

Satyam Panchal

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

51
papers

2,169
citations

30
h-index

46
g-index

54
ext. papers

3,245
ext. citations

4.6
avg. IF

6.22
L-index

#	Paper	IF	Citations
51	Thermal design and simulation of mini-channel cold plate for water cooled large sized prismatic lithium-ion battery. <i>Applied Thermal Engineering</i> , 2017 , 122, 80-90	5.8	162
50	Thermal modeling and validation of temperature distributions in a prismatic lithium-ion battery at different discharge rates and varying boundary conditions. <i>Applied Thermal Engineering</i> , 2016 , 96, 190-199	5.8	142
49	Experimental and theoretical investigations of heat generation rates for a water cooled LiFePO ₄ battery. <i>International Journal of Heat and Mass Transfer</i> , 2016 , 101, 1093-1102	4.9	139
48	Electrochemical thermal modeling and experimental measurements of 18650 cylindrical lithium-ion battery during discharge cycle for an EV. <i>Applied Thermal Engineering</i> , 2018 , 135, 123-132	5.8	121
47	A novel battery thermal management system using nano-enhanced phase change materials. <i>Energy</i> , 2021 , 219, 119564	7.9	103
46	Cycling degradation testing and analysis of a LiFePO ₄ battery at actual conditions. <i>International Journal of Energy Research</i> , 2017 , 41, 2565-2575	4.5	100
45	Numerical analysis of different fin structures in phase change material module for battery thermal management system and its optimization. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 163, 120434	4.9	90
44	Transient electrochemical heat transfer modeling and experimental validation of a large sized LiFePO ₄ /graphite battery. <i>International Journal of Heat and Mass Transfer</i> , 2017 , 109, 1239-1251	4.9	77
43	Experimental and theoretical investigation of temperature distributions in a prismatic lithium-ion battery. <i>International Journal of Thermal Sciences</i> , 2016 , 99, 204-212	4.1	74
42	Investigation on thermal performance of water-cooled Li-ion pouch cell and pack at high discharge rate with U-turn type microchannel cold plate. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 155, 119728	4.9	66
41	A Review of Range Extenders in Battery Electric Vehicles: Current Progress and Future Perspectives. <i>World Electric Vehicle Journal</i> , 2021 , 12, 54	2.5	49
40	Numerical modeling and experimental investigation of a prismatic battery subjected to water cooling. <i>Numerical Heat Transfer; Part A: Applications</i> , 2017 , 71, 626-637	2.3	48
39	High Reynold's Number Turbulent Model for Micro-Channel Cold Plate Using Reverse Engineering Approach for Water-Cooled Battery in Electric Vehicles. <i>Energies</i> , 2020 , 13, 1638	3.1	47
38	Design of a Hybrid Electric Vehicle Powertrain for Performance Optimization Considering Various Powertrain Components and Configurations. <i>Vehicles</i> , 2021 , 3, 20-32	1.5	47
37	Mathematical Heat Transfer Modeling and Experimental Validation of Lithium-Ion Battery Considering: Tab and Surface Temperature, Separator, Electrolyte Resistance, Anode-Cathode Irreversible and Reversible Heat. <i>Batteries</i> , 2020 , 6, 61	5.7	45
36	Experimental temperature distributions in a prismatic lithium-ion battery at varying conditions. <i>International Communications in Heat and Mass Transfer</i> , 2016 , 71, 35-43	5.8	42
35	Effect of integrating the hysteresis component to the equivalent circuit model of Lithium-ion battery for dynamic and non-dynamic applications. <i>Journal of Energy Storage</i> , 2020 , 32, 101785	7.8	41

34	Comparative Study of Equivalent Circuit Models Performance in Four Common Lithium-Ion Batteries: LFP, NMC, LMO, NCA. <i>Batteries</i> , 2021 , 7, 51	5.7	41
33	Experimental and simulated temperature variations in a LiFePO ₄ -20 Ah battery during discharge process. <i>Applied Energy</i> , 2016 , 180, 504-515	10.7	41
32	Comparison of lumped and 1D electrochemical models for prismatic 20Ah LiFePO ₄ battery sandwiched between minichannel cold-plates. <i>Applied Thermal Engineering</i> , 2021 , 199, 117586	5.8	41
31	Numerical investigation on thermal behaviour of 5 U cell configured battery pack using phase change material and fin structure layout. <i>Journal of Energy Storage</i> , 2021 , 43, 103234	7.8	36
30	Coupled Electrochemical-Thermal Simulations and Validation of Minichannel Cold-Plate Water-Cooled Prismatic 20 Ah LiFePO ₄ Battery. <i>Electrochem</i> , 2021 , 2, 643-663	2.9	35
29	Heat and mass transfer modeling and investigation of multiple LiFePO ₄ /graphite batteries in a pack at low C-rates with water-cooling. <i>International Journal of Heat and Mass Transfer</i> , 2019 , 135, 368-379	3.7	34
28	Design and simulation of a lithium-ion battery at large C-rates and varying boundary conditions through heat flux distributions. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018 , 116, 382-390	4.6	34
27	Modeling and Analysis of Heat Dissipation for Liquid Cooling Lithium-Ion Batteries. <i>Energies</i> , 2021 , 14, 4187	3.1	33
26	Experimental investigation and simulation of temperature distributions in a 16Ah-LiMnNiCoO ₂ battery during rapid discharge rates. <i>Heat and Mass Transfer</i> , 2017 , 53, 937-946	2.2	32
25	Soft Sensors for State of Charge, State of Energy and Power Loss in Formula Student Electric Vehicle. <i>Applied System Innovation</i> , 2021 , 4, 78	2.4	31
24	Thermal and electrical performance assessments of lithium-ion battery modules for an electric vehicle under actual drive cycles. <i>Electric Power Systems Research</i> , 2018 , 163, 18-27	3.5	31
23	Numerical study on sensitivity analysis of factors influencing liquid cooling with double cold-plate for lithium-ion pouch cell. <i>International Journal of Energy Research</i> , 2021 , 45, 2533-2559	4.5	30
22	A comprehensive equivalent circuit model for lithium-ion batteries, incorporating the effects of state of health, state of charge, and temperature on model parameters. <i>Journal of Energy Storage</i> , 2021 , 43, 103252	7.8	30
21	Thermal Management of Lithium-Ion Pouch Cell with Indirect Liquid Cooling using Dual Cold Plates Approach. <i>SAE International Journal of Alternative Powertrains</i> , 2015 , 4, 293-307	2	29
20	Uneven temperature and voltage distributions due to rapid discharge rates and different boundary conditions for series-connected LiFePO ₄ batteries. <i>International Communications in Heat and Mass Transfer</i> , 2017 , 81, 210-217	5.8	28
19	One dimensional fast computational partial differential model for heat transfer in lithium-ion batteries. <i>Journal of Energy Storage</i> , 2021 , 37, 102471	7.8	27
18	Cooling Performance Characteristics of 20 Ah Lithium-Ion Pouch Cell with Cold Plates along Both Surfaces. <i>Energies</i> , 2018 , 11, 2550	3.1	24
17	A Conceptualized Hyrail Powertrain: A Case Study of the Union Pearson Express Route. <i>World Electric Vehicle Journal</i> , 2019 , 10, 32	2.5	23

16	Measurement of Temperature Gradient (dT/dy) and Temperature Response (dT/dt) of a Prismatic Lithium-Ion Pouch Cell with LiFePO ₄ Cathode Material 2017 ,		22
15	Degradation Testing and Modeling of 200Ah LiFePO ₄ Battery 2018 ,		19
14	Python-based scikit-learn machine learning models for thermal and electrical performance prediction of high-capacity lithium-ion battery. <i>International Journal of Energy Research</i> ,	4-5	19
13	Investigation and simulation of electric train utilizing hydrogen fuel cell and lithium-ion battery. <i>Sustainable Energy Technologies and Assessments</i> , 2021 , 46, 101234	4-7	19
12	Investigation of Individual Cells Replacement Concept in Lithium-Ion Battery Packs with Analysis on Economic Feasibility and Pack Design Requirements. <i>Processes</i> , 2021 , 9, 2263	2-9	15
11	Concept Review of a Cloud-Based Smart Battery Management System for Lithium-Ion Batteries: Feasibility, Logistics, and Functionality. <i>Batteries</i> , 2022 , 8, 19	5-7	15
10	Experimental study of flow through compressor Cascade. <i>Case Studies in Thermal Engineering</i> , 2017 , 10, 234-243	5-6	13
9	Experimental Measurements of Thermal Characteristics of LiFePO ₄ Battery 2015 ,		13
8	Modeling and Evaluation of Li-Ion Battery Performance Based on the Electric Vehicle Field Tests 2014 ,		13
7	Influence of the Fly Ash Material Inoculants on the Tensile and Impact Characteristics of the Aluminum AA 5083/7.5SiC Composites. <i>Materials</i> , 2021 , 14,	3-5	13
6	Simulation of cooling plate effect on a battery module with different channel arrangement. <i>Journal of Energy Storage</i> , 2022 , 49, 104113	7-8	11
5	Numerical Analysis of Binding Yarn Float Length for 3D Auxetic Structures. <i>Physica Status Solidi (B): Basic Research</i> , 2020 , 257, 2000440	1-3	9
4	Performance Study on the Effect of Coolant Inlet Conditions for a 20 Ah LiFePO ₄ Prismatic Battery with Commercial Mini Channel Cold Plates. <i>Electrochem</i> , 2022 , 3, 259-275	2-9	3
3	Critical thickness of nano-enhanced RT-42 paraffin based battery thermal management system for electric vehicles: A numerical study. <i>Journal of Energy Storage</i> , 2022 , 52, 104757	7-8	2
2	Numerical Investigations on Magnetohydrodynamic Pump Based Microchannel Cooling System for Heat Dissipating Element. <i>Symmetry</i> , 2020 , 12, 1713	2-7	1
1	Combined influence of concentration-dependent properties, local deformation and boundary confinement on the migration of Li-ions in low-expansion electrode particle during lithiation. <i>Journal of Energy Storage</i> , 2022 , 52, 104908	7-8	1