Gregory J Offer

List of Publications by Year
in descending order

47 papers	3,179 citations	159585 30 h-index	223800 46 g-index
51 all docs	51 docs citations	51 times ranked	3066 citing authors

#	Article	IF	Citations
1	In-operando high-speed tomography of lithium-ion batteries during thermal runaway. Nature Communications, 2015, 6, 6924.	12.8	494
2	Lithium ion battery degradation: what you need to know. Physical Chemistry Chemical Physics, 2021, 23, 8200-8221.	2.8	330
3	Coupled thermalâ€“electrochemical modelling of uneven heat generation in lithium-ion battery packs. Journal of Power Sources, 2013, 243, 544-554.	7.8	206
4	Online Measurement of Battery Impedance Using Motor Controller Excitation. IEEE Transactions on Vehicular Technology, 2014, 63, 2557-2566.	6.3	161
5	The effect of thermal gradients on the performance of lithium-ion batteries. Journal of Power Sources, 2014, 247, 1018-1025.	7.8	160
6	Module design and fault diagnosis in electric vehicle batteries. Journal of Power Sources, 2012, 206, 383-392.	7.8	157
7	How Observable Is Lithium Plating? Differential Voltage Analysis to Identify and Quantify Lithium Plating Following Fast Charging of Cold Lithium-Ion Batteries. Journal of the Electrochemical Society, 2019, 166, A725-A739.	2.9	131
8	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.	7.8	109
9	Differential thermal voltammetry for tracking of degradation in lithium-ion batteries. Journal of Power Sources, 2015, 273, 495-501.	7.8	104
10	Modeling the Effects of Thermal Gradients Induced by Tab and Surface Cooling on Lithium Ion Cell Performance. Journal of the Electrochemical Society, 2018, 165, A3169-A3178.	2.9	82
11	Assessing and comparing German and UK transition policies for electric mobility. Environmental Innovation and Societal Transitions, 2015, 14, 84-100.	5.5	76
12	Lithium-ion battery degradation: how to model it. Physical Chemistry Chemical Physics, 2022, 24, 7909-7922.	2.8	73
13	A zero dimensional model of lithiumâ€“sulfur batteries during charge and discharge. Physical Chemistry Chemical Physics, 2016, 18, 584-593.	2.8	67
14	Multi-temperature state-dependent equivalent circuit discharge model for lithium-sulfur batteries. Journal of Power Sources, 2016, 328, 289-299.	7.8	66
15	Modelling transport-limited discharge capacity of lithium-sulfur cells. Electrochimica Acta, 2016, 219, 502-508.	5.2	58
16	A physically meaningful equivalent circuit network model of a lithium-ion battery accounting for local electrochemical and thermal behaviour, variable double layer capacitance and degradation. Journal of Power Sources, 2016, 325, 171-184.	7.8	55
17	Optimising lithium-ion cell design for plug-in hybrid and battery electric vehicles. Journal of Energy Storage, 2019, 22, 228-238.	8.1	52
18	Optimal cell tab design and cooling strategy for cylindrical lithium-ion batteries. Journal of Power Sources, 2021, 492, 229594.	7.8	51

#	ARTICLE	IF	CITATIONS
19	Interactions are important: Linking multi-physics mechanisms to the performance and degradation of solid-state batteries. Materials Today, 2021, 49, 145-183.	14.2	51
20	Potentiometric measurement of entropy change for lithium batteries. Physical Chemistry Chemical Physics, 2017, 19, 9833-9842.	2.8	48
21	Extending battery life: A low-cost practical diagnostic technique for lithium-ion batteries. Journal of Power Sources, 2016, 331, 224-231.	7.8	47
22	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.	7.1	46
23	Tracking degradation in lithium iron phosphate batteries using differential thermal voltammetry. Journal of Power Sources, 2018, 374, 188-195.	7.8	46
24	Irreversible vs Reversible Capacity Fade of Lithium-Sulfur Batteries during Cycling: The Effects of Precipitation and Shuttle. Journal of the Electrochemical Society, 2018, 165, A6107-A6118.	2.9	45
25	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.	7.8	45
26	Preventing lithium ion battery failure during high temperatures by externally applied compression. Journal of Energy Storage, 2017, 13, 296-303.	8.1	41
27	Modelling of Supercapacitors: Factors Influencing Performance. Journal of the Electrochemical Society, 2016, 163, A2475-A2487.	2.9	40
28	How to Cool Lithium Ion Batteries: Optimising Cell Design using a Thermally Coupled Model. Journal of the Electrochemical Society, 2019, 166, A2849-A2859.	2.9	39
29	Hydrogen PEMFC system for automotive applications. International Journal of Low-Carbon Technologies, 2012, 7, 28-37.	2.6	33
30	Physical Origin of the Differential Voltage Minimum Associated with Lithium Plating in Li-Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 090540.	2.9	33
31	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.	7.8	28
32	Lithium sulfur battery nail penetration test under load. Journal of Energy Storage, 2015, 2, 25-29.	8.1	26
33	Localized Swelling Inhomogeneity Detection in Lithium Ion Cells Using Multi-Dimensional Laser Scanning. Journal of the Electrochemical Society, 2019, 166, A27-A34.	2.9	21
34	The role of cell geometry when selecting tab or surface cooling to minimise cell degradation. ETransportation, 2020, 5, 100073.	14.8	20
35	Understanding the drivers of fleet emission reduction activities of the German car manufacturers. Environmental Innovation and Societal Transitions, 2015, 16, 3-21.	5.5	16
36	Chemical Descriptors of Yttria-Stabilized Zirconia at Low Defect Concentration: An <i>ab Initio</i> Study. Journal of Physical Chemistry A, 2015, 119, 6412-6420.	2.5	16

#	Article	IF	Citations
37	From Atoms to Cells: Multiscale Modeling of LiNi_{<i>x</i>}Mn_{<i>y</i>}Co_{<i>z</i>}O₂ Cathodes for Li-Ion Batteries. ACS Energy Letters, 2022, 7, 108-122.	17.4	16
38	The atomistic structure of yttria stabilised zirconia at 6.7 mol%: an ab initio study. Physical Chemistry Chemical Physics, 2016, 18, 31277-31285.	2.8	15
39	Experimental and numerical analysis to identify the performance limiting mechanisms in solid-state lithium cells under pulse operating conditions. Physical Chemistry Chemical Physics, 2019, 21, 22740-22755.	2.8	14
40	Towards online tracking of the shuttle effect in lithium sulfur batteries using differential thermal voltammetry. Journal of Energy Storage, 2019, 21, 765-772.	8.1	12
41	Insights into the Role of Silicon and Graphite in the Electrochemical Performance of Silicon/Graphite Blended Electrodes with a Multi-Material Porous Electrode Model. Journal of the Electrochemical Society, 2022, 169, 020568.	2.9	11
42	Real-time monitoring of proton exchange membrane fuel cell stack failure. Journal of Applied Electrochemistry, 2016, 46, 1157-1162.	2.9	9
43	A Composite Single Particle Lithium-Ion Battery Model Through System Identification. IEEE Transactions on Control Systems Technology, 2022, 30, 1-13.	5.2	8
44	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.	2.9	7
45	Large-Format Bipolar and Parallel Solid-State Lithium-Metal Cell Stacks: A Thermally Coupled Model-Based Comparative Study. Journal of the Electrochemical Society, 2020, 167, 160555.	2.9	6
46	Degradation of thin-film lithium batteries characterised by improved potentiometric measurement of entropy change. Physical Chemistry Chemical Physics, 2018, 20, 11378-11385.	2.8	5
47	Control and energy management strategies for a novel series hybrid. , 2013, , .		0