Billy Wu

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/9078645/publications.pdf

Version: 2024-02-01

80	4,500	136740	106150
papers	citations	32 h-index	65 g-index

81	81	81	4019
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Highly Aligned Ultraâ€Thick Gelâ€Based Cathodes Unlocking Ultraâ€High Energy Density Batteries. Energy and Environmental Materials, 2022, 5, 1332-1339.	7.3	13
2	Peak-tracking method to quantify degradation modes in lithium-ion batteries via differential voltage and incremental capacity. Journal of Energy Storage, 2022, 45, 103669.	3.9	11
3	Lithium-ion batteries under pulsed current operation to stabilize future grids. Cell Reports Physical Science, 2022, 3, 100708.	2.8	19
4	Meta-analysis of experimental results for heat capacity and thermal conductivity in lithium-ion batteries: A critical review. Journal of Power Sources, 2022, 522, 230829.	4.0	28
5	Immersion cooling for lithium-ion batteries â€“ A review. Journal of Power Sources, 2022, 525, 231094.	4.0	142
6	Lithium-ion battery degradation: how to model it. Physical Chemistry Chemical Physics, 2022, 24, 7909-7922.	1.3	73
7	Generalised diagnostic framework for rapid battery degradation quantification with deep learning. Energy and AI, 2022, 9, 100158.	5.8	30
8	A composite electrode model for lithium-ion batteries with silicon/graphite negative electrodes. Journal of Power Sources, 2022, 527, 231142.	4.0	28
9	Model-informed battery current derating strategies: Simple methods to extend battery lifetime in islanded mini-grids. Journal of Energy Storage, 2022, 51, 104524.	3.9	3
10	Bridging Multiscale Characterization Technologies and Digital Modeling to Evaluate Lithium Battery Full Lifecycle. Advanced Energy Materials, 2022, 12, .	10.2	34
11	The Effects of Temperature and Cell Parameters on Lithium-Ion Battery Fast Charging Protocols: A Model-Driven Investigation. Journal of the Electrochemical Society, 2022, 169, 060542.	1.3	7
12	A continuum of physics-based lithium-ion battery models reviewed. Progress in Energy, 2022, 4, 042003.	4.6	30
13	Investigating Li Plating Distribution Caused By a Thermal Gradient through Modelling, Differential Voltage, and Post-Mortem Analysis. ECS Meeting Abstracts, 2022, MA2022-01, 186-186.	0.0	1
14	Designer uniform Li plating/stripping through lithiumâ€“cobalt alloying hierarchical scaffolds for scalable high-performance lithium-metal anodes. Journal of Energy Chemistry, 2021, 52, 385-392.	7.1	29
15	Hybridizing Leadâ€“Acid Batteries with Supercapacitors: A Methodology. Energies, 2021, 14, 507.	1.6	16
16	Lithium ion battery degradation: what you need to know. Physical Chemistry Chemical Physics, 2021, 23, 8200-8221.	1.3	330
17	Towards the digitalisation of porous energy materials: evolution of digital approaches for microstructural design. Energy and Environmental Science, 2021, 14, 2549-2576.	15.6	34
18	Holey graphitic carbon nano-flakes with enhanced storage characteristics scaled to a pouch cell supercapacitor. Fuel, 2021, 285, 119246.	3.4	10

#	Article	IF	Citations
19	A parameter adaptive method for state of charge estimation of lithium-ion batteries with an improved extended Kalman filter. Scientific Reports, 2021, 11, 5805.	1.6	44
20	Designed high-performance lithium-ion battery electrodes using a novel hybrid model-data driven approach. Energy Storage Materials, 2021, 36, 435-458.	9.5	55
21	Interactions are important: Linking multi-physics mechanisms to the performance and degradation of solid-state batteries. Materials Today, 2021, 49, 145-183.	8.3	51
22	Cost-Effective MIL-53(Cr) Metalâ€“Organic Framework-Based Supercapacitors Encompassing Fast-Ion (Li⁺/H⁺/Na⁺) Conductors. ACS Applied Energy Materials, 2021, 4, 4729-4743.	2.5	14
23	Battery Degradation-Aware Current Derating: An Effective Method to Prolong Lifetime and Ease Thermal Management. Journal of the Electrochemical Society, 2021, 168, 060506.	1.3	18
24	Implementation for a cloud battery management system based on the CHAIN framework. Energy and AI, 2021, 5, 100088.	5.8	93
25	Trichome-like Carbon-Metal Fabrics Made of Carbon Microfibers, Carbon Nanotubes, and Fe-Based Nanoparticles as Electrodes for Regenerative Hydrogen/Vanadium Flow Cells. ACS Applied Nano Materials, 2021, 4, 10754-10763.	2.4	7
26	Lithium Plating Heterogeneity Caused by Realistic Thermal Gradients. ECS Meeting Abstracts, 2021, MA2021-02, 460-460.	0.0	1
27	Electrochemical Thermal-Mechanical Modelling of Stress Inhomogeneity in Lithium-Ion Pouch Cells. Journal of the Electrochemical Society, 2020, 167, 013512.	1.3	59
28	Revealing the anion intercalation behavior and surface evolution of graphite in dual-ion batteries via in situ AFM. Nano Research, 2020, 13, 412-418.	5.8	33
29	How to Design Lithium Ion Capacitors: Modelling, Mass Ratio of Electrodes and Pre-lithiation. Journal of the Electrochemical Society, 2020, 167, 013527.	1.3	15
30	Battery digital twins: Perspectives on the fusion of models, data and artificial intelligence for smart battery management systems. Energy and AI, 2020, 1, 100016.	5.8	180
31	Bimetallic organic framework-derived rich pyridinic N-doped carbon nanotubes as oxygen catalysts for rechargeable Zn-air batteries. Journal of Power Sources, 2020, 472, 228470.	4.0	31
32	Modelling of redox flow battery electrode processes at a range of length scales: a review. Sustainable Energy and Fuels, 2020, 4, 5433-5468.	2.5	29
33	NiCo Metalâ€“Organic Framework and Porous Carbon Interlayer-Based Supercapacitors Integrated with a Solar Cell for a Stand-Alone Power Supply System. ACS Applied Materials & Interfaces, 2020, 12, 42749-42762.	4.0	35
34	Degradation Diagnostics for Li₄Ti₅O₁₂-Based Lithium Ion Capacitors: Insights from a Physics-Based Model. Journal of the Electrochemical Society, 2020, 167, 043503.	1.3	7
35	In-situ fabrication of carbon-metal fabrics as freestanding electrodes for high-performance flexible energy storage devices. Energy Storage Materials, 2020, 30, 329-336.	9.5	19
36	A computational multi-node electro-thermal model for large prismatic lithium-ion batteries. Journal of Power Sources, 2020, 459, 228070.	4.0	48

#	Article	IF	Citations
37	How Can Insights from Degradation Modelling Inform Operational Strategies to Increase the Lifetime of Li-Ion Batteries in Islanded Mini-Grids?. ECS Meeting Abstracts, 2020, MA2020-02, 3780-3780.	0.0	3
38	Novel Degradation Model-Based Current Derating Strategy for Lithium-Ion-Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 3808-3808.	0.0	2
39	Lithium-ion battery fast charging: A review. ETransportation, 2019, 1, 100011.	6.8	835
40	Electrospun composite nanofibre supercapacitors enhanced with electrochemically 3D printed current collectors. Journal of Energy Storage, 2019, 26, 100993.	3.9	8
41	Design of Fibre Ni/CGO Anode and Model Interpretation. ECS Transactions, 2019, 91, 1721-1739.	0.3	2
42	Nickel cobaltite@poly(3,4-ethylenedioxypyrrole) and carbon nanofiber interlayer based flexible supercapacitors. Nanoscale, 2019, 11, 2742-2756.	2.8	18
43	Aligned Ionogel Electrolytes for Highâ€Temperature Supercapacitors. Advanced Science, 2019, 6, 1801337.	5.6	48
44	The effect of cell-to-cell variations and thermal gradients on the performance and degradation of lithium-ion battery packs. Applied Energy, 2019, 248, 489-499.	5.1	131
45	Supercapacitors: Aligned Ionogel Electrolytes for High-Temperature Supercapacitors (Adv. Sci. 5/2019). Advanced Science, 2019, 6, 1970029.	5.6	2
46	â€œAll-in-Gelâ€•design for supercapacitors towards solid-state energy devices with thermal and mechanical compliance. Journal of Materials Chemistry A, 2019, 7, 8826-8831.	5.2	41
47	Multi-metal 4D printing with a desktop electrochemical 3D printer. Scientific Reports, 2019, 9, 3973.	1.6	32
48	Sn@C evolution from yolk-shell to core-shell in carbon nanofibers with suppressed degradation of lithium storage. Energy Storage Materials, 2019, 18, 229-237.	9.5	18
49	Operando Visualization and Multi-scale Tomography Studies of Dendrite Formation and Dissolution in Zinc Batteries. Joule, 2019, 3, 485-502.	11.7	300
50	Hierarchical Carbon Nano Fibres for Flexible Zn-Air Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
51	Flexible all-fiber electrospun supercapacitor. Journal of Power Sources, 2018, 384, 264-269.	4.0	77
52	An easy-to-parameterise physics-informed battery model and its application towards lithium-ion battery cell design, diagnosis, and degradation. Journal of Power Sources, 2018, 384, 66-79.	4.0	45
53	A lung-inspired approach to scalable and robust fuel cell design. Energy and Environmental Science, 2018, 11, 136-143.	15.6	134
54	3D Printing: A Low Cost Desktop Electrochemical Metal 3D Printer (Adv. Mater. Technol. 10/2017). Advanced Materials Technologies, 2017, 2, .	3.0	0

#	Article	IF	Citations
55	A systematic study on the use of short circuiting for the improvement of proton exchange membrane fuel cell performance. International Journal of Hydrogen Energy, 2017, 42, 4320-4327.	3.8	12
56	Tough Ionogelâ€inâ€Mask Hybrid Gel Electrolytes in Supercapacitors with Durable Pressure and Thermal Tolerances. Energy Technology, 2017, 5, 220-224.	1.8	19
57	A Low Cost Desktop Electrochemical Metal 3D Printer. Advanced Materials Technologies, 2017, 2, 1700148.	3.0	44
58	3D Printing: 3Dâ€Printed Structural Pseudocapacitors (Adv. Mater. Technol. 9/2016). Advanced Materials Technologies, 2016, 1, .	3.0	1
59	3Dâ€Printed Structural Pseudocapacitors. Advanced Materials Technologies, 2016, 1, 1600167.	3.0	32
60	Extending battery life: A low-cost practical diagnostic technique for lithium-ion batteries. Journal of Power Sources, 2016, 331, 224-231.	4.0	47
61	Real-time monitoring of proton exchange membrane fuel cell stack failure. Journal of Applied Electrochemistry, 2016, 46, 1157-1162.	1.5	9
62	Electrical conductivity and porosity in stainless steel 316L scaffolds for electrochemical devices fabricated using selective laser sintering. Materials and Design, 2016, 106, 51-59.	3.3	41
63	An integrated approach for the analysis and control of grid connected energy storage systems. Journal of Energy Storage, 2016, 5, 48-61.	3.9	70
64	Novel application of differential thermal voltammetry as an in-depth state-of-health diagnosis method for lithium-ion batteries. Journal of Power Sources, 2016, 307, 308-319.	4.0	109
65	â€œCanâ€•You Really Make a Battery Out of That?. Journal of Chemical Education, 2016, 93, 681-686.	1.1	8
66	3D Printed Structural Pseudocapacitors - a Multi-Scale X-Ray Tomography Study. ECS Meeting Abstracts, 2016, , .	0.0	0
67	A novel regenerative hydrogen cerium fuel cell for energy storage applications. Journal of Materials Chemistry A, 2015, 3, 9446-9450.	5.2	42
68	â€œElectrochemical Power Sources: Batteries, Fuel Cells, and Supercapacitorsâ€• Johnson Matthey Technology Review, 2015, 59, 319-321.	0.5	4
69	Additive Manufacturing for Solid Oxide Cell Electrode Fabrication. ECS Transactions, 2015, 68, 2119-2127.	0.3	11
70	Differential thermal voltammetry for tracking of degradation in lithium-ion batteries. Journal of Power Sources, 2015, 273, 495-501.	4.0	104
71	In-Operando X-ray Tomography Study of Lithiation Induced Delamination of Si Based Anodes for Lithium-Ion Batteries. ECS Electrochemistry Letters, 2014, 3, A76-A78.	1.9	60
72	Design and testing of a 9.5ÂkWe proton exchange membrane fuel cellâ€“supercapacitor passive hybrid system. International Journal of Hydrogen Energy, 2014, 39, 7885-7896.	3.8	46

#	Article	IF	Citations
73	The effect of thermal gradients on the performance of lithium-ion batteries. Journal of Power Sources, 2014, 247, 1018-1025.	4.0	160
74	Coupled thermalâ€“electrochemical modelling of uneven heat generation in lithium-ion battery packs. Journal of Power Sources, 2013, 243, 544-554.	4.0	206
75	The effect of thermal gradients on the performance of battery packs in automotive applications. , 2013, , .		4
76	Simulated and Experimental Validation of a Fuel Cell-Supercapacitor Passive Hybrid System for Electric Vehicles. , 2013, , .		3
77	Fault analysis in battery module design for electric and hybrid vehicles. , 2012, , .		3
78	Hydrogen PEMFC system for automotive applications. International Journal of Low-Carbon Technologies, 2012, 7, 28-37.	1.2	33
79	Module design and fault diagnosis in electric vehicle batteries. Journal of Power Sources, 2012, 206, 383-392.	4.0	157
80	Environmental Impact of Hybrid and Electric Vehicles. Issues in Environmental Science and Technology, 0, , 133-156.	0.4	2