Satyam Panchal

List of Publications by Year in descending order

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54 papers	4,348 citations	100601 38 h-index	223390 49 g-index
54 all docs	54 docs citations	54 times ranked	1980 citing authors

#	Article	IF	Citations
1	<scp>Pythonâ€based scikitâ€learn</scp> machine learning models for thermal and electrical performance prediction of <scp>highâ€capacity</scp> lithiumâ€ion battery. International Journal of Energy Research, 2022, 46, 786-794.	2.2	73
2	Simulation of cooling plate effect on a battery module with different channel arrangement. Journal of Energy Storage, 2022, 49, 104113.	3.9	83
3	Concept Review of a Cloud-Based Smart Battery Management System for Lithium-Ion Batteries: Feasibility, Logistics, and Functionality. Batteries, 2022, 8, 19.	2.1	116
4	Critical thickness of nano-enhanced RT-42 paraffin based battery thermal management system for electric vehicles: A numerical study. Journal of Energy Storage, 2022, 52, 104757.	3.9	57
5	Combined influence of concentration-dependent properties, local deformation and boundary confinement on the migration of Li-ions in low-expansion electrode particle during lithiation. Journal of Energy Storage, 2022, 52, 104908.	3.9	30
6	Performance Study on the Effect of Coolant Inlet Conditions for a 20 Ah LiFePO4 Prismatic Battery with Commercial Mini Channel Cold Plates. Electrochem, 2022, 3, 259-275.	1.7	39
7	Numerical investigation on thermal management system for lithium ion battery using phase change material. Materials Today: Proceedings, 2022, 66, 1726-1733.	0.9	51
8	A Review of Lithium-Ion Battery Thermal Runaway Modeling and Diagnosis Approaches. Processes, 2022, 10, 1192.	1.3	79
9	A novel heat dissipation structure based on flat heat pipe for battery thermal management system. International Journal of Energy Research, 2022, 46, 15961-15980.	2.2	79
10	A novel battery thermal management system using nano-enhanced phase change materials. Energy, 2021, 219, 119564.	4.5	263
11	Numerical study on sensitivity analysis of factors influencing liquid cooling with double coldâ€plate for lithiumâ€ion pouch cell. International Journal of Energy Research, 2021, 45, 2533-2559.	2.2	60
12	A Review of Range Extenders in Battery Electric Vehicles: Current Progress and Future Perspectives. World Electric Vehicle Journal, 2021, 12, 54.	1.6	106
13	One dimensional fast computational partial differential model for heat transfer in lithium-ion batteries. Journal of Energy Storage, 2021, 37, 102471.	3.9	51
14	Influence of the Fly Ash Material Inoculants on the Tensile and Impact Characteristics of the Aluminum AA 5083/7.5SiC Composites. Materials, 2021, 14, 2452.	1.3	30
15	Comparative Study of Equivalent Circuit Models Performance in Four Common Lithium-Ion Batteries: LFP, NMC, LMO, NCA. Batteries, 2021, 7, 51.	2.1	126
16	Modeling and Analysis of Heat Dissipation for Liquid Cooling Lithium-Ion Batteries. Energies, 2021, 14, 4187.	1.6	60
17	Investigation and simulation of electric train utilizing hydrogen fuel cell and lithium-ion battery. Sustainable Energy Technologies and Assessments, 2021, 46, 101234.	1.7	27
18	Numerical investigation on thermal behaviour of 5ÂÃ—Â5 cell configured battery pack using phase change material and fin structure layout. Journal of Energy Storage, 2021, 43, 103234.	3.9	89

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19	A comprehensive equivalent circuit model for lithium-ion batteries, incorporating the effects of state of health, state of charge, and temperature on model parameters. Journal of Energy Storage, 2021, 43, 103252.	3.9	149
20	Comparison of lumped and 1D electrochemical models for prismatic 20Ah LiFePO4 battery sandwiched between minichannel cold-plates. Applied Thermal Engineering, 2021, 199, 117586.	3.0	69
21	Design of a Hybrid Electric Vehicle Powertrain for Performance Optimization Considering Various Powertrain Components and Configurations. Vehicles, 2021, 3, 20-32.	1.7	85
22	Soft Sensors for State of Charge, State of Energy, and Power Loss in Formula Student Electric Vehicle. Applied System Innovation, 2021, 4, 78.	2.7	66
23	Coupled Electrochemical-Thermal Simulations and Validation of Minichannel Cold-Plate Water-Cooled Prismatic 20 Ah LiFePO4 Battery. Electrochem, 2021, 2, 643-663.	1.7	71
24	Investigation of Individual Cells Replacement Concept in Lithium-Ion Battery Packs with Analysis on Economic Feasibility and Pack Design Requirements. Processes, 2021, 9, 2263.	1.3	65
25	Effect of integrating the hysteresis component to the equivalent circuit model of Lithium-ion battery for dynamic and non-dynamic applications. Journal of Energy Storage, 2020, 32, 101785.	3.9	77
26	Numerical Investigations on Magnetohydrodynamic Pump Based Microchannel Cooling System for Heat Dissipating Element. Symmetry, 2020, 12, 1713.	1.1	6
27	Numerical analysis of different fin structures in phase change material module for battery thermal management system and its optimization. International Journal of Heat and Mass Transfer, 2020, 163, 120434.	2.5	200
28	Numerical Analysis of Binding Yarn Float Length for 3D Auxetic Structures. Physica Status Solidi (B): Basic Research, 2020, 257, 2000440.	0.7	18
29	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. Batteries, 2020, 6, 61.	2.1	74
30	Investigation on thermal performance of water-cooled Li-ion pouch cell and pack at high discharge rate with U-turn type microchannel cold plate. International Journal of Heat and Mass Transfer, 2020, 155, 119728.	2.5	134
31	High Reynoldâ€™s Number Turbulent Model for Micro-Channel Cold Plate Using Reverse Engineering Approach for Water-Cooled Battery in Electric Vehicles. Energies, 2020, 13, 1638.	1.6	70
32	A Conceptualized Hydrail Powertrain: A Case Study of the Union Pearson Express Route. World Electric Vehicle Journal, 2019, 10, 32.	1.6	30
33	Heat and mass transfer modeling and investigation of multiple LiFePO4/graphite batteries in a pack at low C-rates with water-cooling. International Journal of Heat and Mass Transfer, 2019, 135, 368-377.	2.5	44
34	Electrochemical thermal modeling and experimental measurements of 18650 cylindrical lithium-ion battery during discharge cycle for an EV. Applied Thermal Engineering, 2018, 135, 123-132.	3.0	188
35	Design and simulation of a lithium-ion battery at large C-rates and varying boundary conditions through heat flux distributions. Measurement: Journal of the International Measurement Confederation, 2018, 116, 382-390.	2.5	48
36	Cooling Performance Characteristics of 20 Ah Lithium-Ion Pouch Cell with Cold Plates along Both Surfaces. Energies, 2018, 11, 2550.	1.6	41

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37	Thermal and electrical performance assessments of lithium-ion battery modules for an electric vehicle under actual drive cycles. Electric Power Systems Research, 2018, 163, 18-27.	2.1	49
38	Uneven temperature and voltage distributions due to rapid discharge rates and different boundary conditions for series-connected LiFePO 4 batteries. International Communications in Heat and Mass Transfer, 2017, 81, 210-217.	2.9	36
39	Numerical modeling and experimental investigation of a prismatic battery subjected to water cooling. Numerical Heat Transfer; Part A: Applications, 2017, 71, 626-637.	1.2	72
40	Thermal design and simulation of mini-channel cold plate for water cooled large sized prismatic lithium-ion battery. Applied Thermal Engineering, 2017, 122, 80-90.	3.0	280
41	Experimental study of flow through compressor Cascade. Case Studies in Thermal Engineering, 2017, 10, 234-243.	2.8	15
42	Transient electrochemical heat transfer modeling and experimental validation of a large sized LiFePO4/graphite battery. International Journal of Heat and Mass Transfer, 2017, 109, 1239-1251.	2.5	111
43	Cycling degradation testing and analysis of a LiFePO₄ battery at actual conditions. International Journal of Energy Research, 2017, 41, 2565-2575.	2.2	125
44	Experimental investigation and simulation of temperature distributions in a 16Ah-LiMnNiCoO2 battery during rapid discharge rates. Heat and Mass Transfer, 2017, 53, 937-946.	1.2	37
45	Experimental and simulated temperature variations in a LiFePO4-20 Ah battery during discharge process. Applied Energy, 2016, 180, 504-515.	5.1	54
46	Experimental and theoretical investigations of heat generation rates for a water cooled LiFePO4 battery. International Journal of Heat and Mass Transfer, 2016, 101, 1093-1102.	2.5	195
47	Thermal modeling and validation of temperature distributions in a prismatic lithium-ion battery at different discharge rates and varying boundary conditions. Applied Thermal Engineering, 2016, 96, 190-199.	3.0	197
48	Experimental temperature distributions in a prismatic lithium-ion battery at varying conditions. International Communications in Heat and Mass Transfer, 2016, 71, 35-43.	2.9	65
49	Experimental and theoretical investigation of temperature distributions in a prismatic lithium-ion battery. International Journal of Thermal Sciences, 2016, 99, 204-212.	2.6	116
50	Modeling and Evaluation of Li-Ion Battery Performance Based on the Electric Vehicle Field Tests. , 0, , .		19
51	Thermal Management of Lithium-Ion Pouch Cell with Indirect Liquid Cooling using Dual Cold Plates Approach. SAE International Journal of Alternative Powertrains, 0, 4, 293-307.	0.8	54
52	Experimental Measurements of Thermal Characteristics of LiFePO₄ Battery. , 0, , .		18
53	Measurement of Temperature Gradient (dT/dy) and Temperature Response (dT/dt) of a Prismatic Lithium-Ion Pouch Cell with LiFePO₄ Cathode Material. , 0, , .		26
54	Degradation Testing and Modeling of 200ÂAh LiFePO₄ Battery. , 0, , .		25