Malachi Noked

List of Publications by Year
in descending order

97 papers	6,383 citations	94381 37 h-index	66879 78 g-index
101 all docs	101 docs citations	101 times ranked	7298 citing authors

#	Article	IF	Citations
1	Next-Generation Lithium Metal Anode Engineering via Atomic Layer Deposition. ACS Nano, 2015, 9, 5884-5892.	7.3	700
2	Lithiumâ€“Oxygen Batteries and Related Systems: Potential, Status, and Future. Chemical Reviews, 2020, 120, 6626-6683.	23.0	593
3	Lithium Metal Anodes: Toward an Improved Understanding of Coupled Morphological, Electrochemical, and Mechanical Behavior. ACS Energy Letters, 2017, 2, 664-672.	8.8	434
4	Ultrathin Surface Coating Enables the Stable Sodium Metal Anode. Advanced Energy Materials, 2017, 7, 1601526.	10.2	312
5	Oxidation of Dimethyl Sulfoxide Solutions by Electrochemical Reduction of Oxygen. Journal of Physical Chemistry Letters, 2013, 4, 3115-3119.	2.1	229
6	Enhancing the Reversibility of Mg/S Battery Chemistry through Li⁺ Mediation. Journal of the American Chemical Society, 2015, 137, 12388-12393.	6.6	225
7	Mapping the Challenges of Magnesium Battery. Journal of Physical Chemistry Letters, 2016, 7, 1736-1749.	2.1	224
8	Atomic Layer Deposition of the Solid Electrolyte LiPON. Chemistry of Materials, 2015, 27, 5324-5331.	3.2	221
9	A Rechargeable Al/S Battery with an Ionicâ€Liquid Electrolyte. Angewandte Chemie - International Edition, 2016, 55, 9898-9901.	7.2	215
10	The electrochemistry of activated carbonaceous materials: past, present, and future. Journal of Solid State Electrochemistry, 2011, 15, 1563-1578.	1.2	161
11	Stabilization of Lithium Metal Anodes by Hybrid Artificial Solid Electrolyte Interphase. Chemistry of Materials, 2017, 29, 6298-6307.	3.2	155
12	Activation of a MnO₂ cathode by water-stimulated Mg²⁺ insertion for a magnesium ion battery. Physical Chemistry Chemical Physics, 2015, 17, 5256-5264.	1.3	128
13	Capacitive Deionization of NaCl Solutions at Non-Steady-State Conditions: Inversion Functionality of the Carbon Electrodes. Journal of Physical Chemistry C, 2011, 115, 16567-16573.	1.5	125
14	Enhanced Charge Efficiency in Capacitive Deionization Achieved by Surface-Treated Electrodes and by Means of a Third Electrode. Journal of Physical Chemistry C, 2011, 115, 19856-19863.	1.5	120
15	Mechanistic Role of Li⁺ Dissociation Level in Aprotic Liâ€“O₂ Battery. ACS Applied Materials & Interfaces, 2016, 8, 5300-5307.	4.0	120
16	Metalâ€“Sulfur Batteries: Overview and Research Methods. ACS Energy Letters, 2019, 4, 436-446.	8.8	108
17	Anionâ€“Diluent Pairing for Stable High-Energy Li Metal Batteries. ACS Energy Letters, 2022, 7, 1338-1347.	8.8	108
18	Composite Carbon Nanotube/Carbon Electrodes for Electrical Doubleâ€Layer Super Capacitors. Angewandte Chemie - International Edition, 2012, 51, 1568-1571.	7.2	92

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19	Limitations of charge efficiency in capacitive deionization processes III: The behavior of surface oxidized activated carbon electrodes. Electrochimica Acta, 2010, 56, 441-447.	2.6	90
20	Limitations of Charge Efficiency in Capacitive Deionization. Journal of the Electrochemical Society, 2009, 156, P157.	1.3	87
21	The Rate-Determining Step of Electroadsorption Processes into Nanoporous Carbon Electrodes Related to Water Desalination. Journal of Physical Chemistry C, 2009, 113, 21319-21327.	1.5	79
22	Carbon-Dots-Initiated Photopolymerization: An In Situ Synthetic Approach for MXene/Poly(norepinephrine)/Copper Hybrid and its Application for Mitigating Water Pollution. ACS Applied Materials & Interfaces, 2021, 13, 31038-31050.	4.0	73
23	Atomic Layer Deposition and in Situ Characterization of Ultraclean Lithium Oxide and Lithium Hydroxide. Journal of Physical Chemistry C, 2014, 118, 27749-27753.	1.5	69
24	The Dependence of the Desalination Performance in Capacitive Deionization Processes on the Electrodes PZC. Journal of the Electrochemical Society, 2011, 158, P168.	1.3	68
25	The feasibility of boron removal from water by capacitive deionization. Electrochimica Acta, 2011, 56, 6312-6317.	2.6	68
26	DMSOâ€“Li₂O₂ Interface in the Rechargeable Liâ€“O₂ Battery Cathode: Theoretical and Experimental Perspectives on Stability. ACS Applied Materials & Interfaces, 2015, 7, 11402-11411.	4.0	66
27	Mussel-Inspired Polynorepinephrine/MXene-Based Magnetic Nanohybrid for Electromagnetic Interference Shielding in X-Band and Strain-Sensing Performance. Langmuir, 2022, 38, 3936-3950.	1.6	65
28	A Rechargeable Al/S Battery with an Ionicâ€Liquid Electrolyte. Angewandte Chemie, 2016, 128, 10052-10055.	1.6	64
29	Fabrication of 3D Coreâ€“Shell Multiwalled Carbon Nanotube@RuO₂ Lithium-Ion Battery Electrodes through a RuO₂ Atomic Layer Deposition Process. ACS Nano, 2015, 9, 464-473.	7.3	62
30	Investigation of the Cathodeâ€“Catalystâ€“Electrolyte Interface in Aprotic Liâ€“O₂ Batteries. Chemistry of Materials, 2015, 27, 5305-5313.	3.2	55
31	ALD Protection of Liâ€Metal Anode Surfaces â€“ Quantifying and Preventing Chemical and Electrochemical Corrosion in Organic Solvent. Advanced Materials Interfaces, 2016, 3, 1600426.	1.9	54
32	On the Feasibility of Practical Mgâ€“S Batteries: Practical Limitations Associated with Metallic Magnesium Anodes. ACS Applied Materials & Interfaces, 2018, 10, 36910-36917.	4.0	51
33	Bidirectionally Compatible Buffering Layer Enables Highly Stable and Conductive Interface for 4.5ÂV Sulfideâ€Based Allâ€Solidâ€State Lithium Batteries. Advanced Energy Materials, 2021, 11, 2100881.	10.2	50
34	Solid Electrolyte Lithium Phosphous Oxynitride as a Protective Nanocladding Layer for 3D High-Capacity Conversion Electrodes. ACS Nano, 2016, 10, 2693-2701.	7.3	48
35	Between Liquid and All Solid: A Prospect on Electrolyte Future in Lithiumâ€Ion Batteries for Electric Vehicles. Energy Technology, 2020, 8, 2000580.	1.8	48
36	Dual-template synthesis of ordered mesoporous carbon/Fe₂O₃nanowires: high porosity and structural stability for supercapacitors. Journal of Materials Chemistry A, 2015, 3, 21501-21510.	5.2	46

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37	Highly Reversible Conversion-Type FeOF Composite Electrode with Extended Lithium Insertion by Atomic Layer Deposition LiPON Protection. Chemistry of Materials, 2017, 29, 8780-8791.	3.2	41
38	Composite Carbon Nano-Tubes (CNT)/Activated Carbon Electrodes for Non-Aqueous Super Capacitors Using Organic Electrolyte Solutions. Journal of the Electrochemical Society, 2013, 160, A1282-A1285.	1.3	39
39	Capacitance behavior of ordered mesoporous carbon/Fe2O3 composites: Comparison between 1D cylindrical, 2D hexagonal, and 3D bicontinuous mesostructures. Carbon, 2015, 93, 903-914.	5.4	37
40	Development of Anion Stereoselective, Activated Carbon Molecular Sieve Electrodes Prepared by Chemical Vapor Deposition. Journal of Physical Chemistry C, 2009, 113, 7316-7321.	1.5	35
41	Alkylated LixSiyOz Coating for Stabilization of Li-rich Layered Oxide Cathodes. Energy Storage Materials, 2020, 33, 268-275.	9.5	35
42	Role of boric acid in nickel nanotube electrodeposition: a surface-directed growth mechanism. Chemical Communications, 2014, 50, 527-529.	2.2	34
43	Digenite (Cu₉S₅): Layered p-Type Semiconductor Grown by Reactive Annealing of Copper. Chemistry of Materials, 2018, 30, 2379-2388.	3.2	33
44	Rationally Designed Vanadium Pentoxide as High Capacity Insertion Material for Mgâ€ion. Advanced Functional Materials, 2020, 30, 2003518.	7.8	32
45	Bifunctional Role of LiNO₃ in Liâ€“O₂ Batteries: Deconvoluting Surface and Catalytic Effects. ACS Applied Materials & Interfaces, 2018, 10, 29622-29629.	4.0	31
46	Mitigating Structural Instability of High-Energy Lithium- and Manganese-Rich LiNi_xMn_yCo_z Oxide by Interfacial Atomic Surface Reduction. Chemistry of Materials, 2019, 31, 3840-3847.	3.2	30
47	Understanding the Role of Alumina (Al₂O₃), Pentalithium Aluminate (Li₅AlO₄), and Pentasodium Aluminate (Na₅AlO₄) Coatings on the Li and Mnâ€Rich NCM Cathode Material 0.33Li₂MnO₃·0.67Li(Ni_{0.4}Co_{0.2}Mn_{0.4})O₂ for Enhanced Electrochemical Performance. Advanced Functional Materials, 2021, 31, 2008083.	7.8	30
48	Enhancing the Energy Storage Capabilities of Ti₃C₂T_x MXene Electrodes by Atomic Surface Reduction. Advanced Functional Materials, 2021, 31, 2106294.	7.8	28
49	Electrochemical Thin Layers in Nanostructures for Energy Storage. Accounts of Chemical Research, 2016, 49, 2336-2346.	7.6	24
50	Threeâ€Sodium Ion Activity of a Hollow Spherical Na₃V₂(PO₄)₂F₃ Cathode: Demonstrating High Capacity and Stability. Batteries and Supercaps, 2020, 3, 52-55.	2.4	24
51	AZ31 Magnesium Alloy Foils as Thin Anodes for Rechargeable Magnesium Batteries. ChemSusChem, 2021, 14, 4690-4696.	3.6	24
52	Protocols for Evaluating and Reporting Liâ€“O₂ Cell Performance. Journal of Physical Chemistry Letters, 2016, 7, 211-215.	2.1	23
53	Aprotic metal-oxygen batteries: recent findings and insights. Journal of Solid State Electrochemistry, 2017, 21, 1861-1878.	1.2	23
54	Nickel-Rich Phosphide (Ni₁₂P₅) Nanosheets Coupled with Oxidized Multiwalled Carbon Nanotubes for Oxygen Evolution. ACS Applied Nano Materials, 2020, 3, 10914-10921.	2.4	23

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55	Scalable Synthesis of Few-Layered 2D Tungsten Diselenide (2H-WSe₂) Nanosheets Directly Grown on Tungsten (W) Foil Using Ambient-Pressure Chemical Vapor Deposition for Reversible Li-Ion Storage. ACS Omega, 2020, 5, 19409-19421.	1.6	23
56	Atomic surface reduction of interfaces utilizing vapor phase approach: High energy LiNixMnyCoz oxide as a test case. Energy Storage Materials, 2019, 19, 261-269.	9.5	22
57	Effect of Crystal Structure and Morphology on Na₃V₂(PO₄)₂F₃ Performances for Naâ€Ion Batteries. Batteries and Supercaps, 2020, 3, 510-518.	2.4	22
58	The Study of Activated Carbon/CNT/MoO3Electrodes for Aqueous Pseudo-Capacitors. Journal of the Electrochemical Society, 2013, 160, A1489-A1496.	1.3	21
59	Millimeter-Tall Carpets of Vertically Aligned Crystalline Carbon Nanotubes Synthesized on Copper Substrates for Electrical Applications. Journal of Physical Chemistry C, 2014, 118, 19345-19355.	1.5	20
60	Structure and Functionality of an Alkylated Li_xSi_yO_z Interphase for High-Energy Cathodes from DNP-ssNMR Spectroscopy. Journal of the American Chemical Society, 2021, 143, 4694-4704.	6.6	19
61	Assessing the Concentration Effect on Hydration Radii in Aqueous Solutions by Electroadsorption on a Carbon Molecular Sieve Electrode. Journal of Physical Chemistry C, 2010, 114, 13354-13361.	1.5	17
62	Modification of Li- and Mn-Rich Cathode Materials via Formation of the Rock-Salt and Spinel Surface Layers for Steady and High-Rate Electrochemical Performances. ACS Applied Materials & Interfaces, 2020, 12, 32698-32711.	4.0	17
63	Double gas treatment: A successful approach for stabilizing the Li and Mn-rich NCM cathode materialsâ€™ electrochemical behavior. Energy Storage Materials, 2022, 45, 74-91.	9.5	17
64	A cost-effective water-in-salt electrolyte enables highly stable operation of a 2.15-V aqueous lithium-ion battery. Cell Reports Physical Science, 2022, 3, 100688.	2.8	16
65	Recent advances in solid-state beyond lithium batteries. Journal of Solid State Electrochemistry, 2022, 26, 1851-1869.	1.2	14
66	Effect of Polysulfide Species on Lithium Anode Cycle Life and Reversibility in Liâ€“S Batteries. ACS Applied Energy Materials, 2021, 4, 4711-4718.	2.5	13
67	Thick vertically aligned carbon nanotube/carbon composite electrodes for electrical double-layer capacitors. Carbon, 2013, 58, 134-138.	5.4	12
68	Improving Amorphous Carbon Anodes for Na Ion Batteries by Surface Treatment of a Presodiated Electrode with Al₂O₃. Langmuir, 2019, 35, 11670-11678.	1.6	12
69	Probing Electrochemical Behaviour of Lignocellulosic, Orange Peel Derived Hard Carbon as Anode for Sodium Ion Battery. Journal of the Electrochemical Society, 2020, 167, 090505.	1.3	12
70	Site-Independent Hydrogenation Reactions on Oxide-Supported Au Nanoparticles Facilitated by Intraparticle Hydrogen Atom Diffusion. ACS Catalysis, 2021, 11, 9875-9884.	5.5	12
71	Electrochemical Activation of Li2MnO3 Electrodes at 0 Â°C and Its Impact on the Subsequent Performance at Higher Temperatures. Materials, 2020, 13, 4388.	1.3	11
72	Improvement of the Electrochemical Performance of LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ via Atomic Layer Deposition of Lithium-Rich Zirconium Phosphate Coatings. ACS Applied Materials & Interfaces, 2021, 13, 61733-61741.	4.0	11

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73	Stability of Current Collectors Against Corrosion in APC Electrolyte for Rechargeable Mg Battery. Journal of the Electrochemical Society, 2021, 168, 080526.	1.3	10
74	Improved Cycling Stability of LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ Cathode Material via Variable Temperature Atomic Surface Reduction with Diethyl Zinc. Small, 2022, 18, e2104625.	5.2	10
75	Anodic decomposition of surface films on high voltage spinel surfacesâ€"Density function theory and experimental study. Journal of Chemical Physics, 2019, 151, 234713.	1.2	9
76	Interfacial Engineering of Na₃V₂(PO₄)₂F₃ Hollow Spheres through Atomic Layer Deposition of TiO₂: Boosting Capacity and Mitigating Structural Instability. Small, 2021, 17, e2104416.	5.2	9
77	Growth of Hybrid Inorganic/Organic Chiral Thin Films by Sequenced Vapor Deposition. ACS Nano, 2019, 13, 10397-10404.	7.3	8
78	On the Efficacy of Anode Reversibility in Presence of Li₂S₈: A Case Study for Li-S Batteries. Journal of the Electrochemical Society, 2019, 166, A3098-A3101.	1.3	8
79	High-rate Na_{0.7}Li_{2.3}V₂(PO₄)₂F₃ hollow sphere cathode prepared via a solvothermal and electrochemical ion exchange approach for lithium ion batteries. Journal of Materials Chemistry A, 2020, 8, 21289-21297.	5.2	8
80	Molecular Layer Deposition of Alucone Thin Film on LiCoO₂ to Enable High Voltage Operation. Batteries and Supercaps, 2021, 4, 1739-1748.	2.4	8
81	Growth of Hybrid Chiral Thin Films by Molecular Layer Deposition Zinc/Cysteine as a Case Study. Advanced Materials Interfaces, 2022, 9, 2101725.	1.9	6
82	A straightforward and reliable method for the characterization of carbon nanotube dispersions. Carbon, 2011, 49, 1042-1047.	5.4	5
83	Tailoring Nickel-Rich LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ Layered Oxide Cathode Materials with Metal Sulfides (M₂S:M = Li, Na) for Improved Electrochemical Properties. Journal of the Electrochemical Society, 2021, 168, 080543.	1.3	4
84	In Situ Stress Measurements on Thin Film Au Positive Electrode during the First Discharge of Li-O₂ Batteries. Journal of the Electrochemical Society, 2021, 168, 110551.	1.3	4
85	Improved Electrochemical Behavior and Thermal Stability of Li and Mn-Rich Cathode Materials Modified by Lithium Sulfate Surface Treatment. Inorganics, 2022, 10, 39.	1.2	4
86	Multifunctional interphase. Nature Energy, 2018, 3, 253-254.	19.8	3
87	Diethylzinc-Assisted Atomic Surface Reduction to Stabilize Li and Mn-Rich NCM. ACS Applied Materials & Interfaces, 2021, 13, 44470-44478.	4.0	3
88	Selective Catalyst Surface Access through Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2021, 13, 58827-58837.	4.0	2
89	Electrode Degradation Study of Vertically Aligned Carbon Nanotubes on a 3D Integrated Current Collector. Journal of the Electrochemical Society, 2015, 162, A2372-A2377.	1.3	1
90	Electron Microscopy Study of ALD Protective Coating on the FeOF Electrode. Microscopy and Microanalysis, 2017, 23, 2056-2057.	0.2	1

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91	On the Stability of Nitrate Ion in Rechargeable Li-O2 Batteries. Journal of the Electrochemical Society, 2019, 166, A5008-A5013.	1.3	1
92	Biofilm-Protected Catheters Nanolaminated by Multiple Atomic-Layer-Deposited Oxide Films. ACS Applied Nano Materials, 2021, 4, 6398-6406.	2.4	1
93	Stabilization of Lithium Cobalt Phosphate Cathodes via Artificial Interphases. Journal of the Electrochemical Society, 2020, 167, 130518.	1.3	1
94	Rosarium Philosophorum on Electrochemistry. Israel Journal of Chemistry, 2021, 61, 3-5.	1.0	0
95	Rechargeable Nonaqueous Aluminum Sulfur Battery. ECS Meeting Abstracts, 2016, , .	0.0	0
96	Chitosan bio-functionalization of carbon nanotube arrayed electrode. Advanced Materials Letters, 2017, 8, 1166-1170.	0.3	0
97	Development of Electroactive and Stable Current Collectors for Aqueous Batteries. Journal of the Electrochemical Society, 2022, 169, 050516.	1.3	0