

Feng Lin

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

100
papers

5,337
citations

36
h-index

72
g-index

109
ext. papers

6,601
ext. citations

14.4
avg, IF

5.9
L-index

#	Paper	IF	Citations
100	Mapping Lattice Distortions in LiNi _{0.5} Mn _{1.5} O ₄ Cathode Materials. <i>ACS Energy Letters</i> , 2022 , 7, 690-695	20.1	4
99	TXM-Sandbox: an open-source software for transmission X-ray microscopy data analysis.. <i>Journal of Synchrotron Radiation</i> , 2022 , 29, 266-275	2.4	1
98	Synchrotron X-ray Spectroscopy and Imaging for Metal Oxide Intercalation Cathode Chemistry 2022 , 343-373		
97	Dynamics of particle network in composite battery cathodes.. <i>Science</i> , 2022 , 376, 517-521	33.3	11
96	Revealing the Dynamics and Roles of Iron Incorporation in Nickel Hydroxide Water Oxidation Catalysts. <i>Journal of the American Chemical Society</i> , 2021 , 143, 18519-18526	16.4	14
95	Spatial and Temporal Analysis of Sodium-Ion Batteries. <i>ACS Energy Letters</i> , 2021 , 6, 4023-4054	20.1	12
94	Docking MOF crystals on graphene support for highly selective electrocatalytic peroxide production. <i>Nano Research</i> , 2021 , 1-8	10	2
93	Vacancy-Enabled O3 Phase Stabilization for Manganese-Rich Layered Sodium Cathodes. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 8258-8267	16.4	23
92	Vacancy-Enabled O3 Phase Stabilization for Manganese-Rich Layered Sodium Cathodes. <i>Angewandte Chemie</i> , 2021 , 133, 8339-8348	3.6	8
91	Electrolyte Regulating toward Stabilization of Cobalt-Free Ultrahigh-Nickel Layered Oxide Cathode in Lithium-Ion Batteries. <i>ACS Energy Letters</i> , 2021 , 6, 1324-1332	20.1	13
90	Heterogeneous, Defect-Rich Battery Particles and Electrodes: Why Do They Matter, and How Can One Leverage Them?. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 9618-9629	3.8	4
89	X-ray Nanoimaging of Crystal Defects in Single Grains of Solid-State Electrolyte LiAlLaZrO. <i>Nano Letters</i> , 2021 , 21, 4570-4576	11.5	5
88	Electrochemical and Nanomechanical Properties of TiO ₂ Ceramic Filler Li-Ion Composite Gel Polymer Electrolytes for Li Metal Batteries. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2100669	4.6	3
87	A Self-Sodiophilic Carbon Host Promotes the Cyclability of Sodium Anode. <i>Advanced Functional Materials</i> , 2021 , 31, 2007556	15.6	6
86	Room Temperature to 150 °C Lithium Metal Batteries Enabled by a Rigid Molecular Ionic Composite Electrolyte. <i>Advanced Energy Materials</i> , 2021 , 11, 2003559	21.8	13
85	Chemical Modulation of Local Transition Metal Environment Enables Reversible Oxygen Redox in Mn-Based Layered Cathodes. <i>ACS Energy Letters</i> , 2021 , 6, 2882-2890	20.1	3
84	Transmission x-ray microscopy and its applications in battery material research-a short review. <i>Nanotechnology</i> , 2021 , 32,	3.4	8

83	Multiphase, Multiscale Chemomechanics at Extreme Low Temperatures: Battery Electrodes for Operation in a Wide Temperature Range. <i>Advanced Energy Materials</i> , 2021 , 11, 2102122	21.8	10
82	Fe-based single-atom catalysis for oxidizing contaminants of emerging concern by activating peroxides. <i>Journal of Hazardous Materials</i> , 2021 , 418, 126294	12.8	9
81	Enhancing surface oxygen retention through theory-guided doping selection in Li _{1-x} NiO ₂ for next-generation lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 23293-23303	13	20
80	Machine-learning-revealed statistics of the particle-carbon/binder detachment in lithium-ion battery cathodes. <i>Nature Communications</i> , 2020 , 11, 2310	17.4	75
79	Creating compressive stress at the NiOOH/NiO interface for water oxidation. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 10747-10754	13	20
78	A Surface Chemistry Approach to Tailoring the Hydrophilicity and Lithiophilicity of Carbon Films for Hosting High-Performance Lithium Metal Anodes. <i>Advanced Functional Materials</i> , 2020 , 30, 2000585	15.6	12
77	Quantitative probing of the fast particle motion during the solidification of battery electrodes. <i>Applied Physics Letters</i> , 2020 , 116, 081904	3.4	5
76	Structural and Electrochemical Impacts of Mg/Mn Dual Dopants on the LiNiO Cathode in Li-Metal Batteries. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 12874-12882	9.5	33
75	Charge distribution guided by grain crystallographic orientations in polycrystalline battery materials. <i>Nature Communications</i> , 2020 , 11, 83	17.4	75
74	Tuning the Morphology and Electronic Properties of Single-Crystal LiNiMnO: Exploring the Influence of LiCl-KCl Molten Salt Flux Composition and Synthesis Temperature. <i>Inorganic Chemistry</i> , 2020 , 59, 10591-10603	5.1	9
73	Unveiling the critical role of the Mn dopant in a NiFe(OH) ₂ catalyst for water oxidation. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 17471-17476	13	10
72	Charging Reactions Promoted by Geometrically Necessary Dislocations in Battery Materials Revealed by In Situ Single-Particle Synchrotron Measurements. <i>Advanced Materials</i> , 2020 , 32, e2003417	24	11
71	Uncovering phase transformation, morphological evolution, and nanoscale color heterogeneity in tungsten oxide electrochromic materials. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 20000-20010	13	3
70	Phase segregation reversibility in mixed-metal hydroxide water oxidation catalysts. <i>Nature Catalysis</i> , 2020 , 3, 743-753	36.5	71
69	Mutual modulation between surface chemistry and bulk microstructure within secondary particles of nickel-rich layered oxides. <i>Nature Communications</i> , 2020 , 11, 4433	17.4	34
68	Defect and structural evolution under high-energy ion irradiation informs battery materials design for extreme environments. <i>Nature Communications</i> , 2020 , 11, 4548	17.4	9
67	The sensitive surface chemistry of Co-free, Ni-rich layered oxides: identifying experimental conditions that influence characterization results. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 17487-17497	13	19
66	Targeted Surface Doping with Reversible Local Environment Improves Oxygen Stability at the Electrochemical Interfaces of Nickel-Rich Cathode Materials. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 37885-37891	9.5	19

65	Direct high-resolution mapping of electrocatalytic activity of semi-two-dimensional catalysts with single-edge sensitivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 11618-11623	11.5	35
64	Quantification of Heterogeneous Degradation in Li-Ion Batteries. <i>Advanced Energy Materials</i> , 2019 , 9, 1900674	21.8	111
63	Fully Oxidized NiBe Layered Double Hydroxide with 100% Exposed Active Sites for Catalyzing Oxygen Evolution Reaction. <i>ACS Catalysis</i> , 2019 , 9, 6027-6032	13.1	112
62	Electrocatalysis: Well-Dispersed Nickel- and Zinc-Tailored Electronic Structure of a Transition Metal Oxide for Highly Active Alkaline Hydrogen Evolution Reaction (Adv. Mater. 16/2019). <i>Advanced Materials</i> , 2019 , 31, 1970113	24	2
61	High-Voltage Charging-Induced Strain, Heterogeneity, and Micro-Cracks in Secondary Particles of a Nickel-Rich Layered Cathode Material. <i>Advanced Functional Materials</i> , 2019 , 29, 1900247	15.6	132
60	Well-Dispersed Nickel- and Zinc-Tailored Electronic Structure of a Transition Metal Oxide for Highly Active Alkaline Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2019 , 31, e1807771	24	149
59	Surface Characterization of Li-Substituted Compositionally Heterogeneous NaLi _{0.045} Cu _{0.185} Fe _{0.265} Mn _{0.505} O ₂ Sodium-Ion Cathode Material. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 11428-11435	3.8	10
58	An Ordered P2/P3 Composite Layered Oxide Cathode with Long Cycle Life in Sodium-Ion Batteries 2019 , 1, 573-581		20
57	Chemical-enzymatic fractionation to unlock the potential of biomass-derived carbon materials for sodium ion batteries. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 26954-26965	13	24
56	Dopant Distribution in Co-Free High-Energy Layered Cathode Materials. <i>Chemistry of Materials</i> , 2019 , 31, 9769-9776	9.6	54
55	Oxygen Release Induced Chemomechanical Breakdown of Layered Cathode Materials. <i>Nano Letters</i> , 2018 , 18, 3241-3249	11.5	163
54	Electrochemical Characteristics of Layered Transition Metal Oxide Cathode Materials for Lithium Ion Batteries: Surface, Bulk Behavior, and Thermal Properties. <i>Accounts of Chemical Research</i> , 2018 , 51, 89-96	24.3	128
53	Surface transformation by a cocktail solvent enables stable cathode materials for sodium ion batteries. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 2758-2766	13	17
52	High-performance inertial impaction filters for particulate matter removal. <i>Scientific Reports</i> , 2018 , 8, 4757	4.9	30
51	Understanding the critical chemistry to inhibit lithium consumption in lean lithium metal composite anodes. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 16003-16011	13	12
50	Propagation topography of redox phase transformations in heterogeneous layered oxide cathode materials. <i>Nature Communications</i> , 2018 , 9, 2810	17.4	45
49	Accelerated Evolution of Surface Chemistry Determined by Temperature and Cycling History in Nickel-Rich Layered Cathode Materials. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 23842-23850	9.5	38
48	Deciphering the Cathode-Electrolyte Interfacial Chemistry in Sodium Layered Cathode Materials. <i>Advanced Energy Materials</i> , 2018 , 8, 1801975	21.8	64

47	Chemomechanical behaviors of layered cathode materials in alkali metal ion batteries. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 21859-21884	13	92
46	Thermally driven mesoscale chemomechanical interplay in Li _{0.5} Ni _{0.6} Mn _{0.2} Co _{0.2} O ₂ cathode materials. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 23055-23061	13	32
45	Garnet Electrolyte Surface Degradation and Recovery. <i>ACS Applied Energy Materials</i> , 2018 , 1, 7244-7252	6.1	50
44	Empowering multicomponent cathode materials for sodium ion batteries by exploring three-dimensional compositional heterogeneities. <i>Energy and Environmental Science</i> , 2018 , 11, 2496-2508	35.4	34
43	Zinc-Blende CdS Nanocubes with Coordinated Facets for Photocatalytic Water Splitting. <i>ACS Catalysis</i> , 2017 , 7, 1470-1477	13.1	56
42	A New Anion Receptor for Improving the Interface between Lithium- and Manganese-Rich Layered Oxide Cathode and the Electrolyte. <i>Chemistry of Materials</i> , 2017 , 29, 2141-2149	9.6	31
41	A review of Ni-based layered oxides for rechargeable Li-ion batteries. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 874-901	13	303
40	Atomic Insights into the Enhanced Surface Stability in High Voltage Cathode Materials by Ultrathin Coating. <i>Advanced Functional Materials</i> , 2017 , 27, 1602873	15.6	24
39	Synchrotron X-ray Analytical Techniques for Studying Materials Electrochemistry in Rechargeable Batteries. <i>Chemical Reviews</i> , 2017 , 117, 13123-13186	68.1	291
38	Intercalating Ti Nb O Anode Materials for Fast-Charging, High-Capacity and Safe Lithium-Ion Batteries. <i>Small</i> , 2017 , 13, 1702903	11	33
37	A spongy nickel-organic CO reduction photocatalyst for nearly 100% selective CO production. <i>Science Advances</i> , 2017 , 3, e1700921	14.3	124
36	Tailoring Transition-Metal Hydroxides and Oxides by Photon-Induced Reactions. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 14272-14276	16.4	8
35	Metal segregation in hierarchically structured cathode materials for high-energy lithium batteries. <i>Nature Energy</i> , 2016 , 1,	62.3	179
34	Spontaneous incorporation of gold in palladium-based ternary nanoparticles makes durable electrocatalysts for oxygen reduction reaction. <i>Nature Communications</i> , 2016 , 7, 11941	17.4	58
33	Solution-Processable Glass LiI-Li ₄ SnS ₄ Superionic Conductors for All-Solid-State Li-Ion Batteries. <i>Advanced Materials</i> , 2016 , 28, 1874-83	24	214
32	Elucidation of the surface characteristics and electrochemistry of high-performance LiNiO ₂ . <i>Chemical Communications</i> , 2016 , 52, 4239-42	5.8	50
31	Solid-State Conversion Reaction to Enhance Charge Transfer in Electrochromic Materials. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1400523	4.6	7
30	Poly(acrylic acid) Bridged Gadolinium Metal-Organic Framework-Gold Nanoparticle Composites as Contrast Agents for Computed Tomography and Magnetic Resonance Bimodal Imaging. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 17765-75	9.5	64

29	Graphene as an efficient interfacial layer for electrochromic devices. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 11330-6	9.5	18
28	Sodiation Kinetics of Metal Oxide Conversion Electrodes: A Comparative Study with Lithiation. <i>Nano Letters</i> , 2015 , 15, 5755-63	11.5	100
27	Contrasting Reaction Modality between Electrochemical Sodiation and Lithiation in NiO Conversion Electrode Materials. <i>Microscopy and Microanalysis</i> , 2015 , 21, 325-326	0.5	2
26	Chemical and structural stability of lithium-ion battery electrode materials under electron beam. <i>Scientific Reports</i> , 2014 , 4, 5694	4.9	86
25	Phase evolution for conversion reaction electrodes in lithium-ion batteries. <i>Nature Communications</i> , 2014 , 5, 3358	17.4	146
24	The influence of sol-gel processing on the electrochromic properties of mesoporous WO ₃ films produced by ultrasonic spray deposition. <i>Solar Energy Materials and Solar Cells</i> , 2014 , 121, 163-170	6.4	36
23	Influence of synthesis conditions on the surface passivation and electrochemical behavior of layered cathode materials. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 19833-19840	13	38
22	Computational and Experimental Investigation of Ti Substitution in Li ₁ (Ni _x Mn _x Co _{1-2x-y} Ti _y)O ₂ for Lithium Ion Batteries. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 3649-55	6.4	64
21	Profiling the nanoscale gradient in stoichiometric layered cathode particles for lithium-ion batteries. <i>Energy and Environmental Science</i> , 2014 , 7, 3077	35.4	133
20	Electrochromic performance of nanocomposite nickel oxide counter electrodes containing lithium and zirconium. <i>Solar Energy Materials and Solar Cells</i> , 2014 , 126, 206-212	6.4	18
19	A 3-D Phase Evolution Panorama Uncovered Using a Grid-in-a-Coin Cell Method for Conversion Reaction Electrodes in Lithium-ion Batteries. <i>Microscopy and Microanalysis</i> , 2014 , 20, 444-445	0.5	
18	Surface reconstruction and chemical evolution of stoichiometric layered cathode materials for lithium-ion batteries. <i>Nature Communications</i> , 2014 , 5, 3529	17.4	860
17	Origin of electrochromism in high-performing nanocomposite nickel oxide. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 3643-9	9.5	67
16	Nitrogen-doped nickel oxide thin films for enhanced electrochromic applications. <i>Thin Solid Films</i> , 2013 , 527, 26-30	2.2	33
15	Hole doping in Al-containing nickel oxide materials to improve electrochromic performance. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 301-9	9.5	93
14	Self-assembled single-crystalline ZnO nanostructures. <i>CrystEngComm</i> , 2013 , 15, 3780	3.3	9
13	Photocatalytic Activity and Selectivity of ZnO Materials in the Decomposition of Organic Compounds. <i>ChemCatChem</i> , 2013 , 5, 3841-3846	5.2	19
12	Improvement in carrier transport properties by mild thermal annealing of PbS quantum dot solar cells. <i>Applied Physics Letters</i> , 2013 , 102, 043506	3.4	37

11	Nanoscale gold intercalated into mesoporous silica as a highly active and robust catalyst. <i>Nanotechnology</i> , 2012 , 23, 294010	3.4	16
10	Ultrasonic spray deposition of high performance WO ₃ films using template-assisted sol-gel chemistry. <i>Electrochemistry Communications</i> , 2012 , 25, 62-65	5.1	17
9	In situ crystallization of high performing WO ₃ -based electrochromic materials and the importance for durability and switching kinetics. <i>Journal of Materials Chemistry</i> , 2012 , 22, 16817		70
8	Low-temperature ozone exposure technique to modulate the stoichiometry of WO _x nanorods and optimize the electrochromic performance. <i>Nanotechnology</i> , 2012 , 23, 255601	3.4	29
7	Laser synthesis of gold/oxide nanocomposites. <i>Journal of Materials Chemistry</i> , 2010 , 20, 1103-1106		50
6	Investigating Particle Size-Dependent Redox Kinetics and Charge Distribution in Disordered Rocksalt Cathodes. <i>Advanced Functional Materials</i> , 2110502	15.6	0
5	Heterogeneous Reaction Activities and Statistical Characteristics of Particle Cracking in Battery Electrodes. <i>ACS Energy Letters</i> , 4065-4070	20.1	9
4	Surface reconstruction and chemical evolution of stoichiometric layered cathode materials for lithium-ion batteries		1
3	New Insights into Structural Evolution of LiNiO ₂ Revealed by Operando Neutron Diffraction. <i>Batteries and Supercaps</i> ,	5.6	3
2	Tailoring Disordered/Ordered Phases to Revisit the Degradation Mechanism of High-Voltage LiNi _{0.5} Mn _{1.5} O ₄ Spinel Cathode Materials. <i>Advanced Functional Materials</i> , 2112279	15.6	2
1	Sustainable Electric Vehicle Batteries for a Sustainable World: Perspectives on Battery Cathodes, Environment, Supply Chain, Manufacturing, Life Cycle, and Policy. <i>Advanced Energy Materials</i> , 2200383	21.8	5