

Chengdu Liang

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.

123
papers

13,995
citations

54
h-index

118
g-index

129
ext. papers

15,446
ext. citations

10.6
avg, IF

6.76
L-index

#	Paper	IF	Citations
123	Regulating Electronic Structure of Single-Atom Catalysts toward Efficient Bifunctional Oxygen Electrocatalysis.. <i>Small Methods</i> , 2022 , e2101511	12.8	5
122	Exploring the concordant solid-state electrolytes for all-solid-state lithium-sulfur batteries. <i>Nano Energy</i> , 2022 , 96, 107093	17.1	3
121	In-situ constructing polyacrylamide interphase enables dendrite-free zinc anode in aqueous batteries. <i>Electrochimica Acta</i> , 2021 , 378, 138106	6.7	13
120	An Aqueous Binder for High-Areal-Capacity Fe ₃ O ₄ -Based Anodes in Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2021 , 4, 7201-7208	6.1	6
119	A robust network binder via localized linking by small molecules for high-areal-capacity silicon anodes in lithium-ion batteries. <i>Nano Energy</i> , 2021 , 79, 105430	17.1	32
118	Epoxy and amide crosslinked polarity enhanced polysaccharides binder for silicon anode in lithium-ion batteries. <i>Electrochimica Acta</i> , 2021 , 368, 137580	6.7	4
117	9,10-Anthraquinone/KCuFe(CN): A Highly Compatible Aqueous Aluminum-Ion Full-Battery Configuration. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 8353-8360	9.5	10
116	Epoxy Cross-Linking Enhanced the Toughness of Polysaccharides as a Silicon Anode Binder for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 37704-37712	9.5	4
115	Controllably Electrodepositing ZIF-8 Protective Layer for Highly Reversible Zinc Anode with Ultralong Lifespan. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 9055-9059	6.4	2
114	Peach gum as an efficient binder for high-areal-capacity lithium-sulfur batteries. <i>Sustainable Materials and Technologies</i> , 2021 , 30, e00334	5.3	0
113	A biopolymer network for lean binder in silicon nanoparticle anodes for lithium-ion batteries. <i>Sustainable Materials and Technologies</i> , 2021 , 30, e00333	5.3	7
112	Chitosan oligosaccharide derived polar host for lithium deposition in lithium metal batteries. <i>Sustainable Materials and Technologies</i> , 2020 , 24, e00158	5.3	4
111	Abnormally Low Activation Energy in Cubic Na ₃ SbS ₄ Superionic Conductors. <i>Chemistry of Materials</i> , 2020 , 32, 2264-2271	9.6	13
110	Silicon Anode with High Initial Coulombic Efficiency by Modulated Trifunctional Binder for High-Areal-Capacity Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2020 , 10, 1903110	21.8	113
109	Electrochemical redox behavior of organic quinone compounds in aqueous metal ion electrolytes. <i>Nano Energy</i> , 2020 , 73, 104766	17.1	24
108	Selective Adsorption and Electrocatalysis of Polysulfides through Hexatomic Nickel Clusters Embedded in N-Doped Graphene toward High-Performance Li-S Batteries. <i>Research</i> , 2020 , 2020, 5714349	7.8	11
107	A new battery process technology inspired by partially carbonized polymer binders. <i>Nano Energy</i> , 2020 , 67, 104234	17.1	31

106	Atomic Platinum Anchored on Fe-N-C Material for High Performance Oxygen Reduction Reaction. <i>European Journal of Inorganic Chemistry</i> , 2020 , 2020, 165-168	2.3	1
105	Millimeter Silicon-Derived Secondary Submicron Materials as High-Initial Coulombic Efficiency Anode for Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2020 , 3, 10255-10260	6.1	6
104	Electrospinning MoS ₂ -Decorated Porous Carbon Nanofibers for High-Performance Lithium-Sulfur Batteries. <i>ACS Applied Energy Materials</i> , 2020 , 3, 11893-11899	6.1	12
103	Pre-activation and Defects Introduced via Citric Acid to Mitigate Capacity and Voltage Fading in Li-rich Cathode. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2020 , 646, 1285-1291	1.3	2
102	3D porous carbon nanofibers with CeO ₂ -decorated as cathode matrix for high performance lithium-sulfur batteries. <i>Journal of Power Sources</i> , 2020 , 473, 228588	8.9	40
101	Platinum Atomic Clusters Embedded in Defects of Anatase/Graphene for Efficient Electro- and Photocatalytic Hydrogen Evolution. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 40204-40212	9.5	13
100	Anchoring Polyiodide to Conductive Polymers as Cathode for High-Performance Aqueous Zinc-Iodine Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 14280-14285	8.3	22
99	Stable Lithium Metal Anode Enabled by a Lithiophilic and Electron/Ion Conductive Framework. <i>ACS Nano</i> , 2020 , 14, 5618-5627	16.7	43
98	Polyisoprene Captured Sulfur Nanocomposite Materials for High-Areal-Capacity Lithium Sulfur Battery. <i>ACS Applied Polymer Materials</i> , 2019 , 1, 1965-1970	4.3	27
97	Platinum single-atom and cluster anchored on functionalized MWCNTs with ultrahigh mass efficiency for electrocatalytic hydrogen evolution. <i>Nano Energy</i> , 2019 , 63, 103849	17.1	57
96	Exploring competitive features of stationary sodium ion batteries for electrochemical energy storage. <i>Energy and Environmental Science</i> , 2019 , 12, 1512-1533	35.4	258
95	An innovation: Dendrite free quinone paired with ZnMn ₂ O ₄ for zinc ion storage. <i>Materials Today Energy</i> , 2019 , 13, 323-330	7	42
94	Nitrogen-doped porous carbon sponge-confined ZnO quantum dots for metal collector-free lithium ion battery. <i>Journal of Electroanalytical Chemistry</i> , 2019 , 848, 113275	4.1	6
93	Overwhelming the Performance of Single Atoms with Atomic Clusters for Platinum-Catalyzed Hydrogen Evolution. <i>ACS Catalysis</i> , 2019 , 9, 8213-8223	13.1	36
92	A new ether-based electrolyte for lithium sulfur batteries using a S@pPAN cathode. <i>Chemical Communications</i> , 2018 , 54, 5478-5481	5.8	31
91	Fabrication of Sub-Micrometer-Thick Solid Electrolyte Membranes of Li ₃ PS ₄ via Tiled Assembly of Nanoscale, Plate-Like Building Blocks. <i>Advanced Energy Materials</i> , 2018 , 8, 1800014	21.8	34
90	Blocking Polysulfides and Facilitating Lithium-Ion Transport: Polystyrene Sulfonate@HKUST-1 Membrane for Lithium-Sulfur Batteries. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 30451-30459	9.5	51
89	A compatible carbonate electrolyte with lithium anode for high performance lithium sulfur battery. <i>Electrochimica Acta</i> , 2018 , 282, 555-562	6.7	27

88	Metal-organic framework nanosheets-guided uniform lithium deposition for metallic lithium batteries. <i>Energy Storage Materials</i> , 2018 , 11, 267-273	19.4	61
87	Aligning academia and industry for unified battery performance metrics. <i>Nature Communications</i> , 2018 , 9, 5262	17.4	156
86	Revealing the Structural Stability and Na-Ion Mobility of 3D Superionic Conductor Na ₃ SbS ₄ at Extremely Low Temperatures. <i>ACS Applied Energy Materials</i> , 2018 , 1, 7028-7034	6.1	9
85	In-situ investigation of pressure effect on structural evolution and conductivity of Na ₃ SbS ₄ superionic conductor. <i>Journal of Power Sources</i> , 2018 , 401, 111-116	8.9	13
84	Foldable interpenetrated metal-organic frameworks/carbon nanotubes thin film for lithium-sulfur batteries. <i>Nature Communications</i> , 2017 , 8, 14628	17.4	359
83	Exploiting a robust biopolymer network binder for an ultrahigh-areal-capacity LiB battery. <i>Energy and Environmental Science</i> , 2017 , 10, 750-755	35.4	221
82	In Situ Wrapping Si Nanoparticles with 2D Carbon Nanosheets as High-Areal-Capacity Anode for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 38159-38164	9.5	59
81	Lattice-Cell Orientation Disorder in Complex Spinel Oxides. <i>Advanced Energy Materials</i> , 2017 , 7, 1601950	2.8	16
80	NiCo sulfide nanoboxes with tunable compositions for high-performance electrochemical pseudocapacitors. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 10248-10253	13	64
79	Sodium Ion Transport Mechanisms in Antiperovskite Electrolytes Na ₃ OBr and Na ₄ OI ₂ : An in Situ Neutron Diffraction Study. <i>Inorganic Chemistry</i> , 2016 , 55, 5993-8	5.1	48
78	Li ₂ OHCl Crystalline Electrolyte for Stable Metallic Lithium Anodes. <i>Journal of the American Chemical Society</i> , 2016 , 138, 1768-71	16.4	109
77	Structural and electrolyte properties of Li ₄ P ₂ S ₆ . <i>Solid State Ionics</i> , 2016 , 284, 61-70	3.3	43
76	An Air-Stable Na ₃ SbS ₄ Superionic Conductor Prepared by a Rapid and Economic Synthetic Procedure. <i>Angewandte Chemie</i> , 2016 , 128, 8693-8697	3.6	22
75	An Air-Stable Na ₃ SbS ₄ Superionic Conductor Prepared by a Rapid and Economic Synthetic Procedure. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 8551-5	16.4	125
74	Hierarchical NiCo ₂ O ₄ Hollow Microcuboids as Bifunctional Electrocatalysts for Overall Water-Splitting. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 6290-4	16.4	592
73	Fabrication of ultrathin solid electrolyte membranes of Li ₃ PS ₄ nanoflakes by evaporation-induced self-assembly for all-solid-state batteries. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 8091-8096	13	89
72	Origin of High Li ⁺ Conduction in Doped Li ₇ La ₃ Zr ₂ O ₁₂ Garnets. <i>Chemistry of Materials</i> , 2015 , 27, 5491-5496	9.6	78
71	Highly dispersed buckybowl as model carbocatalysts for C-H bond activation. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 8667-8675	13	2

70	The filler effect—A study of solid oxide fillers with Li ₃ PS ₄ for lithium conducting electrolytes. <i>Solid State Ionics</i> , 2015 , 283, 75-80	3.3	31
69	Unravelling the Impact of Reaction Paths on Mechanical Degradation of Intercalation Cathodes for Lithium-Ion Batteries. <i>Journal of the American Chemical Society</i> , 2015 , 137, 13732-5	16.4	48
68	A study of suppressed formation of low-conductivity phases in doped Li ₇ La ₃ Zr ₂ O ₁₂ garnets by in situ neutron diffraction. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 22868-22876	13	42
67	Lithium–Sulfur batteries: from liquid to solid cells. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 936-958	13	300
66	Asymmetric Rate Behavior of Si Anodes for Lithium-Ion Batteries: Ultrafast De-Lithiation versus Sluggish Lithiation at High Current Densities. <i>Advanced Energy Materials</i> , 2015 , 5, 1401627	21.8	44
65	Solid Electrolyte: the Key for High-Voltage Lithium Batteries. <i>Advanced Energy Materials</i> , 2015 , 5, 1401408.8	10.8	419
64	Correlation of anisotropy and directional conduction in Li ₃ PS ₄ fast Li ⁺ conductor. <i>Applied Physics Letters</i> , 2015 , 107, 013904	3.4	22
63	TiO ₂ Microboxes with Controlled Internal Porosity for High-Performance Lithium Storage. <i>Angewandte Chemie</i> , 2015 , 127, 14539-14543	3.6	6
62	High-Performance Lithium Solid-State Batteries Operating at Elevated Temperature. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1500268	4.6	6
61	TiO ₂ Microboxes with Controlled Internal Porosity for High-Performance Lithium Storage. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 14331-5	16.4	71
60	An iodide-based Li ₇ P ₂ S ₈ I superionic conductor. <i>Journal of the American Chemical Society</i> , 2015 , 137, 1384-7	16.4	228
59	Identifying active functionalities on few-layered graphene catalysts for oxidative dehydrogenation of isobutane. <i>ChemSusChem</i> , 2014 , 7, 483-91	8.3	51
58	Air-stable, high-conduction solid electrolytes of arsenic-substituted Li ₄ SnS ₄ . <i>Energy and Environmental Science</i> , 2014 , 7, 1053-1058	35.4	228
57	Structural Evolution and Li Dynamics in Nanophase Li ₃ PS ₄ by Solid-State and Pulsed-Field Gradient NMR. <i>Chemistry of Materials</i> , 2014 , 26, 3558-3564	9.6	46
56	A high conductivity oxide–sulfide composite lithium superionic conductor. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 4111-4116	13	63
55	Pushing the theoretical limit of Li-CF(x) batteries: a tale of bifunctional electrolyte. <i>Journal of the American Chemical Society</i> , 2014 , 136, 6874-7	16.4	51
54	Artificial solid electrolyte interphase to address the electrochemical degradation of silicon electrodes. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 10083-8	9.5	115
53	A high-conduction Ge substituted Li ₃ As ₄ solid electrolyte with exceptional low activation energy. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 10396-10403	13	51

52	Phosphorous Pentasulfide as a Novel Additive for High-Performance Lithium-Sulfur Batteries. <i>Advanced Functional Materials</i> , 2013 , 23, 1064-1069	15.6	363
51	An Artificial Solid Electrolyte Interphase Enables the Use of a LiNi _{0.5} Mn _{1.5} O ₄ 5 V Cathode with Conventional Electrolytes. <i>Advanced Energy Materials</i> , 2013 , 3, 1275-1278	21.8	66
50	Anomalous high ionic conductivity of nanoporous Li ₃ PS ₄ . <i>Journal of the American Chemical Society</i> , 2013 , 135, 975-8	16.4	537
49	Carbon-Mediated Catalysis: Oxidative Dehydrogenation on Graphitic Carbon. <i>ACS Symposium Series</i> , 2013 , 247-258	0.4	5
48	Lithium superionic sulfide cathode for all-solid lithium-sulfur batteries. <i>ACS Nano</i> , 2013 , 7, 2829-33	16.7	284
47	Oxygen-functionalized few-layer graphene sheets as active catalysts for oxidative dehydrogenation reactions. <i>ChemSusChem</i> , 2013 , 6, 840-6	8.3	56
46	In-situ observation of inhomogeneous degradation in large format Li-ion cells by neutron diffraction. <i>Journal of Power Sources</i> , 2013 , 236, 163-168	8.9	90
45	Lithium polysulfidophosphates: a family of lithium-conducting sulfur-rich compounds for lithium-sulfur batteries. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 7460-3	16.4	233
44	Unraveling structural evolution of LiNi _{0.5} Mn _{1.5} O ₄ by in situ neutron diffraction. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 6908	13	43
43	A Perspective on Coatings to Stabilize High-Voltage Cathodes: LiMn _{1.5} Ni _{0.5} O ₄ with Sub-Nanometer Lipon Cycled with LiPF ₆ Electrolyte. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A3113-A3125	3.9	45
42	Lithium Polysulfidophosphates: A Family of Lithium-Conducting Sulfur-Rich Compounds for Lithium-Sulfur Batteries. <i>Angewandte Chemie</i> , 2013 , 125, 7608-7611	3.6	64
41	Vacuum-tight sample transfer stage for a scanning electron microscopic study of stabilized lithium metal particles. <i>Journal of Materials Science</i> , 2012 , 47, 1572-1577	4.3	15
40	Probing Li-Ni Cation Disorder in Li _{1-x} Ni _{1+x} Al _y O ₂ Cathode Materials by Neutron Diffraction. <i>Journal of the Electrochemical Society</i> , 2012 , 159, A924-A928	3.9	36
39	Visualizing the chemistry and structure dynamics in lithium-ion batteries by in-situ neutron diffraction. <i>Scientific Reports</i> , 2012 , 2, 747	4.9	118
38	Lithium-Sulfur Batteries 2011 , 811-840		
37	Synthesis of LiNiO ₂ cathode materials with homogeneous Al doping at the atomic level. <i>Journal of Power Sources</i> , 2011 , 196, 10201-10206	8.9	43
36	Oxidative dehydrogenation of isobutane on phosphorous-modified graphitic mesoporous carbon. <i>Carbon</i> , 2011 , 49, 659-668	10.4	53
35	Selective gas adsorption within a five-connected porous metal-organic framework. <i>Journal of Materials Chemistry</i> , 2010 , 20, 3984		58

34	Preparation of free-standing high quality mesoporous carbon membranes. <i>Carbon</i> , 2010 , 48, 557-560	10.4	43
33	Investigation of the selective sites on graphitic carbons for oxidative dehydrogenation of isobutane. <i>Journal of Catalysis</i> , 2009 , 267, 158-166	7.3	37
32	Mesoporous Carbon Materials with Ultra-Thin Pore Walls and Highly Dispersed Nickel Nanoparticles. <i>European Journal of Inorganic Chemistry</i> , 2009 , 2009, 605-612	2.3	21
31	Dual Phase Separation for Synthesis of Bimodal Meso-/Macroporous Carbon Monoliths. <i>Chemistry of Materials</i> , 2009 , 21, 2115-2124	9.6	86
30	Open-cage fullerene-like graphitic carbons as catalysts for oxidative dehydrogenation of isobutane. <i>Journal of the American Chemical Society</i> , 2009 , 131, 7735-41	16.4	77
29	Hierarchically Structured Sulfur/Carbon Nanocomposite Material for High-Energy Lithium Battery. <i>Chemistry of Materials</i> , 2009 , 21, 4724-4730	9.6	766
28	Polypyrrole-Based Nitrogen-Doped Carbon Replicas of SBA-15 and SBA-16 Containing Magnetic Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 13126-13133	3.8	63
27	Metal-organic framework with rationally tuned micropores for selective adsorption of water over methanol. <i>Inorganic Chemistry</i> , 2008 , 47, 5543-5	5.1	86
26	Advanced Liquid Membranes Based on Novel Ionic Liquids for Selective Separation of Olefin/Paraffin via Olefin-Facilitated Transport. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 881-888	3.9	85
25	Molecular-sieving capabilities of mesoporous carbon membranes. <i>Journal of Physical Chemistry B</i> , 2008 , 112, 8563-70	3.4	27
24	Mesoporous carbon materials: synthesis and modification. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 3696-717	16.4	1551
23	Mesoporöse Kohlenstoffmaterialien: Synthese und Modifizierung. <i>Angewandte Chemie</i> , 2008 , 120, 3754-3766	16.4	142
22	Graphitic mesoporous carbon as a durable fuel cell catalyst support. <i>Journal of Power Sources</i> , 2008 , 185, 423-427	8.9	133
21	Facile synthesis of ordered mesoporous carbons with high thermal stability by self-assembly of resorcinol-formaldehyde and block copolymers under highly acidic conditions. <i>Langmuir</i> , 2008 , 24, 7500-4	5.1	268
20	Selective gas sorption within a dynamic metal-organic framework. <i>Inorganic Chemistry</i> , 2007 , 46, 8705-9	5.1	118
19	Direct Synthesis of Mesoporous Carbon Microwires and Nanowires. <i>Chemistry of Materials</i> , 2007 , 19, 2383-2385	9.6	80
18	A microporous metal-organic framework for gas-chromatographic separation of alkanes. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 1390-3	16.4	1060
17	A Diazonium Salt-Based Ionic Liquid for Solvent-Free Modification of Carbon. <i>European Journal of Organic Chemistry</i> , 2006 , 2006, 586-589	3.2	37

16	Mesoporous Carbon Materials as Electrodes for Electrochemical Double-Layer Capacitor. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 973, 1		2
15	Electrosorption capacitance of nanostructured carbon-based materials. <i>Journal of Colloid and Interface Science</i> , 2006 , 302, 54-61	9.3	125
14	Synthesis of mesoporous carbon materials via enhanced hydrogen-bonding interaction. <i>Journal of the American Chemical Society</i> , 2006 , 128, 5316-7	16.4	659
13	Hydrophobic Brønsted acid-base ionic liquids based on PAMAM dendrimers with high proton conductivity and blue photoluminescence. <i>Journal of the American Chemical Society</i> , 2005 , 127, 12784-5	16.4	150
12	Synthesis of a large-scale highly ordered porous carbon film by self-assembly of block copolymers. <i>Angewandte Chemie - International Edition</i> , 2004 , 43, 5785-9	16.4	711
11	Synthesis of a Large-Scale Highly Ordered Porous Carbon Film by Self-Assembly of Block Copolymers. <i>Angewandte Chemie</i> , 2004 , 116, 5909-5913	3.6	75
10	Fluorinated carbon with ordered mesoporous structure. <i>Journal of the American Chemical Society</i> , 2004 , 126, 12782-3	16.4	77
9	A graphitized-carbon monolithic column. <i>Analytical Chemistry</i> , 2003 , 75, 4904-12	7.8	139
8	Use of gel-casting to prepare HPLC monolithic silica columns with uniform mesopores and tunable macrochannels. <i>Chemical Communications</i> , 2002 , 2680-1	5.8	31
7	Ionic liquids: a new class of sensing materials for detection of organic vapors based on the use of a quartz crystal microbalance. <i>Analytical Chemistry</i> , 2002 , 74, 2172-6	7.8	110
6	Development of a new atropine sulfate bulk acoustic wave sensor based on a molecularly imprinted electrosynthesized copolymer of aniline with o-phenylenediamine. <i>Analytica Chimica Acta</i> , 2000 , 423, 221-228	6.6	92
5	Molecular imprinting polymer coated BAW bio-mimic sensor for direct determination of epinephrine. <i>Analytica Chimica Acta</i> , 2000 , 415, 135-141	6.6	43
4	Bulk acoustic wave sensor for herbicide assay based on molecularly imprinted polymer. <i>Fresenius Journal of Analytical Chemistry</i> , 2000 , 367, 551-5		28
3	Biomimetic Bulk Acoustic Wave Sensor for Determination of Trimethoprim in the Organic Phase Based on a Molecular Imprinting Polymer.. <i>Analytical Sciences</i> , 2000 , 16, 211-215	1.7	10
2	Study of a molecular imprinting polymer coated BAW bio-mimic sensor and its application to the determination of caffeine in human serum and urine. <i>Analyst, The</i> , 1999 , 124, 1781-5	5	65
1	Fundamental air stability in solid-state electrolytes: principles and solutions. <i>Materials Chemistry Frontiers</i> ,	7.8	3