Erik Schaltz

List of Publications by Year
in descending order

89 papers	2,310 citations	304602 22 h-index	243529 44 g-index
90 all docs	90 docs citations	90 times ranked	2251 citing authors

#	Article	IF	Citations
1	Influence of Battery/Ultracapacitor Energy-Storage Sizing on Battery Lifetime in a Fuel Cell Hybrid Electric Vehicle. IEEE Transactions on Vehicular Technology, 2009, 58, 3882-3891.	3.9	331
2	Switching Frequency Reduction Using Model Predictive Direct Current Control for High-Power Voltage Source Inverters. IEEE Transactions on Industrial Electronics, 2011, 58, 2826-2835.	5.2	182
3	Sensorless Model Predictive Direct Current Control Using Novel Second-Order PLL Observer for PMSM Drive Systems. IEEE Transactions on Industrial Electronics, 2011, 58, 4087-4095.	5.2	120
4	Lithium-Ion Battery State-of-Health Estimation Using the Incremental Capacity Analysis Technique. IEEE Transactions on Industry Applications, 2020, 56, 678-685.	3.3	114
5	Electrochemical characterization of a polybenzimidazole-based high temperature proton exchange membrane unit cell. Journal of Power Sources, 2009, 191, 289-296.	4.0	92
6	An Enhanced Equivalent Circuit Model With Real-Time Parameter Identification for Battery State-of-Charge Estimation. IEEE Transactions on Industrial Electronics, 2022, 69, 3743-3751.	5.2	91
7	An Electrical Equivalent Circuit Model of a Lithium Titanate Oxide Battery. Batteries, 2019, 5, 31.	2.1	81
8	Investigation of the Self-Discharge Behavior of Lithium-Sulfur Batteries. Journal of the Electrochemical Society, 2016, 163, A911-A916.	1.3	80
9	An Advanced HIL Simulation Battery Model for Battery Management System Testing. IEEE Transactions on Industry Applications, 2016, 52, 5086-5099.	3.3	76
10	Characterisation and Modelling of a High Temperature PEM Fuel Cell Stack using Electrochemical Impedance Spectroscopy. Fuel Cells, 2009, 9, 463-473.	1.5	72
11	Online Parameter Estimation for Supercapacitor State-of-Energy and State-of-Health Determination in Vehicular Applications. IEEE Transactions on Industrial Electronics, 2020, 67, 7963-7972.	5.2	65
12	Evaluation of Fuel-Cell Range Extender Impact on Hybrid Electrical Vehicle Performance. IEEE Transactions on Vehicular Technology, 2013, 62, 50-60.	3.9	58
13	Recursive State of Charge and State of Health Estimation Method for Lithium-Ion Batteries Based on Coulomb Counting and Open Circuit Voltage. Energies, 2020, 13, 1811.	1.6	54
14	Incremental Capacity Analysis Applied on Electric Vehicles for Battery State-of-Health Estimation. IEEE Transactions on Industry Applications, 2021, 57, 1810-1817.	3.3	50
15	Design and Control of a Multiple Input DC/DC Converter for Battery/Ultra-capacitor Based Electric Vehicle Power System. , 2009, , .		46
16	Evaluation of Advanced Control for Li-ion Battery Balancing Systems Using Convex Optimization. IEEE Transactions on Sustainable Energy, 2016, 7, 1703-1717.	5.9	41
17	Non-inverting buck-boost converter for fuel cell applications. , 2008, , .		40
18	A Review of Different Electric Equivalent Circuit Models and Parameter Identification Methods of Lithium-Ion Batteries. ECS Transactions, 2018, 87, 23-37.	0.3	31

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19	Review of Parameter Determination for Thermal Modeling of Lithium Ion Batteries. Batteries, 2018, 4, 20.	2.1	30
20	Dynamic Stabilization of DC Traction Systems Using a Supercapacitor-Based Active Stabilizer With Model Predictive Control. IEEE Transactions on Transportation Electrification, 2020, 6, 228-240.	5.3	30
21	A self-discharge model of Lithium-Sulfur batteries based on direct shuttle current measurement. Journal of Power Sources, 2016, 336, 325-331.	4.0	29
22	Predictive Control of Low-Cost Three-Phase Four-Switch Inverter-Fed Drives for Brushless DC Motor Applications. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 1308-1318.	3.5	29
23	Datasheet-based modeling of Li-Ion batteries. , 2012, , .		26
24	Flat tie-line power scheduling control of grid-connected hybrid microgrids. Applied Energy, 2018, 210, 786-799.	5.1	25
25	Multi-Objective Control of Balancing Systems for Li-Ion Battery Packs: A Paradigm Shift?. , 2014, , .		24
26	Effect of ferrite addition above the base ferrite on the coupling factor of wireless power transfer for vehicle applications. Journal of Applied Physics, 2015, 117, 17D517.	1.1	24
27	Electrochemical Impedance Spectroscopy-Based Electric Circuit Modeling of Lithiumâ€“Sulfur Batteries During a Discharging State. IEEE Transactions on Industry Applications, 2019, 55, 631-637.	3.3	23
28	Efficiency Study of Vertical Distance Variations in Wireless Power Transfer for E-Mobility. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	21
29	Incremental Capacity Analysis of a Lithium-Ion Battery Pack for Different Charging Rates. ECS Transactions, 2017, 77, 403-412.	0.3	19
30	Study on the combined influence of battery models and sizing strategy for hybrid and battery-based electric vehicles. Energy, 2017, 137, 272-284.	4.5	19
31	Heat Loss Measurement of Lithium Titanate Oxide Batteries under Fast Charging Conditions by Employing Isothermal Calorimeter. Batteries, 2018, 4, 59.	2.1	17
32	Design and Comparison of Power Systems for a Fuel Cell Hybrid Electric Vehicle. , 2008, , .		15
33	A survey on the reliability of power electronics in electro-mobility applications. , 2015, , .		15
34	Realâ€time openâ€switch fault diagnosis in automotive permanent magnet synchronous motor drives based on Kalman filter. IET Power Electronics, 2020, 13, 2450-2460.	1.5	15
35	Individual Module Maximum Power Point Tracking for Thermoelectric Generator Systems. Journal of Electronic Materials, 2013, 42, 2203-2208.	1.0	14
36	Evaluation of a Novel BEV Concept Based on Fixed and Swappable Li-Ion Battery Packs. IEEE Transactions on Industry Applications, 2016, 52, 5073-5085.	3.3	14

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37	Development of software and strategies for Battery Management System testing on HIL simulator. , 2016, , .		14
38	A High Temperature Experimental Characterization Procedure for Oxide-Based Thermoelectric Generator Modules under Transient Conditions. Energies, 2015, 8, 12839-12847.	1.6	13
39	Dynamic Performance of Maximum Power Point Trackers in TEG Systems Under Rapidly Changing Temperature Conditions. Journal of Electronic Materials, 2016, 45, 1309-1315.	1.0	12
40	Study of Temperature Impacts on a Lithium-Ion Battery Thermal Behaviour by Employing Isothermal Calorimeter. ECS Transactions, 2018, 87, 295-305.	0.3	12
41	Effect of Current Rate and Prior Cycling on the Coulombic Efficiency of a Lithium-Ion Battery. Batteries, 2019, 5, 57.	2.1	11
42	Thermal Analysis of Cold Plate with Different Configurations for Thermal Management of a Lithium-Ion Battery. Batteries, 2020, 6, 17.	2.1	11
43	Design, Control, and Power Management of a Battery/Ultra-Capacitor Hybrid System for Small Electric Vehicles. , 0, , .		10
44	Passive shielding effect on space profile of magnetic field emissions for wireless power transfer to vehicles. Journal of Applied Physics, 2015, 117, 17A739.	1.1	10
45	Distributed coordination of electric vehicle charging in a community microgrid considering real-time price. , 2016, , .		10
46	Self-balancing feature of Lithium-Sulfur batteries. Journal of Power Sources, 2017, 372, 245-251.	4.0	10
47	State-of-Health Estimation of Lithium-Ion Batteries Based on Partial Charging Voltage Profiles. ECS Transactions, 2018, 85, 379-386.	0.3	10
48	An Experimental Analysis of Entropic Coefficient of a Lithium Titanate Oxide Battery. Energies, 2019, 12, 2685.	1.6	10
49	Simulation of Thermal Behaviour of a Lithium Titanate Oxide Battery. Energies, 2019, 12, 679.	1.6	10
50	Load torque compensator for Model Predictive Direct Current Control in high power PMSM drive systems. , 2010, , .		9
51	Thermal performance and efficiency investigation of conventional boost, Z-source and Y-source converters. , 2016, , .		9
52	Design of propulsion system for a fuel cell vehicle. , 2007, , .		8
53	Magnetic field emissions for ferrite and non-ferrite geometries for wireless power transfer to vehicles. Journal of Applied Physics, 2014, 115, .	1.1	7
54	Functional analysis of Battery Management Systems using multi-cell HIL simulator. , 2015, , .		7

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55	Thermal Modelling of a Lithium Titanate Oxide Battery. ECS Transactions, 2018, 87, 315-326.	0.3	7
56	Investigation of the Effect of State-of-Charge and C-Rates on the Heat Loss and Efficiency of a Lithium-Ion Battery. ECS Transactions, 2018, 87, 51-58.	0.3	7
57	Influence of Li-Ion Battery Models in the Sizing of Hybrid Storage Systems with Supercapacitors. , 2014, , .		6
58	State of Charge balancing control of a multi-functional battery energy storage system based on a 11-level cascaded multilevel PWM converter. , 2015, , .		6
59	Battery pack state of charge balancing algorithm for cascaded H-Bridge multilevel converters. , 2016, , .		6
60	Partial Charging Method for Lithium-Ion Battery State-of-Health Estimation. , 2019, , .		6
61	Thermal Behavior and Heat Generation Modeling of Lithium Sulfur Batteries. ECS Transactions, 2017, 77, 467-476.	0.3	5
62	Thermal Characterizations of a Lithium Titanate Oxide-Based Lithium-Ion Battery Focused on Random and Periodic Charge-Discharge Pulses. Applied System Innovation, 2021, 4, 24.	2.7	5
63	Multi-Functional Converter with Integrated Motor Control, Battery Charging and Active Module Balancing for Electric Vehicular Application. , 2014, , .		4
64	Lifetime Prediction of Boost, Z-source and Y-source Converters in a Fuel Cell Hybrid Electric Vehicle Application. Electric Power Components and Systems, 2018, 46, 1979-1991.	1.0	4
65	Effect of Bad Connection on Surface Temperature of Lithium-Ion Batteries by Using Infrared Thermography. ECS Transactions, 2018, 87, 39-50.	0.3	4
66	Incremental Capacity Analysis for Electric Vehicle Battery State-of-Health Estimation. , 2019, , .		4
67	Co-Estimation of Supercapacitor States and Parameters Considering Three-Branch Equivalent Circuit Model. , 2020, , .		4
68	Design and Simulation of Internal Flowing Twisted Conduits for Cooling of Lithium-Ion Batteries through Thermal Characterization. Batteries, 2020, 6, 31.	2.1	4
69	Capacity State-of-Health Estimation of Electric Vehicle Batteries Using Machine Learning and Impedance Measurements. Electronics (Switzerland), 2022, 11, 1414.	1.8	4
70	Tvindkraft: Implementing a 500 kW 21-IGBT-based frequency converter for a 1.7 MW wind power conversion system. , 2013, , .		3
71	Study on Self-Discharge Behavior of Lithium-Sulfur Batteries. ECS Transactions, 2015, 70, 95-103.	0.3	3
72	Electric circuit modeling of lithium-sulfur batteries during discharging state. , 2017, , .		3

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73	Thermal Simulation of Phase Change Material for Cooling of a Lithium-Ion Battery Pack. Electrochem, 2020, 1, 439-449.	1.7	3
74	Characterization of the Compressive Load on a Lithium-Ion Battery for Electric Vehicle Application. Machines, 2021, 9, 71.	1.2	3
75	Investigation of Efficiency and Thermal Performance of The Y-source Converters for a Wide Voltage Range. Renewable Energy and Sustainable Development, 2015, 1, 300.	0.2	3
76	Flexible local load controller for fast electric vehicle charging station supplemented with flywheel energy storage system. , 2014, , .		2
77	Magnetic field emission comparison at different quality factors with series-series compensation network for inductive power transfer to vehicles. , 2014, , .		2
78	Transferring the Incremental Capacity Analysis to Lithium-Sulfur Batteries. ECS Transactions, 2017, 77, 1919-1927.	0.3	2
79	State of charge balancing after hot swap for cascaded H-bridge multilevel converters. , 2017, , .		2
80	Results of Screening over 200 Pristine Lithium-Ion Cells. , 2017, , .		2
81	Thermal Analysis of an Indirect Liquid Cooling with Different Geometries for a Lithium-Ion Battery. ECS Transactions, 2019, 95, 105-112.	0.3	2
82	State-of-Charge Estimation of NMC-based Li-ion Battery Based on Continuous Transfer Function Model and Extended Kalman Filter. , 2021, , .		2
83	Reduction of magnetic emission by increasing secondary side capacitor for ferrite geometry based series-series topology for wireless power transfer to vehicles. , 2014, , .		1
84	Results of Screening over 200 Pristine Lithium-Ion Cells. , 2017, , .		1
85	Analyzing Discharging and Charging Performance of a Lithium-Ion Battery. ECS Transactions, 2019, 95, 37-45.	0.3	1
86	Comparative Study of State of Charge Estimation Under Different Open Circuit Voltage Test Conditions for Lithium-Ion Batteries. , 2020, , .		1
87	Applying Different Configurations for the Thermal Management of a Lithium Titanate Oxide Battery Pack. Electrochem, 2021, 2, 50-63.	1.7	1
88	Magnetic field emission comparison at different quality factors with series-parallel compensation network for wireless power transfer to vehicles. , 2014, , .		0
89	An Analytical Solution for Lithium-Ion Batteries Cooling. ECS Transactions, 2019, 95, 75-79.	0.3	0