Deyu Wang

List of Publications by Year
in descending order

121 papers	8,186 citations	46984 47 h-index	48277 88 g-index
125 all docs	125 docs citations	125 times ranked	8055 citing authors

#	Article	IF	Citations
1	Hierarchically Porous Graphene as a Lithiumâ€“Air Battery Electrode. Nano Letters, 2011, 11, 5071-5078.	4.5	943
2	Improving the rate performance of LiFePO4 by Fe-site doping. Electrochimica Acta, 2005, 50, 2955-2958.	2.6	349
3	Optimization of Air Electrode for Li/Air Batteries. Journal of the Electrochemical Society, 2010, 157, A487.	1.3	308
4	Cracking causing cyclic instability of LiFePO4 cathode material. Journal of Power Sources, 2005, 140, 125-128.	4.0	299
5	High-performance, nano-structured LiMnPO4 synthesized via a polyol method. Journal of Power Sources, 2009, 189, 624-628.	4.0	292
6	Investigation on the charging process of Li2O2-based air electrodes in Liâ€“O2 batteries with organic carbonate electrolytes. Journal of Power Sources, 2011, 196, 3894-3899.	4.0	229
7	Fundamentals and Challenges of Lithium Ion Batteries at Temperatures between â^'40 and 60 Â°C. Advanced Energy Materials, 2020, 10, 1904152.	10.2	200
8	Reaction mechanisms for the limited reversibility of Liâ€“O2 chemistry in organic carbonate electrolytes. Journal of Power Sources, 2011, 196, 9631-9639.	4.0	198
9	Investigation of the rechargeability of Liâ€“O2 batteries in non-aqueous electrolyte. Journal of Power Sources, 2011, 196, 5674-5678.	4.0	197
10	Ambient operation of Li/Air batteries. Journal of Power Sources, 2010, 195, 4332-4337.	4.0	189
11	Optimization of Nonaqueous Electrolytes for Primary Lithium/Air Batteries Operated in Ambient Environment. Journal of the Electrochemical Society, 2009, 156, A773.	1.3	166
12	Advanced Electrolytes for Fastâ€Charging Highâ€Voltage Lithiumâ€Ion Batteries in Wideâ€Temperature Range. Advanced Energy Materials, 2020, 10, 2000368.	10.2	159
13	Effects of Nonaqueous Electrolytes on the Performance of Lithium/Air Batteries. Journal of the Electrochemical Society, 2010, 157, A219.	1.3	148
14	Correlation of oxygen non-stoichiometry to the instabilities and electrochemical performance of LiNi 0.8 Co 0.1 Mn 0.1 O 2 utilized in lithium ion battery. Journal of Power Sources, 2015, 283, 211-218.	4.0	145
15	Stabilizing Li/electrolyte interface with a transplantable protective layer based on nanoscale LiF domains. Nano Energy, 2017, 39, 662-672.	8.2	143
16	Direct Observation of the Growth of Lithium Dendrites on Graphite Anodes by Operando ECâ€AFM. Small Methods, 2018, 2, 1700298.	4.6	133
17	Effect of LiFSI Concentrations To Form Thickness- and Modulus-Controlled SEI Layers on Lithium Metal Anodes. Journal of Physical Chemistry C, 2018, 122, 9825-9834.	1.5	131
18	Triphenylamine-Based Metalâ€“Organic Frameworks as Cathode Materials in Lithium-Ion Batteries with Coexistence of Redox Active Sites, High Working Voltage, and High Rate Stability. ACS Applied Materials & Interfaces, 2016, 8, 14578-14585.	4.0	121

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19	Highâ€Power Lithium Metal Batteries Enabled by Highâ€Concentration Acetonitrileâ€Based Electrolytes with Vinylene Carbonate Additive. Advanced Functional Materials, 2020, 30, 2001285.	7.8	121
20	Nanostructured Phosphorus Doped Silicon/Graphite Composite as Anode for High-Performance Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 23672-23678.	4.0	120
21	Facile synthesis of Fe-MOF/RGO and its application as a high performance anode in lithium-ion batteries. RSC Advances, 2016, 6, 30763-30768.	1.7	118
22	Improving the Electrochemical Activity of LiMnPO[sub 4] Via Mn-Site Substitution. Journal of the Electrochemical Society, 2010, 157, A225.	1.3	112
23	Investigation on gas generation of Li4Ti5O12/LiNi1/3Co1/3Mn1/3O2 cells at elevated temperature. Journal of Power Sources, 2013, 237, 285-290.	4.0	110
24	Improved cyclic stability of LiNi0.8Co0.1Mn0.1O2 via Ti substitution with a cut-off potential of 4.5V. Ceramics International, 2015, 41, 7133-7139.	2.3	110
25	Stabilization of Silicon Anode for Li-Ion Batteries. Journal of the Electrochemical Society, 2010, 157, A1047.	1.3	108
26	Enhanced Stability of Li Metal Anodes by Synergetic Control of Nucleation and the Solid Electrolyte Interphase. Advanced Energy Materials, 2019, 9, 1901764.	10.2	108
27	Stability of Li₂CO₃ in cathode of lithium ion battery and its influence on electrochemical performance. RSC Advances, 2016, 6, 19233-19237.	1.7	99
28	Tailoring Lithium Deposition via an SEIâ€Functionalized Membrane Derived from LiF Decorated Layered Carbon Structure. Advanced Energy Materials, 2019, 9, 1802912.	10.2	98
29	Investigation on Li4Ti5O12 batteries developed for hybrid electric vehicle. Journal of Applied Electrochemistry, 2012, 42, 989-995.	1.5	91
30	Overcharge investigation of lithium-ion polymer batteries. Journal of Power Sources, 2006, 160, 1302-1307.	4.0	86
31	Crown Ethers in Nonaqueous Electrolytes for Lithium/Air Batteries. Electrochemical and Solid-State Letters, 2010, 13, A48.	2.2	82
32	Li2O-Reinforced Cu Nanoclusters as Porous Structure for Dendrite-Free and Long-Lifespan Lithium Metal Anode. ACS Applied Materials & Interfaces, 2016, 8, 26801-26808.	4.0	77
33	Volumetric variation confinement: surface protective structure for high cyclic stability of lithium metal electrodes. Journal of Materials Chemistry A, 2016, 4, 2427-2432.	5.2	74
34	Redox Targeting of Insulating Electrode Materials: A New Approach to High-Energy-Density Batteries. Angewandte Chemie - International Edition, 2006, 45, 8197-8200.	7.2	71
35	Reinvestigation on the state-of-the-art nonaqueous carbonate electrolytes for 5ÂV Li-ion battery applications. Journal of Power Sources, 2012, 213, 304-316.	4.0	69
36	High Capacity Pouch-Type Liâ€“Air Batteries. Journal of the Electrochemical Society, 2010, 157, A760.	1.3	67

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37	20% Efficient Perovskite Solar Cells with 2D Electron Transporting Layer. Advanced Functional Materials, 2019, 29, 1805168.	7.8	67
38	LiMn0.8Fe0.2PO4/C cathode material synthesized via co-precipitation method with superior high-rate and low-temperature performances for lithium-ion batteries. Journal of Power Sources, 2015, 275, 785-791.	4.0	65
39	Unlocking the energy capabilities of micron-sized LiFePO4. Nature Communications, 2015, 6, 7898.	5.8	65
40	Pseudocapacitance Induced Uniform Plating/Stripping of Li Metal Anode in Vertical Graphene Nanowalls. Advanced Functional Materials, 2018, 28, 1805638.	7.8	65
41	Improved stability of Ni-rich cathode by the substitutive cations with stronger bonds. Electrochimica Acta, 2018, 268, 41-48.	2.6	62
42	New solid-state synthesis routine and mechanism for LiFePO4 using LiF as lithium precursor. Journal of Solid State Chemistry, 2004, 177, 4582-4587.	1.4	60
43	Decomposing lithium carbonate with a mobile catalyst. Nano Energy, 2017, 36, 390-397.	8.2	60
44	Preparation and electrochemical investigation of Li2CoPO4F cathode material for lithium-ion batteries. Journal of Power Sources, 2011, 196, 2241-2245.	4.0	58
45	Continuous solid solutions LiFe1â^'xCoxPO4 and its electrochemical performance. Journal of Power Sources, 2005, 146, 580-583.	4.0	52
46	Highly stable Ni-rich layered oxide cathode enabled by a thick protective layer with bio-tissue structure. Energy Storage Materials, 2020, 24, 291-296.	9.5	51
47	Hybrid Air-Electrode for Li/Air Batteries. Journal of the Electrochemical Society, 2010, 157, A294.	1.3	50
48	Improving Li anode performance by a porous 3D carbon paper host with plasma assisted sponge carbon coating. Energy Storage Materials, 2018, 11, 47-56.	9.5	49
49	In-situ EC-AFM and ex-situ XPS characterization to investigate the mechanism of SEI formation in highly concentrated aqueous electrolyte for Li-ion batteries. Applied Surface Science, 2020, 507, 145059.	3.1	49
50	In-situ study of surface structure evolution of silicon anodes by electrochemical atomic force microscopy. Applied Surface Science, 2018, 452, 67-74.	3.1	45
51	A three-dimensional macroporous Cu/SnO2 composite anode sheet prepared via a novel method. Journal of Power Sources, 2010, 195, 7403-7408.	4.0	44
52	The long life-span of a Li-metal anode enabled by a protective layer based on the pyrolyzed N-doped binder network. Journal of Materials Chemistry A, 2017, 5, 9339-9349.	5.2	44
53	Improving LiNi0.9Co0.08Mn0.02O2â€™s cyclic stability via abating mechanical damages. Energy Storage Materials, 2020, 28, 1-9.	9.5	44
54	Li2NaV2(PO4)3: A novel composite cathode material with high ratio ofÂrhombohedral phase. Journal of Power Sources, 2013, 227, 199-203.	4.0	43

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55	Direct visualization of solid electrolyte interphase on Li₄Ti₅O₁₂ by in situ AFM. RSC Advances, 2016, 6, 77105-77110.	1.7	42
56	Novel approach for a high-energy-density Liâ€“air battery: tri-dimensional growth of Li2O2 crystals tailored by electrolyte Li+ ion concentrations. Journal of Materials Chemistry A, 2014, 2, 9020.	5.2	41
57	Constant dripping wears away a stone: Fatigue damage causing particles' cracking. Journal of Power Sources, 2019, 416, 104-110.	4.0	41
58	Seed-Free Selective Deposition of Lithium Metal into Tough Graphene Framework for Stable Lithium Metal Anode. ACS Applied Materials & Interfaces, 2019, 11, 44383-44389.	4.0	39
59	Beyond imaging: Applications of atomic force microscopy for the study of Lithium-ion batteries. Ultramicroscopy, 2019, 204, 34-48.	0.8	39
60	A highly stable host for lithium metal anode enabled by Li9Al4-Li3N-AlN structure. Nano Energy, 2019, 59, 110-119.	8.2	39
61	Fe-Based Metal-Organic Framework and Its Derivatives for Reversible Lithium Storage. Journal of Materials Science and Technology, 2017, 33, 768-774.	5.6	37
62	Improving the Interfacial Stability between Lithium and Solidâ€State Electrolyte via Dipoleâ€Structured Lithium Layer Deposited on Graphene Oxide. Advanced Science, 2020, 7, 2000237.	5.6	36
63	An Approach to Make Macroporous Metal Sheets as Current Collectors for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2010, 157, A765.	1.3	35
64	Regulating Surface and Grainâ€Boundary Structures of Niâ€Rich Layered Cathodes for Ultrahigh Cycle Stability. Small, 2020, 16, e1906433.	5.2	34
65	Over-potential induced Li/Na filtrated depositions using stacked graphene coating on copper scaffold. Energy Storage Materials, 2019, 16, 364-373.	9.5	31
66	Design of a multi-functional gel polymer electrolyte with a 3D compact stacked polymer micro-sphere matrix for high-performance lithium metal batteries. Journal of Materials Chemistry A, 2022, 10, 12563-12574.	5.2	31
67	LiCoO2-catalyzed electrochemical oxidation of Li2CO3. Nano Research, 2016, 9, 3903-3913.	5.8	29
68	Three-dimensional graphene network supported ultrathin CeO2 nanoflakes for oxygen reduction reaction and rechargeable metal-air batteries. Electrochimica Acta, 2018, 263, 561-569.	2.6	26
69	Thermal stability of solid electrolyte interphase of lithium-ion batteries. Applied Surface Science, 2018, 454, 61-67.	3.1	26
70	Operando study of Fe 3 O 4 anodes by electrochemical atomic force microscopy. Applied Surface Science, 2017, 426, 217-223.	3.1	25
71	Silicon-titanium nanocomposite synthesized via the direct electrolysis of SiO2/TiO2 precursor in molten salt and their performance as the anode material for lithium ion batteries. Journal of Alloys and Compounds, 2019, 781, 362-370.	2.8	24
72	Investigation of (1Ââ^'Âx)LiMnPO4Â·xLi3V2(PO4)3/C: Phase composition and electrochemical performance. Journal of Power Sources, 2014, 263, 332-337.	4.0	23

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73	Electronic structural changes of the electrochemically delithiated LiFe0.5Co0.5PO4 cathode material studied by X-ray absorption spectroscopy. Journal of Power Sources, 2008, 183, 427-430.	4.0	22
74	Synthesis of Na2FePO4F/C and its electrochemical performance. Ceramics International, 2013, 39, 5379-5385.	2.3	22
75	Artificial nucleation sites with stable SEI for Li metal anodes by aggressive Al pulverization. Nano Energy, 2020, 73, 104746.	8.2	22
76	Phase diagram and electrochemical behavior of lithium sodium vanadium phosphates cathode materials for lithium ion batteries. Ceramics International, 2015, 41, 5164-5171.	2.3	21
77	Direct study of the electrical properties of PC12 cells and hippocampal neurons by EFM and KPFM. Nanoscale Advances, 2019, 1, 537-545.	2.2	21
78	Hexamethylene diisocyanate as an electrolyte additive for high-energy density lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 8246-8249.	5.2	20
79	Influence of Enhanced O₂ Provision on the Discharge Performance of Liâ€“air Batteries by Incorporating Fluoroether. ChemSusChem, 2017, 10, 1385-1389.	3.6	20
80	Effect of nitrogen-doped carbon/Ketjenblack composite on the morphology of Li2O2 for high-energy-density Liâ€“air batteries. Carbon, 2016, 96, 965-971.	5.4	19
81	In-situ constructing a rigid and stable dual-layer CEI film improving high-voltage 4.6ÂV LiCoO2 performances. Nano Energy, 2022, 96, 107082.	8.2	19
82	Polymer wiring of insulating electrode materials: An approach to improve energy density of lithium-ion batteries. Electrochemistry Communications, 2009, 11, 1350-1352.	2.3	18
83	Improving the Durability of Lithium-Metal Anode via In situ Constructed Multilayer SEI. ACS Applied Materials & Interfaces, 2021, 13, 49445-49452.	4.0	18
84	Exploration on the possibility of Ni foam as current collector in rechargeable lithium-air batteries. Electrochimica Acta, 2013, 87, 865-871.	2.6	17
85	Improvement of electrochemical activity of LiMnPO4-based cathode by surface iron enrichment. Journal of Power Sources, 2017, 341, 175-182.	4.0	17
86	Facile Pyrolyzed N-Doped Binder Network for Stable Si Anodes. ACS Applied Materials & Interfaces, 2017, 9, 32775-32781.	4.0	17
87	Influence of Li3V2(PO4)3 complexing on the performance of LiMnPO4 based materials utilized in lithium ion battery. Ceramics International, 2014, 40, 7637-7641.	2.3	16
88	Simplifying the Electrolyte Systems with the Functional Cosolvent. ACS Applied Materials & Interfaces, 2019, 11, 27854-27861.	4.0	15
89	Ab initio thermodynamic optimization of Ni-rich Niâ€“Coâ€“Mn oxide cathode coatings. Journal of Power Sources, 2020, 450, 227693.	4.0	15
90	A high power Liâ€“air battery enabled by a fluorocarbon additive. Journal of Materials Chemistry A, 2017, 5, 24617-24620.	5.2	13

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91	Carbon nanotube-wrapped Fe₂O₃ anode with improved performance for lithium-ion batteries. Beilstein Journal of Nanotechnology, 2017, 8, 649-656.	1.5	13
92	Isophorone Diisocyanate: An Effective Additive to Form Cathode-Protective-Interlayer and Its Influence on LiNi0.5Co0.2Mn0.3O2 at High Potential. ACS Applied Materials & Interfaces, 2018, 10, 11305-11310.	4.0	13
93	Insight into bulk charge transfer of lithium metal anodes by synergism of nickel seeding and LiF-Li3N-Li2S co-doped interphase. Energy Storage Materials, 2021, 37, 491-500.	9.5	13
94	Addressing Unfavorable Influence of Particle Cracking with a Strengthened Shell Layer in Ni-Rich Cathodes. ACS Applied Materials & Interfaces, 2021, 13, 18954-18960.	4.0	11
95	Efficient hole transport layers based on cross-linked poly(N-vinylcarbazole) for high-performance perovskite photodetectors. Journal of Materials Chemistry C, 2021, 9, 11722-11728.	2.7	10
96	Suppressing Sponge-Like Li Deposition via AlN-Modified Substrate for Stable Li Metal Anode. ACS Applied Materials & Interfaces, 2019, 11, 42261-42270.	4.0	9
97	The mechanism of V-modification in Li2CoSiO4 cathode material for Li-ion batteries: A combined first-principles and experimental study. Electrochimica Acta, 2020, 353, 136564.	2.6	9
98	Efficient and Stable Large-Area Perovskite Solar Cells with Inorganic Perovskite/Carbon Quantum Dot-Graded Heterojunction. Research, 2021, 2021, 9845067.	2.8	9
99	Direct investigation of charge transfer in neurons by electrostatic force microscopy. Ultramicroscopy, 2019, 196, 24-32.	0.8	8
100	Synthesis and Electrochemical Characterization of Lithium Carboxylate 2D Compounds as Highâ€Performance Anodes for Liâˆ'Ion Batteries. ChemElectroChem, 2020, 7, 306-313.	1.7	8
101	High-loading lateral Li deposition realized by a Scalable Fluorocarbon Bonded Laminates. Carbon, 2021, 171, 894-906.	5.4	8
102	Additives to disturb LiMn0.8Fe0.2PO4 growth and their influence on performance. Journal of Nanoparticle Research, 2015, 17, 1.	0.8	6
103	Prolonging the Cycle Life of a Lithiumâ€"Air Battery by Alleviating Electrolyte Degradation with a Ceramicâ€"Carbon Composite Cathode. ChemSusChem, 2019, 12, 4962-4967.	3.6	6
104	Amide-Based Interface Layer with High Toughness In Situ Building on the Li Metal Anode. ACS Applied Materials & Interfaces, 2020, 12, 25826-25831.	4.0	6
105	A Framework with Enriched Fluorinated Sites for Stable Li Metal Cycling. Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2020, .	2.2	6
106	Influence of HDI as a cathode film-forming additive on the performance of LiFe0.2Mn0.8PO4/C cathode. RSC Advances, 2017, 7, 41970-41972.	1.7	5
107	Peroxo Species Formed in the Bulk of Silicate Cathodes. Angewandte Chemie - International Edition, 2021, 60, 10056-10063.	7.2	5
108	High-performance Li-air battery after limiting inter-electrode crosstalk. Energy Storage Materials, 2021, 39, 225-231.	9.5	5

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109	Enhanced Electrochemical Performance of Ni-Rich Cathodes by Neutralizing Residual Lithium with Acid Compounds. ACS Applied Materials & Interfaces, 2021, 13, 55072-55079.	4.0	5
110	Nanostructure and its effect on electrochemical properties of polyanionic Li₂CoSiO₄ for lithium ion batteries. Nanotechnology, 2020, 31, 425602.	1.3	4
111	Transplantable Carbonaceous Li⁺ Filtrating Membrane for Lithium Metal Protection. ACS Applied Materials & Interfaces, 2020, 12, 30494-30502.	4.0	3
112	Re-considering the LiMn1-xFexPO4/C cathodes utilized in electric vehicles. Ionics, 2020, 26, 3215-3221.	1.2	3
113	Investigation of electrolytes utilized for high-voltage LiNi0.5Mn1.5O4 batteries. AIP Conference Proceedings, 2017, , .	0.3	2
114	Peroxo Species Formed in the Bulk of Silicate Cathodes. Angewandte Chemie, 2021, 133, 10144-10151.	1.6	2
115	Fâ€“Nâ€“S doped lithiophilic interphases for stable Li metal and alloy anodes. Journal of Power Sources, 2021, 508, 230334.	4.0	2
116	Magnetohydrodynamic Interfaceâ€Rearranged Lithium Ions Distribution for Uniform Lithium Deposition and Stable Lithium Metal Anode. ChemPhysChem, 2021, 22, 1027-1033.	1.0	1
117	Realizing Compact Lithium Deposition via Elaborative Nucleation and Growth Regulation for Stable Lithium-Metal Batteries. ACS Applied Materials & Interfaces, 2021, 13, 34248-34257.	4.0	1
118	Improvement of Cyclic Stability of Na0.67Mn0.8Ni0.1Co0.1O2 via Suppressing Lattice Variation. Chinese Physics Letters, 2021, 38, 076102.	1.3	1
119	High performance 0.9LiMnPO4-0.1LiFePO4/C composite. Science China Technological Sciences, 2020, 63, 971-976.	2.0	0
120	Innentitelbild: Peroxo Species Formed in the Bulk of Silicate Cathodes (Angew. Chem. 18/2021). Angewandte Chemie, 2021, 133, 9814-9814.	1.6	0
121	Compact Interlaminar Lithium Plating Realized by Silver Nanowires Imbedded in a Stacked Graphene Host with a Rational Void Space. ACS Applied Energy Materials, 2022, 5, 3100-3109.	2.5	0