, 167, 728-739.	4.3	58
13	Development and performance assessment of LPG operated cluster Porous Radiant Burner for commercial cooking and industrial applications. <i>Energy</i> , 2021, 219, 119581.	4.5	8
14	Thermochemical energy storage system for cooling and process heating applications: A review. <i>Energy Conversion and Management</i> , 2021, 229, 113617.	4.4	65
15	Parametric studies on MmNi _{4.7} Fe _{0.3} based reactor with embedded cooling tubes for hydrogen storage and cooling application. <i>Journal of Energy Storage</i> , 2021, 35, 102317.	3.9	19
16	Experimental study of coupled heat and mass transfer phenomena between air and desiccant in a solar assisted thermal liquid desiccant system. <i>International Journal of Thermal Sciences</i> , 2021, 162, 106795.	2.6	17
17	Strategies for scaling-up LaNi ₅ -based hydrogen storage system with internal conical fins and cooling tubes. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 19031-19045.	3.8	15
18	A review on solar greenhouse dryer: Design, thermal modelling, energy, economic and environmental aspects. <i>Solar Energy</i> , 2021, 229, 3-21.	2.9	46

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19	Performance analysis of arc rib fin embedded in a solar air heater. Thermal Science and Engineering Progress, 2021, 23, 100891.	1.3	30
20	Compound charging and discharging enhancement in multi-PCM system using non-uniform fin distribution. Renewable Energy, 2021, 171, 299-314.	4.3	79
21	Role of hybrid-nanofluid in heat transfer enhancement – A review. International Communications in Heat and Mass Transfer, 2021, 125, 105341.	2.9	140
22	Design and Performance Prediction of a Compact MmNi4.6Al0.4 based Hydrogen Storage System. Journal of Energy Storage, 2021, 39, 102612.	3.9	27
23	Performance studies on mixed-mode forced convection solar cabinet dryer under different air mass flow rates for drying of cluster fig. Solar Energy, 2021, 229, 39-51.	2.9	22
24	Performance comparison of evacuated U-tube solar collector integrated parabolic reflector with conventional evacuated U-tube solar collector. Sadhana - Academy Proceedings in Engineering Sciences, 2021, 46, 1.	0.8	3
25	Clustered Porous Radiant Burner: A cleaner alternative for cooking systems in small and medium scale applications. Journal of Cleaner Production, 2021, 308, 127276.	4.6	12
26	A review on solar dryers integrated with thermal energy storage units for drying agricultural and food products. Solar Energy, 2021, 229, 22-38.	2.9	54
27	Experimental and numerical investigations on the charging and discharging performances of high-temperature cylindrical phase change material encapsulations. Solar Energy, 2021, 224, 411-424.	2.9	7
28	Experimental investigations of high-temperature shell and multi-tube latent heat storage system. Applied Thermal Engineering, 2021, 198, 117491.	3.0	17
29	Biogas Cook Stove with a Novel Porous Radiant Burner – An Alternate for LPG Cook Stoves in Rural and Semi-urban Indian Households. Advances in Sustainability Science and Technology, 2021, , 121-132.	0.4	0
30	Design assessment of a horizontal shell and tube latent heat storage system: Alternative to fin designs. Journal of Energy Storage, 2021, 44, 103282.	3.9	13
31	Experimental investigation on annular metal hydride reactor for medium to large-scale hydrogen storage applications. Journal of Energy Storage, 2021, 44, 103473.	3.9	9
32	Experimental studies on biogas combustion in a novel double layer inert Porous Radiant Burner. Renewable Energy, 2020, 149, 1040-1052.	4.3	32
33	Performance analysis of a forced convection mixed mode horizontal solar cabinet dryer for drying of black ginger (Kaempferia parviflora) using two successive air mass flow rates. Renewable Energy, 2020, 152, 55-66.	4.3	73
34	Fluid to liquid membrane energy exchanger for simultaneous liquid desiccant regeneration and desalination applications – Theoretical and experimental analyses. Energy Conversion and Management, 2020, 204, 112291.	4.4	14
35	Evaluation of thermo-kinetic and absorption characteristics of pure desiccants and desiccant mixtures. Materials Today: Proceedings, 2020, 26, 1967-1971.	0.9	12
36	Impact of preheat zone properties on the flammability limits of crude biogas combustion in a two-layer porous radiant burner. Journal of Physics: Conference Series, 2020, 1473, 012033.	0.3	1

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37	Numerical investigation of performance trade-off characteristics of a packed bed dehumidifier using aqueous blends of lithium chloride and calcium chloride. <i>Heat and Mass Transfer</i> , 2020, 56, 3093-3109.	1.2	5
38	Coupling strategy of multi-module high temperature solid sensible heat storage system for large scale application. <i>Applied Energy</i> , 2020, 278, 115665.	5.1	10
39	Experimental based multi-objective optimisation for structured packed bed liquid desiccant dehumidification systems. <i>Journal of Building Engineering</i> , 2020, 32, 101813.	1.6	4
40	Thermal and economic performance assessments of waste cooking oil /kerosene blend operated pressure cook-stove with porous radiant burner. <i>Energy</i> , 2020, 206, 118102.	4.5	16
41	Modeling and numerical simulation of a 5 kg LaNi ₅ -based hydrogen storage reactor with internal conical fins. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 8794-8809.	3.8	66
42	Study of LPG and Biogas Combustion in Two-Layer Porous Radiant Burners (PRBs). <i>Lecture Notes in Mechanical Engineering</i> , 2020, , 1385-1391.	0.3	2
43	Influence of Geometric Configuration on Charging Characteristics of MmNi _{4.6} Fe _{0.4} Based Hydrogen Storage Device. <i>Springer Proceedings in Energy</i> , 2020, , 397-410.	0.2	1
44	Thermal modelling and parametric investigations on coupled heat and mass transfer processes occurred in a packed tower. <i>Heat and Mass Transfer</i> , 2019, 55, 627-644.	1.2	14
45	Design methodology and thermal modelling of industrial scale reactor for solid state hydrogen storage. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 20278-20292.	3.8	48
46	Performance assessment of evacuated U-tube solar collector: a numerical study. <i>Sadhana - Academy Proceedings in Engineering Sciences</i> , 2019, 44, 1.	0.8	10
47	Concrete based high temperature thermal energy storage system: Experimental and numerical studies. <i>Energy Conversion and Management</i> , 2019, 198, 111905.	4.4	32
48	A critical review of high-temperature reversible thermochemical energy storage systems. <i>Applied Energy</i> , 2019, 254, 113733.	5.1	185
49	Study of effects of various parameter on thermal efficiency of porous burner with kerosene pressure stove. <i>Journal of Physics: Conference Series</i> , 2019, 1240, 012136.	0.3	4
50	Combustion of biogas in Porous Radiant Burner: Low emission combustion. <i>Energy Procedia</i> , 2019, 158, 1116-1121.	1.8	16
51	Parametric Studies on LaNi _{4.7} Al _{0.3} based Hydrogen Storage Reactor with Embedded Cooling Tubes. <i>Energy Procedia</i> , 2019, 158, 2384-2390.	1.8	16
52	Performance Assessment of a Porous Radiant Cook Stove Fueled with Blend of Waste Vegetable Oil (WVO) and Kerosene. <i>Energy Procedia</i> , 2019, 158, 2391-2396.	1.8	6
53	Assessment of Heat Transfer Characteristics of a Latent Heat Thermal Energy Storage System: Multi Tube Design. <i>Energy Procedia</i> , 2019, 158, 4677-4683.	1.8	21
54	Experimental investigation of a Cast-Steel based Thermal Energy Storage System. <i>Energy Procedia</i> , 2019, 158, 4664-4670.	1.8	3

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55	Performance investigation of lab-scale sensible heat storage prototypes. International Journal of Green Energy, 2019, 16, 1363-1378.	2.1	4
56	Experimental and numerical investigations on high temperature cast steel based sensible heat storage system. Applied Energy, 2019, 251, 113322.	5.1	28
57	Experimental based multilayer perceptron approach for prediction of evacuated solar collector performance in humid subtropical regions. Renewable Energy, 2019, 143, 1566-1580.	4.3	23
58	Performance analyses of mixed mode forced convection solar dryer for drying of stevia leaves. Solar Energy, 2019, 188, 507-518.	2.9	132
59	Experimental studies on industrial scale metal hydride based hydrogen storage system with embedded cooling tubes. International Journal of Hydrogen Energy, 2019, 44, 13549-13560.	3.8	51
60	Investigation of charging and discharging characteristics of a horizontal conical shell and tube latent thermal energy storage device. Energy Conversion and Management, 2019, 188, 381-397.	4.4	71
61	Performance analysis of metal hydride based simultaneous cooling and heat transformation system. International Journal of Hydrogen Energy, 2019, 44, 10906-10915.	3.8	21
62	Material Characterization Role in Porous Media Combustion Stability and Performance. Materials Today: Proceedings, 2019, 18, 5063-5068.	0.9	2
63	Experimental investigation and numerical modelling on the performance assessments of evacuated U tube solar collector systems. Renewable Energy, 2019, 134, 1344-1361.	4.3	46
64	Energy, entransy and exergy analyses of a liquid desiccant regenerator. International Journal of Refrigeration, 2019, 105, 80-91.	1.8	17
65	Experimental investigation and parametric studies on structured packing chamber based liquid desiccant dehumidification and regeneration systems. Building and Environment, 2019, 149, 330-348.	3.0	43
66	Life cycle Assessment (LCA) and Techno-economic Assessment (TEA) of medium scale (5-10 kW) LPG cooking stove with two-layer porous radiant burner. Applied Thermal Engineering, 2018, 133, 316-326.	3.0	25
67	Drying kinetics and quality analysis of black turmeric (Curcuma caesia) drying in a mixed mode forced convection solar dryer integrated with thermal energy storage. Renewable Energy, 2018, 120, 23-34.	4.3	165
68	A Review on Clean Combustion Within Porous Media. Energy, Environment, and Sustainability, 2018, , 209-224.	0.6	5
69	A novel heat transfer enhancement technique for performance improvements in encapsulated latent heat storage system. Solar Energy, 2018, 164, 276-286.	2.9	18
70	Development and testing of energy efficient and environment friendly porous radiant burner operating on liquefied petroleum gas. Applied Thermal Engineering, 2018, 129, 482-489.	3.0	39
71	Performance tests on lab-scale sensible heat storage prototypes. Applied Thermal Engineering, 2018, 129, 953-967.	3.0	52
72	Feasibility Study of the Application of a Latent Heat Storage in a Solar Dryer for Drying Green Chili. , 2018, , .		4

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73	Experimental Analysis of a Porous Radiant Pressurized Cook Stove by Using a Blend of Waste Cooking Oil (WCO) and Kerosene. , 2018, , .		2
74	Comparative study of phase change phenomenon in high temperature cascade latent heat energy storage system using conduction and conduction-convection models. Solar Energy, 2018, 176, 627-637.	2.9	35
75	Energy Saving and Techno-economic Assessment of Self Aspirated Domestic LPG Stove with Porous Radiant Burner. IOP Conference Series: Materials Science and Engineering, 2018, 377, 012194.	0.3	1
76	Performance analysis of a mixed mode forced convection solar dryer with and without thermal energy storage heat exchanger. IOP Conference Series: Materials Science and Engineering, 2018, 377, 012195.	0.3	5
77	A novel finite difference model coupled with recursive algorithm for analyzing heat and mass transfer processes in a cross flow dehumidifier/regenerator. International Journal of Thermal Sciences, 2018, 131, 1-13.	2.6	21
78	A critical review on design aspects and developmental status of metal hydride based thermal machines. International Journal of Hydrogen Energy, 2018, 43, 17753-17779.	3.8	83
79	Performance investigation of a lab-scale latent heat storage prototype - Numerical results. Energy Conversion and Management, 2017, 135, 188-199.	4.4	73
80	Energy and exergy analyses of the solar drying processes of ghost chilli pepper and ginger. Renewable Energy, 2017, 105, 764-773.	4.3	138
81	Performance studies on a forced convection solar dryer integrated with a paraffin wax-based latent heat storage system. Solar Energy, 2017, 149, 214-226.	2.9	146
82	A novel approach for performance assessment of mechanical draft wet cooling towers. Applied Thermal Engineering, 2017, 121, 14-26.	3.0	52
83	Empirical Correlation Based Models for Estimation of Air Cooled and Water Cooled Condenser's Performance. Energy Procedia, 2017, 109, 293-305.	1.8	15
84	Performance Assessment of a Counter Flow Cooling Tower - Unique Approach. Energy Procedia, 2017, 109, 243-252.	1.8	25
85	Experimental investigation of thin layer drying kinetics of ghost chilli pepper (Capsicum Chinense) Tj ETQq1 1 0.784314 rgBT /Overlo 4.3 108	4.3	108
86	Performance investigation of a lab-scale latent heat storage prototype - Experimental results. Solar Energy, 2017, 155, 971-984.	2.9	40
87	Modelling and Performance Analysis of U Type Evacuated Tube Solar Collector Using Different Working Fluids. Energy Procedia, 2016, 90, 227-237.	1.8	49
88	Coupled Heat and Mass Transfer Analysis of an Adiabatic Dehumidifier - Unique Approach. Energy Procedia, 2016, 90, 305-315.	1.8	12
89	Parametric investigations on compressor-driven metal hydride based cooling system. Applied Thermal Engineering, 2016, 97, 87-99.	3.0	23
90	Performance investigation of a single-stage metal hydride heat transformer. International Journal of Green Energy, 2016, 13, 102-109.	2.1	10

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91	Numerical and experimental analyses of LPG (liquefied petroleum gas) combustion in a domestic cooking stove with a porous radiant burner. <i>Energy</i> , 2016, 95, 404-414.	4.5	52
92	Niche applications of metal hydrides and related thermal management issues. <i>Journal of Alloys and Compounds</i> , 2015, 645, S117-S122.	2.8	52
93	Thermal Modeling and Performance Investigation of a Double-Stage Metal Hydride-Based Heat Transformer. <i>Numerical Heat Transfer; Part A: Applications</i> , 2015, 67, 883-901.	1.2	5
94	Performance investigation of high-temperature sensible heat thermal energy storage system during charging and discharging cycles. <i>Clean Technologies and Environmental Policy</i> , 2015, 17, 501-513.	2.1	29
95	Performance characterization of a medium-scale liquefied petroleum gas cooking stove with a two-layer porous radiant burner. <i>Applied Thermal Engineering</i> , 2015, 89, 44-50.	3.0	50
96	Development of Double-Stage Metal Hydride-Based Hydrogen Compressor for Heat Transformer Application. <i>Journal of Energy Engineering - ASCE</i> , 2015, 141, .	1.0	8
97	Thermal modeling of LmNi _{4.91} Sn _{0.15} based solid state hydrogen storage device with embedded cooling tubes. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 15549-15562.	3.8	58
98	Tests on LmNi _{4.91} Sn _{0.15} based solid state hydrogen storage device with embedded cooling tubes – Part B: Desorption process. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 4966-4972.	3.8	27
99	Tests on LmNi _{4.91} Sn _{0.15} based solid state hydrogen storage device with embedded cooling tubes – Part A: Absorption process. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 3342-3351.	3.8	40
100	Development of novel porous radiant burners for LPG cooking applications. <i>Fuel</i> , 2013, 112, 562-566.	3.4	84
101	Performance tests on metal hydride based hydrogen storage devices. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 9570-9577.	3.8	12
102	Analysis of crossed van't Hoff metal hydride based heat pump. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 11415-11420.	3.8	12
103	Studies on metal hydride based single-stage heat transformer. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 7178-7187.	3.8	38
104	Design and optimization of lab-scale sensible heat storage prototype for solar thermal power plant application. <i>Solar Energy</i> , 2013, 97, 217-229.	2.9	55
105	Performance tests on a double-stage metal hydride based heat transformer. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 15428-15437.	3.8	28
106	Measurement of thermochemical properties of some metal hydrides – Titanium (Ti), misch metal (Mm) and lanthanum (La) based alloys. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 5288-5301.	3.8	15
107	Thermal modeling and performance analysis of industrial-scale metal hydride based hydrogen storage container. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 14351-14364.	3.8	85
108	Computational study on metal hydride based three-stage hydrogen compressor. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 3797-3806.	3.8	38

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109	Tests on a metal hydride based thermal energy storage system. International Journal of Hydrogen Energy, 2012, 37, 3818-3824.	3.8	46
110	Studies on porous radiant burners for LPG (liquefied petroleum gas) cooking applications. Energy, 2011, 36, 6074-6080.	4.5	78
111	Simulation of double-stage double-effect metal hydride heat pump. International Journal of Hydrogen Energy, 2010, 35, 1474-1484.	3.8	18
112	Metal hydride based heating and cooling systems: A review. International Journal of Hydrogen Energy, 2010, 35, 3817-3831.	3.8	119
113	Study of heat and mass transfer in MmNi _{4.6} Al _{0.4} during desorption of hydrogen. International Journal of Hydrogen Energy, 2010, 35, 10811-10818.	3.8	15
114	Performance investigations of a single-stage metal hydride heat pump. International Journal of Hydrogen Energy, 2010, 35, 6950-6958.	3.8	50
115	Performance investigation of double-stage metal hydride based heat pump. Applied Thermal Engineering, 2010, 30, 2698-2707.	3.0	27
116	Numerical investigation of coupled heat and mass transfer during desorption of hydrogen in metal hydride beds. Energy Conversion and Management, 2009, 50, 69-75.	4.4	50
117	Study of coupled heat and mass transfer during absorption of hydrogen in MmNi _{4.6} Al _{0.4} based hydrogen storage device. Sadhana - Academy Proceedings in Engineering Sciences, 2009, 34, 255-270.	0.8	9
118	Measurement of thermodynamic properties of some hydrogen absorbing alloys. International Journal of Hydrogen Energy, 2009, 34, 1873-1879.	3.8	33
119	Computational study of metal hydride cooling system. International Journal of Hydrogen Energy, 2009, 34, 3164-3172.	3.8	52
120	Studies on hydriding kinetics of some La-based metal hydride alloys. International Journal of Hydrogen Energy, 2009, 34, 7253-7262.	3.8	68
121	Numerical simulation of coupled heat and mass transfer in metal hydride-based hydrogen storage reactor. Journal of Alloys and Compounds, 2009, 472, 466-472.	2.8	48
122	Performance tests on a thermally operated hydrogen compressor. International Journal of Hydrogen Energy, 2008, 33, 463-469.	3.8	35
123	Tests on mechanically alloyed Mg ₂ Ni for hydrogen storage. Journal of Alloys and Compounds, 2008, 452, 456-461.	2.8	44
124	Parametric studies on a metal hydride based hydrogen storage device. International Journal of Hydrogen Energy, 2007, 32, 4988-4997.	3.8	78
125	Experiments on a metal hydride-based hydrogen storage device. International Journal of Hydrogen Energy, 2005, 30, 1569-1581.	3.8	152
126	Experiments on a metal hydride based hydrogen compressor. International Journal of Hydrogen Energy, 2005, 30, 879-892.	3.8	61

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127	Parametric studies on a metal hydride based single stage hydrogen compressor. International Journal of Hydrogen Energy, 2002, 27, 1083-1092.	3.8	42