Xiang Chen

List of Publications by Year in Descending Order

124 papers	11,014 citations	49 h-index	104 g-index
142 ext. papers	14,320 ext. citations	12.6 avg, IF	7.01 L-index

#	Paper	IF	Citations
124	An encapsulating lithium-polysulfide electrolyte for practical lithium–sulfur batteries. *CheM*, **2022**,	16.2	13
123	The chemical origin of temperature-dependent lithium-ion concerted diffusion in sulfide solid electrolyte Li10GeP2S12. *Journal of Energy Chemistry*, **2022**,	12	2
122	Frontispiece: Surface Gelation on Disulfide Electrocatalysts in Lithium–Sulfur Batteries. *Angewandte Chemie - International Edition*, **2022**, 61,	16.4	1
121	Uncovering electrocatalytic conversion mechanisms from Li2S2 to Li2S: Generalization of computational hydrogen electrode. *Energy Storage Materials*, **2022**, 47, 327-327	19.4	0
120	A generalizable, data-driven online approach to forecast capacity degradation trajectory of lithium batteries. *Journal of Energy Chemistry*, **2022**, 68, 548-555	12	2
119	Polar interaction of polymer host–solvent enables stable solid electrolyte interphase in composite lithium metal anodes. *Journal of Energy Chemistry*, **2022**, 64, 172-178	12	10
118	A review on theoretical models for lithium–sulfur battery cathodes. *Informa Materi ly*, **2022**, 4,	23.1	13
117	Applying Classical, , and Machine-Learning Molecular Dynamics Simulations to the Liquid Electrolyte for Rechargeable Batteries.. *Chemical Reviews*, **2022**,	68.1	9
116	Usability Identification Framework and High-Throughput Screening of Two-Dimensional Materials in Lithium Ion Batteries. *ACS Nano*, **2021**, 15, 16469-16477	16.7	3
115	Stress Regulation on Atomic Bonding and Ionic Diffusivity: Mechanochemical Effects in Sulfide Solid Electrolytes. *Energy & Fuels*, **2021**, 35, 10210-10218	4.1	9
114	The Defect Chemistry of Carbon Frameworks for Regulating the Lithium Nucleation and Growth Behaviors in Lithium Metal Anodes. *Small*, **2021**, 17, e2007142	11	13
113	Non-Solvating and Low-Dielectricity Cosolvent for Anion-Derived Solid Electrolyte Interphases in Lithium Metal Batteries. *Angewandte Chemie*, **2021**, 133, 11543-11548	3.6	9
112	Non-Solvating and Low-Dielectricity Cosolvent for Anion-Derived Solid Electrolyte Interphases in Lithium Metal Batteries. *Angewandte Chemie - International Edition*, **2021**, 60, 11442-11447	16.4	52
111	Lithium-Sulfur Batteries: An Organodiselenide Comediator to Facilitate Sulfur Redox Kinetics in Lithium–Sulfur Batteries (Adv. Mater. 13/2021). *Advanced Materials*, **2021**, 33, 2170100	24	5
110	Influence of Crystallinity of Lithium Thiophosphate Solid Electrolytes on the Performance of Solid-State Batteries. *Advanced Energy Materials*, **2021**, 11, 2100654	21.8	25
109	Can Aqueous Zinc–Air Batteries Work at Sub-Zero Temperatures?. *Angewandte Chemie*, **2021**, 133, 15409-15413	3.6	3
108	Electrolyte Structure of Lithium Polysulfides with Anti-Reductive Solvent Shells for Practical Lithium-Sulfur Batteries. *Angewandte Chemie - International Edition*, **2021**, 60, 15503-15509	16.4	37

107	Electrolyte Structure of Lithium Polysulfides with Anti-Reductive Solvent Shells for Practical LithiumSulfur Batteries. *Angewandte Chemie*, **2021**, 133, 15631-15637	3.6	1
106	Can Aqueous Zinc-Air Batteries Work at Sub-Zero Temperatures?. *Angewandte Chemie - International Edition*, **2021**, 60, 15281-15285	16.4	19
105	The dynamic evolution of aggregated lithium dendrites in lithium metal batteries. *Chinese Journal of Chemical Engineering*, **2021**, 37, 137-137	3.2	6
104	Regulating Interfacial Chemistry in Lithium-Ion Batteries by a Weakly Solvating Electrolyte**. *Angewandte Chemie*, **2021**, 133, 4136-4143	3.6	35
103	Identifying the Critical AnionCation Coordination to Regulate the Electric Double Layer for an Efficient Lithium-Metal Anode Interface. *Angewandte Chemie*, **2021**, 133, 4261-4266	3.6	10
102	Identifying the Critical Anion-Cation Coordination to Regulate the Electric Double Layer for an Efficient Lithium-Metal Anode Interface. *Angewandte Chemie - International Edition*, **2021**, 60, 4215-4220	16.4	58
101	Regulating Interfacial Chemistry in Lithium-Ion Batteries by a Weakly Solvating Electrolyte*. *Angewandte Chemie - International Edition*, **2021**, 60, 4090-4097	16.4	106
100	Covalent Organic Frameworks Construct Precise Lithiophilic Sites for Uniform Lithium Deposition. *Matter*, **2021**, 4, 253-264	12.7	35
99	Formation mechanism of the solid electrolyte interphase in different ester electrolytes. *Journal of Materials Chemistry A*, **2021**, 9, 19664-19668	13	21
98	How Does External Pressure Shape Li Dendrites in Li Metal Batteries?. *Advanced Energy Materials*, **2021**, 11, 2003416	21.8	44
97	Rktitelbild: Identifying the Critical AnionCation Coordination to Regulate the Electric Double Layer for an Efficient Lithium-Metal Anode Interface (Angew. Chem. 8/2021). *Angewandte Chemie*, **2021**, 133, 4428-4428	3.6	
96	Frontispiz: Regulating Interfacial Chemistry in Lithium-Ion Batteries by a Weakly Solvating Electrolyte. *Angewandte Chemie*, **2021**, 133,	3.6	1
95	An Organodiselenide Comediator to Facilitate Sulfur Redox Kinetics in Lithium-Sulfur Batteries. *Advanced Materials*, **2021**, 33, e2007298	24	61
94	Role of Lithiophilic Metal Sites in Lithium Metal Anodes. *Energy & Fuels*, **2021**, 35, 12746-12752	4.1	4
93	IonSolvent chemistry in lithium battery electrolytes: From mono-solvent to multi-solvent complexes. *Fundamental Research*, **2021**, 1, 393-398		10
92	An Atomic Insight into the Chemical Origin and Variation of the Dielectric Constant in Liquid Electrolytes. *Angewandte Chemie*, **2021**, 133, 21643-21648	3.6	0
91	Applying Machine Learning to Rechargeable Batteries: From the Microscale to the Macroscale. *Angewandte Chemie - International Edition*, **2021**, 60, 24354-24366	16.4	12
90	Applying Machine Learning to Rechargeable Batteries: From the Microscale to the Macroscale. *Angewandte Chemie*, **2021**, 133, 24558	3.6	0

89	Promoting the sulfur redox kinetics by mixed organodiselenides in high-energy-density lithiumsulfur batteries. *EScience*, **2021**, 1, 44-44		45
88	An Atomic Insight into the Chemical Origin and Variation of the Dielectric Constant in Liquid Electrolytes. *Angewandte Chemie - International Edition*, **2021**, 60, 21473-21478	16.4	26
87	Stable Anion-Derived Solid Electrolyte Interphase in Lithium Metal Batteries. *Angewandte Chemie*, **2021**, 133, 22865	3.6	12
86	The carrier transition from Li atoms to Li vacancies in solid-state lithium alloy anodes. *Science Advances*, **2021**, 7, eabi5520	14.3	23
85	Stable Anion-Derived Solid Electrolyte Interphase in Lithium Metal Batteries. *Angewandte Chemie - International Edition*, **2021**, 60, 22683-22687	16.4	24
84	Advanced Electrode Materials in Lithium Batteries: Retrospect and Prospect. *Energy Material Advances*, **2021**, 2021, 1-15	1	40
83	Surface Gelation on Disulfide Electrocatalysts in Lithium-Sulfur Batteries. *Angewandte Chemie - International Edition*, **2021**,	16.4	7
82	Dead lithium formation in lithium metal batteries: A phase field model. *Journal of Energy Chemistry*, **2021**,	12	8
81	Building an Air Stable and Lithium Deposition Regulable Garnet Interface from Moderate-Temperature Conversion Chemistry. *Angewandte Chemie*, **2020**, 132, 12167-12173	3.6	14
80	Solid Electrolyte Interphase: The Failure of Solid Electrolyte Interphase on Li Metal Anode: Structural Uniformity or Mechanical Strength? (Adv. Energy Mater. 10/2020). *Advanced Energy Materials*, **2020**, 10, 2070045	21.8	0
79	Lithium Bonds in Lithium Batteries. *Angewandte Chemie - International Edition*, **2020**, 59, 11192-11195	16.4	39
78	Sodiophilicity/potassiophilicity chemistry in sodium/potassium metal anodes. *Journal of Energy Chemistry*, **2020**, 51, 1-6	12	32
77	MOF-derived conductive carbon nitrides for separator-modified LiS batteries and flexible supercapacitors. *Journal of Materials Chemistry A*, **2020**, 8, 1757-1766	13	73
76	Redox Comediation with Organopolysulfides in Working Lithium-Sulfur Batteries. *CheM*, **2020**, 6, 3297-3311	16.2	84
75	Ion-Solvent Chemistry-Inspired Cation-Additive Strategy to Stabilize Electrolytes for Sodium-Metal Batteries. *CheM*, **2020**, 6, 2242-2256	16.2	49
74	Atomic Insights into the Fundamental Interactions in Lithium Battery Electrolytes. *Accounts of Chemical Research*, **2020**, 53, 1992-2002	24.3	53
73	Lithium Bonds in Lithium Batteries. *Angewandte Chemie*, **2020**, 132, 11288-11291	3.6	9
72	Building an Air Stable and Lithium Deposition Regulable Garnet Interface from Moderate-Temperature Conversion Chemistry. *Angewandte Chemie - International Edition*, **2020**, 59, 12069-12075	16.4	68

[2019-2020]

71	The Failure of Solid Electrolyte Interphase on Li Metal Anode: Structural Uniformity or Mechanical Strength?. *Advanced Energy Materials*, **2020**, 10, 1903645	21.8	98
70	Cation‐Solvent, Cation‐Anion, and Solvent‐Solvent Interactions with Electrolyte Solvation in Lithium batteries. *Batteries and Supercaps*, **2019**, 2, 114-114	5.6	5
69	Graphene-based Fe-coordinated framework porphyrin as an interlayer for lithium‐sulfur batteries. *Materials Chemistry Frontiers*, **2019**, 3, 615-619	7.8	33
68	Regulating the Inner Helmholtz Plane for Stable Solid Electrolyte Interphase on Lithium Metal Anodes. *Journal of the American Chemical Society*, **2019**, 141, 9422-9429	16.4	216
67	One-Pot Synthesis of Framework Porphyrin Materials and Their Applications in Bifunctional Oxygen Electrocatalysis. *Advanced Functional Materials*, **2019**, 29, 1901301	15.6	44
66	Dithiothreitol as a promising electrolyte additive to suppress the ‐shuttle effect‐ by slicing the disulfide bonds of polysulfides in lithium-sulfur batteries. *Journal of Power Sources*, **2019**, 424, 254-260	8.9	15
65	Combining theory and experiment in lithium‐sulfur batteries: Current progress and future perspectives. *Materials Today*, **2019**, 22, 142-158	21.8	217
64	Modeling and theoretical design of next-generation lithium metal batteries. *Energy Storage Materials*, **2019**, 16, 169-193	19.4	53
63	Rational design of graphitic-inorganic Bi-layer artificial SEI for stable lithium metal anode. *Energy Storage Materials*, **2019**, 16, 426-433	19.4	64
62	Framework Porphyrins: One-Pot Synthesis of Framework Porphyrin Materials and Their Applications in Bifunctional Oxygen Electrocatalysis (Adv. Funct. Mater. 29/2019). *Advanced Functional Materials*, **2019**, 29, 1970198	15.6	1
61	Favorable Lithium Nucleation on Lithiophilic Framework Porphyrin for Dendrite-Free Lithium Metal Anodes. *Research*, **2019**, 2019, 1-11	7.8	23
60	Favorable Lithium Nucleation on Lithiophilic Framework Porphyrin for Dendrite-Free Lithium Metal Anodes. *Research*, **2019**, 2019, 4608940	7.8	22
59	Lithiophilicity chemistry of heteroatom-doped carbon to guide uniform lithium nucleation in lithium metal anodes. *Science Advances*, **2019**, 5, eaau7728	14.3	266
58	Uniform Lithium Nucleation Guided by Atomically Dispersed Lithiophilic CoNx Sites for Safe Lithium Metal Batteries. *Small Methods*, **2019**, 3, 1800354	12.8	51
57	Regulating Anions in the Solvation Sheath of Lithium Ions for Stable Lithium Metal Batteries. *ACS Energy Letters*, **2019**, 4, 411-416	20.1	176
56	Innentitelbild: Activating Inert Metallic Compounds for High-Rate Lithium‐Sulfur Batteries Through In Situ Etching of Extrinsic Metal (Angew. Chem. 12/2019). *Angewandte Chemie*, **2019**, 131, 3692-3692	3.6	1
55	Activating Inert Metallic Compounds for High-Rate Lithium-Sulfur Batteries Through In Situ Etching of Extrinsic Metal. *Angewandte Chemie - International Edition*, **2019**, 58, 3779-3783	16.4	204
54	Activating Inert Metallic Compounds for High-Rate Lithium‐Sulfur Batteries Through In Situ Etching of Extrinsic Metal. *Angewandte Chemie*, **2019**, 131, 3819-3823	3.6	34

53	Cation–Solvent, Cation–Anion, and Solvent–Solvent Interactions with Electrolyte Solvation in Lithium Batteries. *Batteries and Supercaps*, **2019**, 2, 128-131	5.6	78
52	Highly Stable Lithium Metal Batteries Enabled by Regulating the Solvation of Lithium Ions in Nonaqueous Electrolytes. *Angewandte Chemie - International Edition*, **2018**, 57, 5301-5305	16.4	402
51	Highly Stable Lithium Metal Batteries Enabled by Regulating the Solvation of Lithium Ions in Nonaqueous Electrolytes. *Angewandte Chemie*, **2018**, 130, 5399-5403	3.6	97
50	Coralloid Carbon Fiber-Based Composite Lithium Anode for Robust Lithium Metal Batteries. *Joule*, **2018**, 2, 764-777	27.8	435
49	Titelbild: Highly Stable Lithium Metal Batteries Enabled by Regulating the Solvation of Lithium Ions in Nonaqueous Electrolytes (Angew. Chem. 19/2018). *Angewandte Chemie*, **2018**, 130, 5275-5275	3.6	2
48	Dual-Layered Film Protected Lithium Metal Anode to Enable Dendrite-Free Lithium Deposition. *Advanced Materials*, **2018**, 30, e1707629	24	278
47	Ion–Solvent Complexes Promote Gas Evolution from Electrolytes on a Sodium Metal Anode. *Angewandte Chemie*, **2018**, 130, 742-745	3.6	22
46	Innentitelbild: Ion–Solvent Complexes Promote Gas Evolution from Electrolytes on a Sodium Metal Anode (Angew. Chem. 3/2018). *Angewandte Chemie*, **2018**, 130, 606-606	3.6	
45	Lithium Nitrate Solvation Chemistry in Carbonate Electrolyte Sustains High-Voltage Lithium Metal Batteries. *Angewandte Chemie*, **2018**, 130, 14251-14255	3.6	87
44	Lithium Nitrate Solvation Chemistry in Carbonate Electrolyte Sustains High-Voltage Lithium Metal Batteries. *Angewandte Chemie - International Edition*, **2018**, 57, 14055-14059	16.4	249
43	Lithium Metal Anodes: Dual-Layered Film Protected Lithium Metal Anode to Enable Dendrite-Free Lithium Deposition (Adv. Mater. 25/2018). *Advanced Materials*, **2018**, 30, 1870181	24	8
42	A Bifunctional Perovskite Promoter for Polysulfide Regulation toward Stable Lithium-Sulfur Batteries. *Advanced Materials*, **2018**, 30, 1705219	24	228
41	An ion redistributor for dendrite-free lithium metal anodes. *Science Advances*, **2018**, 4, eaat3446	14.3	231
40	Innentitelbild: The Origin of the Reduced Reductive Stability of Ion–Solvent Complexes on Alkali and Alkaline Earth Metal Anodes (Angew. Chem. 51/2018). *Angewandte Chemie*, **2018**, 130, 16810-16810	3.6	
39	Uniform Nucleation of Lithium in 3D Current Collectors via Bromide Intermediates for Stable Cycling Lithium Metal Batteries. *Journal of the American Chemical Society*, **2018**, 140, 18051-18057	16.4	96
38	Rücktitelbild: Lithium Nitrate Solvation Chemistry in Carbonate Electrolyte Sustains High-Voltage Lithium Metal Batteries (Angew. Chem. 43/2018). *Angewandte Chemie*, **2018**, 130, 14488-14488	3.6	
37	A Polysulfide-Immobilizing Polymer Retards the Shuttling of Polysulfide Intermediates in Lithium-Sulfur Batteries. *Advanced Materials*, **2018**, 30, e1804581	24	168
36	The Origin of the Reduced Reductive Stability of Ion–Solvent Complexes on Alkali and Alkaline Earth Metal Anodes. *Angewandte Chemie*, **2018**, 130, 16885-16889	3.6	31

35	The Origin of the Reduced Reductive Stability of Ion-Solvent Complexes on Alkali and Alkaline Earth Metal Anodes. *Angewandte Chemie - International Edition*, **2018**, 57, 16643-16647	16.4	72
34	The Radical Pathway Based on a Lithium-Metal-Compatible High-Dielectric Electrolyte for Lithium-Sulfur Batteries. *Angewandte Chemie - International Edition*, **2018**, 57, 16732-16736	16.4	107
33	The Radical Pathway Based on a Lithium-Metal-Compatible High-Dielectric Electrolyte for Lithium‐Sulfur Batteries. *Angewandte Chemie*, **2018**, 130, 16974-16978	3.6	25
32	Enhanced Electrochemical Kinetics and Polysulfide Traps of Indium Nitride for Highly Stable Lithium-Sulfur Batteries. *ACS Nano*, **2018**, 12, 9578-9586	16.7	146
31	Ion-Solvent Complexes Promote Gas Evolution from Electrolytes on a Sodium Metal Anode. *Angewandte Chemie - International Edition*, **2018**, 57, 734-737	16.4	140
30	Towards stable lithium-sulfur batteries: Mechanistic insights into electrolyte decomposition on lithium metal anode. *Energy Storage Materials*, **2017**, 8, 194-201	19.4	133
29	Fluoroethylene Carbonate Additives to Render Uniform Li Deposits in Lithium Metal Batteries. *Advanced Functional Materials*, **2017**, 27, 1605989	15.6	878
28	Implantable Solid Electrolyte Interphase in Lithium-Metal Batteries. *CheM*, **2017**, 2, 258-270	16.2	411
27	An Analogous Periodic Law for Strong Anchoring of Polysulfides on Polar Hosts in Lithium Sulfur Batteries: S- or Li-Binding on First-Row Transition-Metal Sulfides?. *ACS Energy Letters*, **2017**, 2, 795-801	20.1	203
26	Innentitelbild: Lithiophilic Sites in Doped Graphene Guide Uniform Lithium Nucleation for Dendrite-Free Lithium Metal Anodes (Angew. Chem. 27/2017). *Angewandte Chemie*, **2017**, 129, 7790-7790	3.6	2
25	Lithiophilic Sites in Doped Graphene Guide Uniform Lithium Nucleation for Dendrite-Free Lithium Metal Anodes. *Angewandte Chemie - International Edition*, **2017**, 56, 7764-7768	16.4	760
24	Lithiophilic Sites in Doped Graphene Guide Uniform Lithium Nucleation for Dendrite-Free Lithium Metal Anodes. *Angewandte Chemie*, **2017**, 129, 7872-7876	3.6	127
23	Lithium Bond Chemistry in Lithium‐Sulfur Batteries. *Angewandte Chemie*, **2017**, 129, 8290-8294	3.6	50
22	Lithium Bond Chemistry in Lithium-Sulfur Batteries. *Angewandte Chemie - International Edition*, **2017**, 56, 8178-8182	16.4	332
21	Rücktitelbild: Columnar Lithium Metal Anodes (Angew. Chem. 45/2017). *Angewandte Chemie*, **2017**, 129, 14508-14508	3.6	
20	Columnar Lithium Metal Anodes. *Angewandte Chemie - International Edition*, **2017**, 56, 14207-14211	16.4	146
19	Columnar Lithium Metal Anodes. *Angewandte Chemie*, **2017**, 129, 14395-14399	3.6	38
18	A Supramolecular Capsule for Reversible Polysulfide Storage/Delivery in Lithium-Sulfur Batteries. *Angewandte Chemie - International Edition*, **2017**, 56, 16223-16227	16.4	66

17	A Supramolecular Capsule for Reversible Polysulfide Storage/Delivery in Lithium-Sulfur Batteries. *Angewandte Chemie*, **2017**, 129, 16441-16445	3.6	18
16	Innenrücktitelbild: A Supramolecular Capsule for Reversible Polysulfide Storage/Delivery in Lithium-Sulfur Batteries (Angew. Chem. 51/2017). *Angewandte Chemie*, **2017**, 129, 16635-16635	3.6	
15	Oxygen Electrocatalysis: Topological Defects in Metal-Free Nanocarbon for Oxygen Electrocatalysis (Adv. Mater. 32/2016). *Advanced Materials*, **2016**, 28, 7030-7030	24	10
14	A Cooperative Interface for Highly Efficient Lithium-Sulfur Batteries. *Advanced Materials*, **2016**, 28, 9551-9558	24	431
13	Lithium-Sulfur Batteries: A Cooperative Interface for Highly Efficient Lithium-Sulfur Batteries (Adv. Mater. 43/2016). *Advanced Materials*, **2016**, 28, 9550-9550	24	2
12	Design Principles for Heteroatom-Doped Nanocarbon to Achieve Strong Anchoring of Polysulfides for Lithium-Sulfur Batteries. *Small*, **2016**, 12, 3283-91	11	515
11	Topological Defects in Metal-Free Nanocarbon for Oxygen Electrocatalysis. *Advanced Materials*, **2016**, 28, 6845-51	24	522
10	Frontispiz: Enhanced Electrochemical Kinetics on Conductive Polar Mediators for Lithium-Sulfur Batteries. *Angewandte Chemie*, **2016**, 128,	3.6	1
9	Frontispiece: Enhanced Electrochemical Kinetics on Conductive Polar Mediators for Lithium-Sulfur Batteries. *Angewandte Chemie - International Edition*, **2016**, 55,	16.4	1
8	Enhanced Electrochemical Kinetics on Conductive Polar Mediators for Lithium-Sulfur Batteries. *Angewandte Chemie - International Edition*, **2016**, 55, 12990-12995	16.4	442
7	Enhanced Electrochemical Kinetics on Conductive Polar Mediators for Lithium-Sulfur Batteries. *Angewandte Chemie*, **2016**, 128, 13184-13189	3.6	104
6	Information Theory Analysis of Blind Detection for PCMA Satellite Communication Systems **2013**,		4
5	Polysulfide Electrocatalysis on Framework Porphyrin in High-Capacity and High-Stable Lithium-Sulfur Batteries. *CCS Chemistry*,128-137	7.2	96
4	Dissolution-Precipitation Dynamics in Ester Electrolyte for High-Stability Lithium Metal Batteries. *ACS Energy Letters*,1413-1421	20.1	13
3	MXenes Composites as the Protective Layer for Li Metal Electrodes. *Nano Hybrids and Composites* ,34, 9-14	0.7	
2	Review on the lithium transport mechanism in solid-state battery materials. *Wiley Interdisciplinary Reviews: Computational Molecular Science*,	7.9	0
1	The Origin of Fast Lithium-Ion Transport in the Inorganic Solid Electrolyte Interphase on Lithium Metal Anodes. *Small Structures*,2200071	8.7	7