Daniel Ioan Stroe

List of Publications by Year
in descending order

143 papers	5,335 citations	101543 36 h-index	102487 66 g-index
143 all docs	143 docs citations	143 times ranked	3430 citing authors

#	Article	IF	Citations
1	Sizing of an Energy Storage System for Grid Inertial Response and Primary Frequency Reserve. IEEE Transactions on Power Systems, 2016, 31, 3447-3456.	6.5	286
2	Operation of a Grid-Connected Lithium-Ion Battery Energy Storage System for Primary Frequency Regulation: A Battery Lifetime Perspective. IEEE Transactions on Industry Applications, 2017, 53, 430-438.	4.9	257
3	Battery second life: Hype, hope or reality? A critical review of the state of the art. Renewable and Sustainable Energy Reviews, 2018, 93, 701-718.	16.4	242
4	An Overview and Comparison of Online Implementable SOC Estimation Methods for Lithium-Ion Battery. IEEE Transactions on Industry Applications, 2018, 54, 1583-1591.	4.9	237
5	Overview of Lithium-Ion Battery Modeling Methods for State-of-Charge Estimation in Electrical Vehicles. Applied Sciences (Switzerland), 2018, 8, 659.	2.5	194
6	A review of non-probabilistic machine learning-based state of health estimation techniques for Lithium-ion battery. Applied Energy, 2021, 300, 117346.	10.1	158
7	Technical Viability of Battery Second Life: A Study From the Ageing Perspective. IEEE Transactions on Industry Applications, 2018, 54, 2703-2713.	4.9	145
8	A Simplified Model-Based State-of-Charge Estimation Approach for Lithium-Ion Battery With Dynamic Linear Model. IEEE Transactions on Industrial Electronics, 2019, 66, 7717-7727.	7.9	140
9	Accelerated Lifetime Testing Methodology for Lifetime Estimation of Lithium-Ion Batteries Used in Augmented Wind Power Plants. IEEE Transactions on Industry Applications, 2014, 50, 4006-4017.	4.9	127
10	Selection and Performance-Degradation Modeling of $LiMO_{2}/Li_{4}Ti_{5}O_{12}$ and $LiFePO_{4}/C$ Battery Cells as Suitable Energy Storage Systems for Grid Integration With Wind Power Plants: An Example for the Primary Frequency Regulation Service. IEEE Transactions on Sustainable Energy, 2014, 5, 90-101.	8.8	115
11	Lithium-Ion Battery State-of-Health Estimation Using the Incremental Capacity Analysis Technique. IEEE Transactions on Industry Applications, 2020, 56, 678-685.	4.9	114
12	Lithium-ion battery state of health estimation with short-term current pulse test and support vector machine. Microelectronics Reliability, 2018, 88-90, 1216-1220.	1.7	104
13	Multiobjective Optimization of Data-Driven Model for Lithium-Ion Battery SOH Estimation With Short-Term Feature. IEEE Transactions on Power Electronics, 2020, 35, 11855-11864.	7.9	100
14	Sizing Study of Second Life Li-ion Batteries for Enhancing Renewable Energy Grid Integration. IEEE Transactions on Industry Applications, 2016, 52, 4999-5008.	4.9	91
15	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.	7.9	91
16	Degradation Behavior of Lithium-Ion Batteries During Calendar Ageingâ€"The Case of the Internal Resistance Increase. IEEE Transactions on Industry Applications, 2018, 54, 517-525.	4.9	88
17	Lithium ion battery chemistries from renewable energy storage to automotive and back-up power applications â€" An overview. , 2014, , .		85
18	State-of-health estimation of lithium-ion batteries based on semi-supervised transfer component analysis. Applied Energy, 2020, 277, 115504.	10.1	85

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19	Lifetime Estimation of the Nanophosphate $\hbox{LiFePO}_{4}\hbox{/C}$ Battery Chemistry Used in Fully Electric Vehicles. IEEE Transactions on Industry Applications, 2015, 51, 3453-3461.	4.9	81
20	Fast Approach for Battery Impedance Identification Using Pseudo-Random Sequence Signals. IEEE Transactions on Power Electronics, 2020, 35, 2548-2557.	7.9	81
21	Investigation of the Self-Discharge Behavior of Lithium-Sulfur Batteries. Journal of the Electrochemical Society, 2016, 163, A911-A916.	2.9	80
22	An evolutionary framework for lithium-ion battery state of health estimation. Journal of Power Sources, 2019, 412, 615-622.	7.8	80
23	Comparative Study of Ramp-Rate Control Algorithms for PV with Energy Storage Systems. Energies, 2019, 12, 1342.	3.1	78
24	Degradation Behavior of Lithium-Ion Batteries Based on Lifetime Models and Field Measured Frequency Regulation Mission Profile. IEEE Transactions on Industry Applications, 2016, 52, 5009-5018.	4.9	77
25	On the feature selection for battery state of health estimation based on charging–discharging profiles. Journal of Energy Storage, 2021, 33, 102122.	8.1	77
26	An optimized ensemble learning framework for lithium-ion Battery State of Health estimation in energy storage system. Energy, 2020, 206, 118140.	8.8	75
27	Generalized Characterization Methodology for Performance Modelling of Lithium-Ion Batteries. Batteries, 2016, 2, 37.	4.5	71
28	Lithium-ion battery state-of-health estimation in electric vehicle using optimized partial charging voltage profiles. Energy, 2019, 185, 1054-1062.	8.8	63
29	Low-complexity online estimation for LiFePO4 battery state of charge in electric vehicles. Journal of Power Sources, 2018, 395, 280-288.	7.8	55
30	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.	3.1	54
31	Control of Permanent Magnet Synchronous Generator for large wind turbines. , 2010, , .		51
32	Power and Energy Management with Battery Storage for a Hybrid Residential PV-Wind System – A Case Study for Denmark. Energy Procedia, 2018, 155, 464-477.	1.8	50
33	Battery state-of-health modelling by multiple linear regression. Journal of Cleaner Production, 2021, 290, 125700.	9.3	50
34	Incremental Capacity Analysis Applied on Electric Vehicles for Battery State-of-Health Estimation. IEEE Transactions on Industry Applications, 2021, 57, 1810-1817.	4.9	50
35	A Review of Pulsed Current Technique for Lithium-ion Batteries. Energies, 2020, 13, 2458.	3.1	45
36	Understanding the mechanism of capacity increase during early cycling of commercial NMC/graphite lithium-ion batteries. Journal of Energy Chemistry, 2022, 74, 34-44.	12.9	45

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37	Data efficient health prognostic for batteries based on sequential information-driven probabilistic neural network. Applied Energy, 2022, 323, 119663.	10.1	43
38	An Automatic Weak Learner Formulation for Lithium-Ion Battery State of Health Estimation. IEEE Transactions on Industrial Electronics, 2022, 69, 2659-2668.	7.9	40
39	Grid inertial response with Lithium-ion battery energy storage systems. , 2014, , .		39
40	A Novel Multiple Correction Approach for Fast Open Circuit Voltage Prediction of Lithium-Ion Battery. IEEE Transactions on Energy Conversion, 2019, 34, 1115-1123.	5.2	37
41	Novel Fitting Algorithm for Parametrization of Equivalent Circuit Model of Li-Ion Battery From Broadband Impedance Measurements. IEEE Transactions on Industrial Electronics, 2021, 68, 4916-4926.	7.9	37
42	Comparison of lithium-ion battery performance at beginning-of-life and end-of-life. Microelectronics Reliability, 2018, 88-90, 1251-1255.	1.7	36
43	A Review of Battery Technology in CubeSats and Small Satellite Solutions. Energies, 2020, 13, 4097.	3.1	34
44	A novel feedback correction-adaptive Kalman filtering method for the whole-life-cycle state of charge and closed-circuit voltage prediction of lithium-ion batteries based on the second-order electrical equivalent circuit model. International Journal of Electrical Power and Energy Systems, 2022, 139, 108020.	5.5	34
45	Lithium–ion battery power degradation modelling by electrochemical impedance spectroscopy. IET Renewable Power Generation, 2017, 11, 1136-1141.	3.1	33
46	Lithium-Ion Battery Operation, Degradation, and Aging Mechanism in Electric Vehicles: An Overview. Energies, 2021, 14, 5220.	3.1	33
47	Primary frequency regulation with Li-ion battery energy storage system: A case study for Denmark. , 2013, , .		31
48	Evaluation of lithium-ion battery second life performance and degradation. , 2016, , .		31
49	The Degradation Behavior of LiFePO4/C Batteries during Long-Term Calendar Aging. Energies, 2021, 14, 1732.	3.1	31
50	An improved coulomb counting method based on dual open–circuit voltage and real–time evaluation of battery dischargeable capacity considering temperature and battery aging. International Journal of Energy Research, 2021, 45, 17609-17621.	4.5	31
51	Second life battery energy storage system for residential demand response service. , 2015, , .		30
52	An Improved State of Charge and State of Power Estimation Method Based on Genetic Particle Filter for Lithium-ion Batteries. Energies, 2020, 13, 478.	3.1	30
53	Batteries 2020 â€" Lithium-ion battery first and second life ageing, validated battery models, lifetime modelling and ageing assessment of thermal parameters. , 2016, , .		29
54	A self-discharge model of Lithium-Sulfur batteries based on direct shuttle current measurement. Journal of Power Sources, 2016, 336, 325-331.	7.8	29

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55	Fuzzy Entropy-Based State of Health Estimation for Li-Ion Batteries. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5125-5137.	5.4	29
56	A novel energy management strategy for the ternary lithium batteries based on the dynamic equivalent circuit modeling and differential Kalman filtering under time-varying conditions. Journal of Power Sources, 2020, 450, 227652.	7.8	28
57	A comparative study of lithium ion to lead acid batteries for use in UPS applications. , 2014, , .		27
58	Overview of Machine Learning Methods for Lithium-Ion Battery Remaining Useful Lifetime Prediction. Electronics (Switzerland), 2021, 10, 3126.	3.1	27
59	Electrothermal impedance spectroscopy as a cost efficient method for determining thermal parameters of lithium ion batteries: Prospects, measurement methods and the state of knowledge. Journal of Cleaner Production, 2017, 155, 63-71.	9.3	25
60	Effects of open-circuit voltage tests and models on state-of-charge estimation for batteries in highly variable temperature environments: Study case nano-satellites. Journal of Power Sources, 2021, 498, 229913.	7.8	25
61	Literature Review, Recycling of Lithium-Ion Batteries from Electric Vehicles, Part I: Recycling Technology. Energies, 2022, 15, 1086.	3.1	25
62	Effect of Pulsed Current on Charging Performance of Lithium-Ion Batteries. IEEE Transactions on Industrial Electronics, 2022, 69, 10144-10153.	7.9	24
63	Degradation behaviour of Lithium-ion batteries based on field measured frequency regulation mission profile. , 2015, , .		23
64	Second life battery energy storage system for enhancing renewable energy grid integration. , 2015, , .		23
65	Lithium-ion battery dynamic model for wide range of operating conditions. , 2017, , .		23
66	Electrochemical Impedance Spectroscopy-Based Electric Circuit Modeling of Lithiumâ€"Sulfur Batteries During a Discharging State. IEEE Transactions on Industry Applications, 2019, 55, 631-637.	4.9	23
67	Analysis of 3.4 Ah lithium-sulfur pouch cells by electrochemical impedance spectroscopy. Journal of Energy Chemistry, 2022, 72, 318-325.	12.9	23
68	Field tests experience from 1.6MW/400kWh Li-ion battery energy storage system providing primary frequency regulation service. , 2013, , .		22
69	Lifetime and economic analyses of lithium-ion batteries for balancing wind power forecast error. International Journal of Energy Research, 2015, 39, 760-770.	4.5	22
70	Battery Storage-Based Frequency Containment Reserves in Large Wind Penetrated Scenarios: A Practical Approach to Sizing. Energies, 2018, 11, 3065.	3.1	22
71	Wireless Smart Battery Management System for Electric Vehicles. , 2020, , .		22
72	An Accurate Time Constant Parameter Determination Method for the Varying Condition Equivalent Circuit Model of Lithium Batteries. Energies, 2020, 13, 2057.	3.1	21

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73	Incremental Capacity Analysis of a Lithium-Ion Battery Pack for Different Charging Rates. ECS Transactions, 2017, 77, 403-412.	0.5	19
74	Accelerated aging of Lithium-ion batteries based on electric vehicle mission profile. , 2017, , .		19
75	Short term energy storage for grid support in wind power applications. , 2012, , .		18
76	Broadband Impedance Measurement of Lithium-Ion Battery in the Presence of Nonlinear Distortions. Energies, 2020, 13, 2493.	3.1	17
77	An overview of online implementable SOC estimation methods for Lithium-ion batteries. , 2017, , .		14
78	Reference Performance Test Methodology for Degradation Assessment of Lithium-Sulfur Batteries. Journal of the Electrochemical Society, 2018, 165, A1601-A1609.	2.9	14
79	Influence of Battery Parametric Uncertainties on the State-of-Charge Estimation of Lithium Titanate Oxide-Based Batteries. Energies, 2018, 11, 795.	3.1	14
80	A novel power state evaluation method for the lithium battery packs based on the improved external measurable parameter coupling model. Journal of Cleaner Production, 2020, 242, 118506.	9.3	14
81	Lifetime Extension of Lithium-Ion Batteries With Low-Frequency Pulsed Current Charging. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2023, 11, 57-66.	5.4	14
82	Electrical circuit models for performance modeling of Lithium-Sulfur batteries. , 2015, , .		13
83	A comprehensive study on the degradation of lithium-ion batteries during calendar ageing: The internal resistance increase. , 2016, , .		13
84	Control strategies for VSC-based HVDC transmission system. , 2011, , .		12
85	SOH Estimation of LMO/NMC-based Electric Vehicle Lithium-Ion Batteries Using the Incremental Capacity Analysis Technique. , 2018, , .		12
86	A Novel Control Architecture for Hybrid Power Plants to Provide Coordinated Frequency Reserves. Energies, 2019, 12, 919.	3.1	12
87	Battery Lifetime Analysis for Residential PV-Battery System used to Optimize the Self Consumption - A Danish Scenario. , 2019, , .		12
88	The Second Life Ageing of the NMC/C Electric Vehicle Retired Li-Ion Batteries in the Stationary Applications. ECS Transactions, 2016, 74, 55-62.	0.5	11
89	Concurrent Real-Time Estimation of State of Health and Maximum Available Power in Lithium-Sulfur Batteries. Energies, 2018, 11, 2133.	3.1	11
90	The Effect of Voltage Dataset Selection on the Accuracy of Entropy-Based Capacity Estimation Methods for Lithium-Ion Batteries. Applied Sciences (Switzerland), 2019, 9, 4170.	2.5	11

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91	Performance model for high-power lithium titanate oxide batteries based on extended characterization tests. , 2015, , .		10
92	Evaluation of different methods for measuring the impedance of Lithium-ion batteries during ageing. , 2015, , .		10
93	Self-balancing feature of Lithium-Sulfur batteries. Journal of Power Sources, 2017, 372, 245-251.	7.8	10
94	State-of-Health Estimation of Lithium-Ion Batteries Based on Partial Charging Voltage Profiles. ECS Transactions, 2018, 85, 379-386.	0.5	10
95	Validating Performance Models for Hybrid Power Plant Control Assessment. Energies, 2019, 12, 4330.	3.1	9
96	Log-Linear Model for Predicting the Lithium-ion Battery Age Based on Resistance Extraction from Dynamic Aging Profiles. IEEE Transactions on Industry Applications, 2020, 56, 6937-6948.	4.9	9
97	The Effect of Pulsed Current on the Performance of Lithium-ion Batteries. , 2020, , .		9
98	Transfer Learning for Adapting Battery State-of-Health Estimation From Laboratory to Field Operation. IEEE Access, 2022, 10, 26514-26528.	4.2	9
99	Selection and impedance based model of a lithium ion battery technology for integration with virtual power plant. , 2013, , .		7
100	Investigation on the Self-discharge of the LiFePO<inf>4</inf>/C nanophosphate battery chemistry at different conditions. , 2014, , .		7
101	Extensive EIS characterization of commercially available lithium polymer battery cell for performance modelling. , 2015, , .		7
102	Suggested operation of grid-connected lithium-ion battery energy storage system for primary frequency regulation: Lifetime perspective. , 2015, , .		7
103	Methodology for Assessing the Lithium-Sulfur Battery Degradation for Practical Applications. ECS Transactions, 2017, 77, 479-490.	0.5	7
104	A review of sliding mode observers based on equivalent circuit model for battery SoC estimation. , 2019, , .		7
105	Novel online fitting algorithm for impedance-based state estimation of Li-ion batteries. , 2019, , .		7
106	A novel collaborative multiscale weighting factorâ€adaptive Kalman filtering method for the timeâ€varying wholeâ€lifeâ€cycle state of charge estimation of lithiumâ€ion batteries. International Journal of Energy Research, 2022, 46, 7704-7721.	4.5	7
107	Recent Health Diagnosis Methods for Lithium-Ion Batteries. Batteries, 2022, 8, 72.	4.5	7
108	Comparison of parametrization techniques for an electrical circuit model of Lithium-Sulfur batteries. , 2015, , .		6

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109	Partial Charging Method for Lithium-Ion Battery State-of-Health Estimation. , 2019, , .		6
110	Improved covariance matchingâ€"electrical equivalent modeling for accurate internal state characterization of packing lithiumâ€ion batteries. International Journal of Energy Research, 2022, 46, 3602-3620.	4.5	6
111	SOH analysis of Li-ion battery based on ECM parameters and broadband impedance measurements. , 2020, , .		6
112	Thermal Behavior and Heat Generation Modeling of Lithium Sulfur Batteries. ECS Transactions, 2017, 77, 467-476.	0.5	5
113	Calendar ageing of LiFePO<inf>4</inf>/C batteries in the second life applications. , 2017, , .		5
114	Calendar Aging Lifetime Model for NMC-based Lithium-ion Batteries Based on EIS Measurements. , 2019, , .		5
115	Lithium-ion Battery State of Health Estimation Using Empirical Mode Decomposition Sample Entropy and Support Vector Machine. , 2020, , .		5
116	Incremental Capacity Analysis for Electric Vehicle Battery State-of-Health Estimation. , 2019, , .		4
117	Fast and Robust Estimation of Lithium-ion Batteries State of Health Using Ensemble Learning. , 2021, , .		4
118	Capacity State-of-Health Estimation of Electric Vehicle Batteries Using Machine Learning and Impedance Measurements. Electronics (Switzerland), 2022, 11, 1414.	3.1	4
119	Electric circuit modeling of lithium-sulfur batteries during discharging state. , 2017, , .		3
120	Calendar Degradation and Self-Discharge Occurring During Short- and Long-Term Storage of NMC Based Lithium-Ion Batteries. ECS Transactions, 2021, 105, 3-11.	0.5	3
121	Performance degradation of thermal parameters during cycle ageing of high energy density Ni-Mn-Co based Lithium-Ion battery cells. , 2016, , .		2
122	Transferring the Incremental Capacity Analysis to Lithium-Sulfur Batteries. ECS Transactions, 2017, 77, 1919-1927.	0.5	2
123	Test Platform for Photovoltaic Systems with Integrated Battery Energy Storage Applications. , 2018, , .		2
124	Experimental Study on Calendaristic Degradation and Self-Discharge of 3.4 Ah Lithium-Sulfur Pouch Cells. ECS Transactions, 2018, 85, 267-273.	0.5	2
125	Electrical equivalent circuit modeling. , 2021, , 47-94.		2
126	Battery system active control strategies. , 2021, , 313-340.		2

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127	Suitability of the nanophosphate LiFePO$_4$/C battery chemistry for the fully electric vehicle: Lifetime perspective. , 2014, , .		1
128	Comparative Study of State of Charge Estimation Under Different Open Circuit Voltage Test Conditions for Lithium-Ion Batteries. , 2020, , .		1
129	Battery state-of-energy prediction methods. , 2021, , 199-226.		1
130	Electrochemical Nernst modeling. , 2021, , 95-124.		1
131	Fuzzy Entropy-Based State of Health Estimation of LiFePO4 Batteries Considering Temperature Variation. , 2020, , .		1
132	Data smoothing in Fuzzy Entropy-based Battery State of Health Estimation. , 2020, , .		1
133	State of Health Estimation for Lithium-ion Battery Using Fuzzy Entropy and Support Vector Machine. , 2020, , .		1
134	Overview of Methods for Battery Lifetime Extension. , 2021, , .		1
135	Electrothermal impedance spectroscopy measurement on high power LiMO$_2$/Li$_4$Ti$_5$O$_{12}$ battery cell with low bandwidth test setup. , 2015, , .		0
136	Functional assessment of battery management system tested on hardware-in-the-loop simulator. , 2017, , .		0
137	Optimization of the discharge cut-off voltage in LiFePO4 battery packs. , 2019, , .		0
138	Battery state-of-charge estimation methods. , 2021, , 157-198.		0
139	Battery state-of-health estimation methods. , 2021, , 255-311.		0
140	An auto-regressive model for battery voltage prediction. , 2021, , .		0
141	Battery state-of-power evaluation methods. , 2021, , 227-254.		0
142	Development of a Model-Based Approach to Capture Battery Parameter Degradation in Satellites. ECS Transactions, 2020, 99, 341-349.	0.5	0
143	A Time-Varying Log-linear Model for Predicting the Resistance of Lithium-ion Batteries. , 2020, , .		0