

Jason B Siegel

List of Publications by Year in Descending Order

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Version: 2024-04-28

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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.

104
papers

2,222
citations

25
h-index

45
g-index

130
ext. papers

2,792
ext. citations

5.2
avg, IF

5.31
L-index

#	Paper	IF	Citations
104	Iterative Learning-Based Trajectory Optimization Using Fourier Series Basis Functions 2022 , 6, 2180-2185		0
103	Comparison of expansion and voltage differential indicators for battery capacity fade. <i>Journal of Power Sources</i> , 2022 , 518, 230714	8.9	1
102	Comparing power processing system approaches in second-use battery energy buffering for electric vehicle charging. <i>Journal of Energy Storage</i> , 2022 , 49, 104017	7.8	1
101	An Algorithmic Safety VEST For Li-ion Batteries During Fast Charging. <i>IFAC-PapersOnLine</i> , 2021 , 54, 522-527	5.7	1
100	Airflow and Power-Split Control Strategy for a Fuel Cell Hybrid Powered Robot. <i>IFAC-PapersOnLine</i> , 2021 , 54, 387-392	0.7	
99	Modeling Li-ion Battery First Venting Events Before Thermal Runaway. <i>IFAC-PapersOnLine</i> , 2021 , 54, 528-533	0.7	0
98	Reversible and Irreversible Expansion of Lithium-Ion Batteries Under a Wide Range of Stress Factors. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 100520	3.9	2
97	Electrochemical Battery State Estimation Under Parameter Uncertainty Caused by Aging Using Expansion Measurements 2021 ,		2
96	Promise and Challenges of a Data-Driven Approach for Battery Lifetime Prognostics 2021 ,		2
95	Control of hybrid boosting in highly diluted internal combustion engines. <i>International Journal of Engine Research</i> , 2021 , 22, 1794-1807	2.7	1
94	Detection of Li-ion battery failure and venting with Carbon Dioxide sensors. <i>ETransportation</i> , 2021 , 7, 100100	12.7	24
93	The challenge and opportunity of battery lifetime prediction from field data. <i>Joule</i> , 2021 , 5, 1934-1955	27.8	16
92	Optimal control for fast acquisition of equilibrium voltage for Li-ion batteries. <i>Journal of Energy Storage</i> , 2021 , 40, 102814	7.8	
91	Power Split Supercharging: A Mild Hybrid Approach to Boost Fuel Economy. <i>Energies</i> , 2020 , 13, 6580	3.1	3
90	Electrode State of Health Estimation for Lithium Ion Batteries Considering Half-cell Potential Change Due to Aging. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 090531	3.9	9
89	Hybrid nonlinear observer for battery state-of-charge estimation using nonmonotonic force measurements. <i>Advanced Control for Applications</i> , 2020 , 2, e38	0.9	1
88	Leveraging Cell Expansion Sensing in State of Charge Estimation: Practical Considerations. <i>Energies</i> , 2020 , 13, 2653	3.1	8

87	Parameterization of prismatic lithium iron phosphate cells through a streamlined thermal/electrochemical model. <i>Journal of Power Sources</i> , 2020 , 453, 227787	8.9	3
86	Li-ion Battery Fault Detection in Large Packs Using Force and Gas Sensors. <i>IFAC-PapersOnLine</i> , 2020 , 53, 12491-12496	0.7	1
85	Co-optimization of speed trajectory and power management for a fuel-cell/battery electric vehicle. <i>Applied Energy</i> , 2020 , 260, 114254	10.7	27
84	Estimation Error Bound of Battery Electrode Parameters With Limited Data Window. <i>IEEE Transactions on Industrial Informatics</i> , 2020 , 16, 3376-3386	11.9	15
83	Differential Expansion and Voltage Model for Li-ion Batteries at Practical Charging Rates. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 110561	3.9	11
82	Battery Internal Short Detection Methodology Using Cell Swelling Measurements 2020 ,		4
81	. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 753-765	4.8	22
80	Early Detection for Li-Ion Batteries Thermal Runaway Based on Gas Sensing. <i>ECS Transactions</i> , 2019 , 89, 85-97	1	11
79	Towards better estimability of electrode-specific state of health: Decoding the cell expansion. <i>Journal of Power Sources</i> , 2019 , 427, 101-111	8.9	25
78	Modeling and Estimation for Advanced Battery Management. <i>Annual Review of Control, Robotics, and Autonomous Systems</i> , 2019 , 2, 393-426	11.8	28
77	Unveiling the pseudocapacitive charge storage mechanisms of nanostructured vanadium nitrides using in-situ analyses. <i>Nano Energy</i> , 2019 , 60, 72-81	17.1	36
76	Synthesis of Pontryagin's Maximum Principle Analysis for Speed Profile Optimization of All-Electric Vehicles. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2019 , 141,	1.6	13
75	. <i>IEEE Transactions on Control Systems Technology</i> , 2019 , 27, 1165-1180	4.8	9
74	Modeling Li-Ion Battery Temperature and Expansion Force during the Early Stages of Thermal Runaway Triggered by Internal Shorts. <i>Journal of the Electrochemical Society</i> , 2019 , 166, A2431-A2443	3.9	17
73	Evolution of Dead Lithium Growth in Lithium Metal Batteries: Experimentally Validated Model of the Apparent Capacity Loss. <i>Journal of the Electrochemical Society</i> , 2019 , 166, A3456-A3463	3.9	21
72	Optimal Energy Management for a Mild Hybrid Vehicle With Electric and Hybrid Engine Boosting Systems. <i>IEEE Transactions on Vehicular Technology</i> , 2019 , 68, 3386-3399	6.8	21
71	On the Effectiveness of Hybridization Paired with Eco-Driving 2019 ,		1
70	Minimum-Time Measurement of Open Circuit Voltage of Battery Systems 2019 ,		1

69	On power denials and lost energy opportunities in downsizing battery packs in hybrid electric vehicles. <i>Journal of Energy Storage</i> , 2018 , 16, 187-196	7.8	4
68	Assessing a Hybrid Supercharged Engine for Diluted Combustion Using a Dynamic Drive Cycle Simulation. <i>SAE International Journal of Alternative Powertrains</i> , 2018 , 7,	2	5
67	Cooling Parasitic Considerations for Optimal Sizing and Power Split Strategy for Military Robot Powered by Hydrogen Fuel Cells 2018 ,		1
66	Fabrication of Multimeasurand Sensor for Monitoring of a Li-Ion Battery. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2018 , 140,	2	12
65	Beyond Estimating Battery State of Health: Identifiability of Individual Electrode Capacity and Utilization 2018 ,		4
64	Integration of Non-monotonic Cell Swelling Characteristic for State-of-Charge Estimation 2018 ,		8
63	2018 ,		1
62	Comparison of Individual-Electrode State of Health Estimation Methods for Lithium Ion Battery 2018 ,		3
61	Optimal Energy Management for a Hybrid Electric Vehicle with a Power Split Supercharger 2018 ,		2
60	Modeling Li-Ion Battery Thermal Runaway Using a Three Section Thermal Model 2018 ,		5
59	Internal short circuit detection method for battery pack based on circuit topology. <i>Science China Technological Sciences</i> , 2018 , 61, 1502-1511	3.5	16
58	Pseudocapacitive storage via micropores in high-surface area molybdenum nitrides. <i>Nano Energy</i> , 2018 , 51, 122-127	17.1	25
57	Parameterization of Battery Electrothermal Models Coupled With Finite Element Flow Models for Cooling. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2017 , 139,	1.6	11
56	Topology Comparison for 48V Battery-Supercapacitor Hybrid Energy Storage System * *This work was supported by the National Science Foundation through an SBIR Grant. <i>IFAC-PapersOnLine</i> , 2017 , 50, 4733-4738	0.7	7
55	Internal Short Circuit Trigger Method for Lithium-Ion Battery Based on Shape Memory Alloy. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A3038-A3044	3.9	48
54	Fusing Phenomenon of Lithium-Ion Battery Internal Short Circuit. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A2738-A2745	3.9	34
53	Intercalation Driven Porosity Effects in Coupled Continuum Models for the Electrical, Chemical, Thermal and Mechanical Response of Battery Electrode Materials. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A2199-A2212	3.9	5
52	On identifying the aging mechanisms in li-ion batteries using two points measurements 2017 ,		4

51	Model Predictive Control for Real-time Position Tracking of a Catenary-free Tram. <i>IFAC-PapersOnLine</i> , 2017 , 50, 1000-1005	0.7	3
50	Novel thin temperature and expansion sensors for li-ion battery monitoring 2017 ,		3
49	Battery Capacity Fading Estimation Using a Force-Based Incremental Capacity Analysis. <i>Journal of the Electrochemical Society</i> , 2016 , 163, A1584-A1594	3.9	52
48	A novel phenomenological multi-physics model of Li-ion battery cells. <i>Journal of Power Sources</i> , 2016 , 326, 447-458	8.9	29
47	Phenomenological force and swelling models for rechargeable lithium-ion battery cells. <i>Journal of Power Sources</i> , 2016 , 310, 118-129	8.9	38
46	Supercapacitor Electrical and Thermal Modeling, Identification, and Validation for a Wide Range of Temperature and Power Applications. <i>IEEE Transactions on Industrial Electronics</i> , 2016 , 63, 1574-1585	8.9	71
45	Control Strategies for Power Quantized Solid Oxide Fuel Cell Hybrid Powertrains: In Mobile Robot Applications. <i>SAE International Journal of Alternative Powertrains</i> , 2016 , 5, 58-67	2	5
44	2016 ,		4
43	Estimating state-of-charge imbalance of batteries using force measurements 2016 ,		10
42	Observability analysis for surface sensor location in encased battery cells 2015 ,		5
41	2015 ,		4
40	Comparison of SOFC and PEM Fuel Cell Hybrid Power Management Strategies for Mobile Robots 2015 ,		2
39	The Estimation of Temperature Distribution in Cylindrical Battery Cells Under Unknown Cooling Conditions. <i>IEEE Transactions on Control Systems Technology</i> , 2014 , 22, 2277-2286	4.8	75
38	Optimal power management for a series hybrid electric vehicle cognizant of battery mechanical effects 2014 ,		7
37	Rate dependence of swelling in lithium-ion cells. <i>Journal of Power Sources</i> , 2014 , 267, 197-202	8.9	107
36	Hardware-in-the-loop validation of a power management strategy for hybrid powertrains. <i>Control Engineering Practice</i> , 2014 , 29, 277-286	3.9	21
35	Temperature Estimation in a Battery String Under Frugal Sensor Allocation 2014 ,		3
34	A Phenomenological Model of Bulk Force in a Li-Ion Battery Pack and Its Application to State of Charge Estimation. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A2222-A2231	3.9	55

33	Parameterization and Validation of a Distributed Coupled Electro-Thermal Model for Prismatic Cells 2014 ,		16
32	An Iterative Learning Control Approach to Improving Fidelity in Internet-Distributed Hardware-in-the-Loop Simulation. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2014 , 136,	1.6	16
31	Preliminary results on identification of an electro-thermal model for low temperature and high power operation of cylindrical double layer ultracapacitors 2014 ,		4
30	A lumped-parameter electro-thermal model for cylindrical batteries. <i>Journal of Power Sources</i> , 2014 , 257, 1-11	8.9	259
29	Keeping Ground Robots on the Move Through Battery & Mission Management. <i>Mechanical Engineering</i> , 2014 , 136, S1-S6	0.9	2
28	Degradation phenomena in PEM fuel cell with dead-ended anode. <i>International Journal of Hydrogen Energy</i> , 2013 , 38, 11346-11356	6.7	80
27	Optimization of purge cycle for dead-ended anode fuel cell operation. <i>International Journal of Hydrogen Energy</i> , 2013 , 38, 5092-5105	6.7	107
26	Online Parameterization of Lumped Thermal Dynamics in Cylindrical Lithium Ion Batteries for Core Temperature Estimation and Health Monitoring. <i>IEEE Transactions on Control Systems Technology</i> , 2013 , 21, 1745-1755	4.8	144
25	Maximum Power Estimation of Lithium-Ion Batteries Accounting for Thermal and Electrical Constraints 2013 ,		11
24	Expansion of Lithium Ion Pouch Cell Batteries: Observations from Neutron Imaging. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A1031-A1038	3.9	65
23	A computationally efficient thermal model of cylindrical battery cells for the estimation of radially distributed temperatures 2013 ,		4
22	Quadruple adaptive observer of the core temperature in cylindrical Li-ion batteries and their health monitoring 2012 ,		3
21	On the accuracy and simplifications of battery models using in situ measurements of Lithium concentration in operational cells 2012 ,		2
20	Modeling and Experiments of Voltage Transients of Polymer Electrolyte Membrane Fuel Cells With the Dead-Ended Anode. <i>Journal of Fuel Cell Science and Technology</i> , 2012 , 9,		31
19	Parameterization and Validation of an Integrated Electro-Thermal Cylindrical LFP Battery Model 2012 ,		30
18	Neutron Imaging of Lithium Concentration in LFP Pouch Cell Battery. <i>Journal of the Electrochemical Society</i> , 2011 , 158, A523	3.9	86
17	Carbon Corrosion in PEM Fuel Cell Dead-Ended Anode Operations. <i>Journal of the Electrochemical Society</i> , 2011 , 158, B1164	3.9	72
16	Neutron imaging of lithium concentration in battery pouch cells 2011 ,		4

15	Modeling and Experiments of Voltage Transients of PEM Fuel Cells With the Dead-Ended Anode 2011,		1
14	Multiple Degradation Phenomena in Polymer Electrolyte Fuel Cell Operation With Dead-Ended Anode 2011,		4
13	Nitrogen blanketing front equilibria in dead end anode fuel cell operation 2011,		1
12	Nitrogen Front Evolution in Purged Polymer Electrolyte Membrane Fuel Cell with Dead-Ended Anode. <i>Journal of the Electrochemical Society</i> , 2010 , 157, B1081	3.9	58
11	Parameterization of gdl liquid water front propagation and channel accumulation for anode purge scheduling in fuel cells 2010,		1
10	Controllability and Observability Analysis of the Liquid Water Distribution Inside the Gas Diffusion Layer of a Unit Fuel Cell Model. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2010 , 132,	1.6	6
9	Modeling and Simulations of PEMFCs Operating With Periodically Purged Dead-Ended Anode Channels 2010,		3
8	Education on vehicle electrification: Battery Systems, Fuel Cells, and Hydrogen 2010,		6
7	Purge Scheduling for Dead-Ended Anode Operation of PEM Fuel Cells. <i>The Electrical Engineering Handbook</i> , 2010 , 5-1-5-43		1
6	Derivation and Simulation Results of a Hybrid Model Predictive Control for Water Purge Scheduling in a Fuel Cell 2009,		1
5	Stack-level validation of a semi-analytic channel-to-channel fuel cell model for two-phase water distribution boundary value control 2008,		1
4	2008,		4
3	Measurement of Liquid Water Accumulation in a PEMFC with Dead-Ended Anode. <i>Journal of the Electrochemical Society</i> , 2008 , 155, B1168	3.9	98
2	Parameterization and prediction of temporal fuel cell voltage behavior during flooding and drying conditions. <i>Journal of Power Sources</i> , 2008 , 178, 207-222	8.9	70
1	Accelerated Battery Lifetime Simulations Using Adaptive Inter-Cycle Extrapolation Algorithm. <i>Journal of the Electrochemical Society</i> ,	3.9	0