

Michael Metzger

List of Publications by Year in descending order

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257101

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times ranked

3863
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#	ARTICLE	IF	CITATIONS
1	Impact of Graphite Materials on the Lifetime of NMC811/Graphite Pouch Cells: Part II. Long-Term Cycling, Stack Pressure Growth, Isothermal Microcalorimetry, and Lifetime Projection. <i>Journal of the Electrochemical Society</i> , 2022, 169, 010501.	1.3	16
2	Diagnosing Battery Degradation via Gas Analysis. <i>Energy and Environmental Materials</i> , 2022, 5, 688-692.	7.3	7
3	Investigation of Redox Shuttle Generation in LFP/Graphite and NMC811/Graphite Cells. <i>Journal of the Electrochemical Society</i> , 2022, 169, 040518.	1.3	17
4	Different Positive Electrodes for Anode-Free Lithium Metal Cells. <i>Journal of the Electrochemical Society</i> , 2022, 169, 040517.	1.3	30
5	The Use of LiFSI and LiTFSI in LiFePO ₄ /Graphite Pouch Cells to Improve High-Temperature Lifetime. <i>Journal of the Electrochemical Society</i> , 2022, 169, 040560.	1.3	14
6	Li[Ni _{0.5} Mn _{0.3} Co _{0.2}]O ₂ as a Superior Alternative to LiFePO ₄ for Long-Lived Low Voltage Li-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2022, 169, 050512.	1.3	36
7	Melt Synthesis of Lithium Manganese Iron Phosphate: Part II. Particle Size, Electrochemical Performance, and Solid-State Lithium Diffusion. <i>Journal of the Electrochemical Society</i> , 2022, 169, 060527.	1.3	1
8	Melt Synthesis of Lithium Manganese Iron Phosphate: Part I. Composition, Physical Properties, Structural Analysis, and Charge/Discharge Cycling. <i>Journal of the Electrochemical Society</i> , 2022, 169, 060526.	1.3	2
9	Performance and Lifetime of Battery Desalination Cells Based on Nickel Hexacyanoferrate. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 142-142.	0.0	0
10	Reply to the "Comment on "Techno-economic analysis of capacitive and intercalative water deionization" by S. K. Patel, L. Wang and M. Elimelech, <i>Energy Environ. Sci.</i> , 2021, 10.1039/DOEE03321A. <i>Energy and Environmental Science</i> , 2021, 14, 2499-2503.	15.6	3
11	A Modified Electrochemical Model to Account for Mechanical Effects Due to Lithium Intercalation and External Pressure. <i>Journal of the Electrochemical Society</i> , 2021, 168, 020533.	1.3	8
12	A Study of Model-Based Protective Fast-Charging and Associated Degradation in Commercial Smartphone Cells: Insights on Cathode Degradation as a Result of Lithium Depositions on the Anode. <i>Advanced Energy Materials</i> , 2021, 11, 2003019.	10.2	7
13	Synergies for longer cycle life. <i>Nature Energy</i> , 2021, 6, 574-575.	19.8	1
14	Probing Heterogeneous Degradation of Catalyst in PEM Fuel Cells under Realistic Automotive Conditions with Multi-Modal Techniques. <i>Advanced Energy Materials</i> , 2021, 11, 2101794.	10.2	25
15	Location-Dependent Cobalt Deposition in Smartphone Cells upon Long-Term Fast-Charging Visualized by Synchrotron X-ray Fluorescence. <i>Chemistry of Materials</i> , 2021, 33, 6318-6328.	3.2	1
16	A Systematic Study of Electrolyte Additives in Single Crystal and Bimodal LiNi _{0.8} Mn _{0.1} Co _{0.1} O ₂ /Graphite Pouch Cells. <i>Journal of the Electrochemical Society</i> , 2021, 168, 090503.	1.3	38
17	Performance and lifetime of intercalative water deionization cells for mono- and divalent ion removal. <i>Desalination</i> , 2021, 517, 115218.	4.0	3
18	Impact of Graphite Materials on the Lifetime of NMC811/Graphite Pouch Cells: Part I. Material Properties, ARC Safety Tests, Gas Generation, and Room Temperature Cycling. <i>Journal of the Electrochemical Society</i> , 2021, 168, 110543.	1.3	20

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19	Diagnosing and correcting anode-free cell failure via electrolyte and morphological analysis. Nature Energy, 2020, 5, 693-702.	19.8	303
20	Removal of Na ⁺ and Ca ²⁺ with Prussian blue analogue electrodes for brackish water desalination. Desalination, 2020, 487, 114479.	4.0	23
21	Effects of Graphite Heat-Treatment Temperature on Single-Crystal Li[Ni ₅ Mn ₃ Co ₂]O ₂ /Graphite Pouch Cells. Journal of the Electrochemical Society, 2020, 167, 080543.	1.3	16
22	Understanding the Overlithiation Properties of LiNi _{0.6} Mn _{0.2} Co _{0.2} O ₂ Using Electrochemistry and Depth-Resolved X-ray Absorption Spectroscopy. Journal of the Electrochemical Society, 2020, 167, 080514.	1.3	17
23	Mapping of Heterogeneous Catalyst Degradation in Polymer Electrolyte Fuel Cells. Advanced Energy Materials, 2020, 10, 2000623.	10.2	24
24	Techno-economic analysis of capacitive and intercalative water deionization. Energy and Environmental Science, 2020, 13, 1544-1560.	15.6	76
25	Effect of Liquid Electrolyte Soaking on the Interfacial Resistance of Li ₇ La ₃ Zr ₂ O ₁₂ for All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2020, 12, 20605-20612.	4.0	26
26	Evaluating the High-Voltage Stability of Conductive Carbon and Ethylene Carbonate with Various Lithium Salts. Journal of the Electrochemical Society, 2020, 167, 160522.	1.3	34
27	Ambient Storage Derived Surface Contamination of NCM811 and NCM111: Performance Implications and Mitigation Strategies. Journal of the Electrochemical Society, 2019, 166, A2322-A2335.	1.3	132
28	Resistance Growth in Lithium-Ion Pouch Cells with LiNi _{0.80} Co _{0.15} Al _{0.05} O ₂ Positive Electrodes and Proposed Mechanism for Voltage Dependent Charge-Transfer Resistance. Journal of the Electrochemical Society, 2019, 166, A1779-A1784.	1.3	50
29	Thermally-driven mesopore formation and oxygen release in delithiated NCA cathode particles. Journal of Materials Chemistry A, 2019, 7, 12593-12603.	5.2	41
30	Long-term chemothermal stability of delithiated NCA in polymer solid-state batteries. Journal of Materials Chemistry A, 2019, 7, 27135-27147.	5.2	10
31	Mesoscale Chemomechanical Interplay of the LiNi _{0.8} Co _{0.15} Al _{0.05} O ₂ Cathode in Solid-State Polymer Batteries. Chemistry of Materials, 2019, 31, 491-501.	3.2	89
32	Quantification of PF ₅ and POF ₃ from Side Reactions of LiPF ₆ in Li-Ion Batteries. Journal of the Electrochemical Society, 2018, 165, A3022-A3028.	1.3	115
33	Surface Contamination of Metal Oxide-Based Battery Active Materials: Performance Implications and Mitigation Strategies. ECS Meeting Abstracts, 2018, , .	0.0	0
34	Understanding the Origins of Higher Capacities at Faster Rates in Lithium-Excess Li _x Ni ₂ Sb ₃ O ₂ . Chemistry of Materials, 2017, 29, 2584-2593.	3.2	18
35	Oxygen Release and Its Effect on the Cycling Stability of LiNi _x Mn _y Co _z O ₂ (NMC) Cathode Materials for Li-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A1361-A1377.	1.3	813
36	Zwischen Anode und Kathode. Nachrichten Aus Der Chemie, 2017, 65, 645-647.	0.0	0

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37	Antimony Doped Tin Oxide—Synthesis, Characterization and Application as Cathode Material in Li-O ₂ Cells: Implications on the Prospect of Carbon-Free Cathodes for Rechargeable Lithium-Air Batteries. Journal of the Electrochemical Society, 2017, 164, A1026-A1036.	1.3	22
38	The Effect of CO ₂ on Alkyl Carbonate Trans-Esterification during Formation of Graphite Electrodes in Li-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A2513-A2526.	1.3	58
39	Chemical versus Electrochemical Electrolyte Oxidation on NMC111, NMC622, NMC811, LNMO, and Conductive Carbon. Journal of Physical Chemistry Letters, 2017, 8, 4820-4825.	2.1	338
40	An Analysis of Artificial and Natural Graphite in Lithium Ion Pouch Cells Using Ultra-High Precision Coulometry, Isothermal Microcalorimetry, Gas Evolution, Long Term Cycling and Pressure Measurements. Journal of the Electrochemical Society, 2017, 164, A3545-A3555.	1.3	53
41	Oxygen Evolution and Its Effect on the Cycling Stability of LiNi _x Mn _y Co _z O ₂ (NMC) Cathode Materials for Li-Ion Batteries. ECS Meeting Abstracts, 2017, , .	0.0	0
42	Gas Evolution from Thermal and Electrochemical Side Reactions with Contaminants in Lithium-Ion Batteries. ECS Meeting Abstracts, 2017, , .	0.0	0
43	Vertically Aligned Two-Dimensional Graphene-Metal Hydroxide Hybrid Arrays for Li-O ₂ Batteries. ACS Applied Materials & Interfaces, 2016, 8, 26041-26050.	4.0	30
44	Effect of Substituting LiBF ₄ for LiPF ₆ in High Voltage Lithium-Ion Cells Containing Electrolyte Additives. Journal of the Electrochemical Society, 2016, 163, A1686-A1692.	1.3	24
45	Consumption of Fluoroethylene Carbonate (FEC) on Si-C Composite Electrodes for Li-Ion Batteries. Journal of the Electrochemical Society, 2016, 163, A1705-A1716.	1.3	229
46	Hydrolysis of Ethylene Carbonate with Water and Hydroxide under Battery Operating Conditions. Journal of the Electrochemical Society, 2016, 163, A1219-A1225.	1.3	96
47	Origin of H ₂ Evolution in LIBs: H ₂ O Reduction vs. Electrolyte Oxidation. Journal of the Electrochemical Society, 2016, 163, A798-A809.	1.3	262
48	The 2016 H. H. Uhlig Summer Research Fellowship — Summary Report: Role of Conducting Salt on Anodic Stability of Conductive Carbon and Ethylene Carbonate in High-Voltage Li-Ion Cells. Electrochemical Society Interface, 2016, 25, 104-105.	0.3	0
49	Gas Evolution at Graphite Anodes Depending on Electrolyte Water Content and SEI Quality Studied by On-Line Electrochemical Mass Spectrometry. Journal of the Electrochemical Society, 2015, 162, A1984-A1989.	1.3	120
50	Anodic Oxidation of Conductive Carbon and Ethylene Carbonate in High-Voltage Li-Ion Batteries Quantified by On-Line Electrochemical Mass Spectrometry. Journal of the Electrochemical Society, 2015, 162, A1123-A1134.	1.3	151
51	Carbon Coating Stability on High-Voltage Cathode Materials in H ₂ O-Free and H ₂ O-Containing Electrolyte. Journal of the Electrochemical Society, 2015, 162, A1227-A1235.	1.3	55
52	Role of 1,3-Propane Sultone and Vinylene Carbonate in Solid Electrolyte Interface Formation and Gas Generation. Journal of Physical Chemistry C, 2015, 119, 11337-11348.	1.5	162
53	The Influence of Water and Protons on Li ₂ O ₂ Crystal Growth in Aprotic Li-O ₂ Cells. Journal of the Electrochemical Society, 2015, 162, A573-A584.	1.3	220
54	Anodic Decomposition of Trimethylboroxine as Additive for High Voltage Li-Ion Batteries. Journal of the Electrochemical Society, 2014, 161, A2255-A2261.	1.3	24

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55	Water Effect on the Specific Capacity of Aprotic Li-O ₂ Cells in a Sealed Two-Compartment Cell. ECS Meeting Abstracts, 2014, , .	0.0	1