Heng Zhang

List of Publications by Year
in descending order

83 papers	6,630 citations	87401 40 h-index	73587 79 g-index
84 all docs	84 docs citations	84 times ranked	6112 citing authors

#	Article	IF	Citations
1	Unprecedented Impact of Main Chain on Comb Polymer Electrolytes Performances. ChemElectroChem, 2022, 9, .	1.7	9
2	Bis(fluorosulfonyl)imide-based electrolyte for rechargeable lithium batteries: A perspective. Journal of Power Sources Advances, 2022, 14, 100088.	2.6	19
3	Stable non-corrosive sulfonimide salt for 4-V-class lithium metal batteries. Nature Materials, 2022, 21, 455-462.	13.3	78
4	Anions with a Dipole: Toward High Transport Numbers in Solid Polymer Electrolytes. Chemistry of Materials, 2022, 34, 3451-3460.	3.2	11
5	Taming the chemical instability of lithium hexafluorophosphate-based electrolyte with lithium fluorosulfonimide salts. Journal of Power Sources, 2022, 526, 231105.	4.0	20
6	Anion Ï€â€“Ï€ Stacking for Improved Lithium Transport in Polymer Electrolytes. Journal of the American Chemical Society, 2022, 144, 9806-9816.	6.6	28
7	Single Lithium Ion Conducting â€œBinderlyteâ€•for Highâ€Performing Lithium Metal Batteries. Small, 2022, 18, .	5.2	6
8	History of Solid Polymer Electrolyteâ€Based Solidâ€State Lithium Metal Batteries: A Personal Account. Israel Journal of Chemistry, 2021, 61, 94-100.	1.0	33
9	Anion-cation interactions in novel ionic liquids based on an asymmetric sulfonimide anion observed by NMR and MD simulations. Journal of Molecular Liquids, 2021, 327, 114879.	2.3	6
10	Nanoscale modelling of polymer electrolytes for rechargeable batteries. Energy Storage Materials, 2021, 36, 77-90.	9.5	14
11	Diagnosing the SEI Layer in a Potassium Ion Battery Using Distribution of Relaxation Time. Journal of Physical Chemistry Letters, 2021, 12, 2064-2071.	2.1	33
12	Impact of Negative Charge Delocalization on the Properties of Solid Polymer Electrolytes. ChemElectroChem, 2021, 8, 1322-1328.	1.7	13
13	Electrolyte and anodeâ€electrolyte interphase in solidâ€state lithium metal polymer batteries: A perspective. SusMat, 2021, 1, 24-37.	7.8	74
14	Salt Additives for Improving Cyclability of Polymer-Based All-Solid-State Lithiumâ€“Sulfur Batteries. ACS Applied Energy Materials, 2021, 4, 4459-4464.	2.5	18
15	Li[(FSO 2)(n â€C 4 F 9 SO 2)N]: A Difunctional Salt for Ethyleneâ€Carbonateâ€•and Additiveâ€Free Electrolyte for Liâ€•ion Cells. ChemElectroChem, 2021, 8, 1807-1816.	1.7	4
16	Unraveling Ion Dynamics and Interactions in an Ionic Liquid Electrolyte with a Protonated Anion for Lithium Batteries. Journal of Physical Chemistry C, 2021, 125, 14818-14826.	1.5	2
17	Sulfurâ€containing compounds as electrolyte additives for lithiumâ€ion batteries. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 1364-1392.	8.5	60
18	Production of high-energy Li-ion batteries comprising silicon-containing anodes and insertion-type cathodes. Nature Communications, 2021, 12, 5459.	5.8	190

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19	Safe, Flexible, and High-Performing Gel-Polymer Electrolyte for Rechargeable Lithium Metal Batteries. Chemistry of Materials, 2021, 33, 8812-8821.	3.2	66
20	Nanofiber-reinforced polymer electrolytes toward room temperature solid-state lithium batteries. Journal of Power Sources, 2020, 448, 227424.	4.0	34
21	Jeffamineâ€Based Polymers for Rechargeable Batteries. Batteries and Supercaps, 2020, 3, 30-46.	2.4	27
22	From Solidâ€Solution Electrodes and the Rockingâ€Chair Concept to Today's Batteries. Angewandte Chemie, 2020, 132, 542-546.	1.6	28
23	From Solidâ€Solution Electrodes and the Rockingâ€Chair Concept to Today's Batteries. Angewandte Chemie - International Edition, 2020, 59, 534-538.	7.2	124
24	Lithium-ion batteries â€“ Current state of the art and anticipated developments. Journal of Power Sources, 2020, 479, 228708.	4.0	401
25	Highly salt-concentrated electrolyte comprising lithium bis(fluorosulfonyl)imide and 1,3-dioxolane-based ether solvents for 4-V-class rechargeable lithium metal cell. Electrochimica Acta, 2020, 363, 137198.	2.6	17
26	Improvement of Lithium Metal Polymer Batteries through a Small Dose of Fluorinated Salt. Journal of Physical Chemistry Letters, 2020, 11, 6133-6138.	2.1	24
27	Trifluoromethyl-free anion for highly stable lithium metal polymer batteries. Energy Storage Materials, 2020, 32, 225-233.	9.5	42
28	Lithium fluorinated sulfonimide-based solid polymer electrolytes for Li | | LiFePO4 cell: The impact of anionic structure. Solid State Ionics, 2020, 358, 115519.	1.3	16
29	Insight into the Ionic Transport of Solid Polymer Electrolytes in Polyether and Polyester Blends. Journal of Physical Chemistry C, 2020, 124, 17981-17991.	1.5	37
30	Reviewâ€"Polymer Electrolytes for Sodium Batteries. Journal of the Electrochemical Society, 2020, 167, 070534.	1.3	86
31	Reviewâ€"Polymer Electrolytes for Rechargeable Batteries: From Nanocomposite to Nanohybrid. Journal of the Electrochemical Society, 2020, 167, 070524.	1.3	135
32	Unprecedented Improvement of Single Liâ€Ion Conductive Solid Polymer Electrolyte Through Salt Additive. Advanced Functional Materials, 2020, 30, 2000455.	7.8	63
33	Weakly Coordinating Fluorineâ€Free Polysalt for Single Lithiumâ€Ion Conductive Solid Polymer Electrolytes. Batteries and Supercaps, 2020, 3, 738-746.	2.4	14
34	Solid Polymer Electrolytes Comprising Camphor-Derived Chiral Salts for Solid-State Batteries. Journal of the Electrochemical Society, 2020, 167, 120541.	1.3	1
35	Quasi-solid-state electrolytes for lithium sulfur batteries: Advances and perspectives. Journal of Power Sources, 2019, 438, 226985.	4.0	73
36	Innentitelbild: Suppressed Mobility of Negative Charges in Polymer Electrolytes with an Etherâ€Functionalized Anion (Angew. Chem. 35/2019). Angewandte Chemie, 2019, 131, 12052-12052.	1.6	0

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37	Suppressed Mobility of Negative Charges in Polymer Electrolytes with an Etherâ€Functionalized Anion. Angewandte Chemie - International Edition, 2019, 58, 12070-12075.	7.2	61
38	Suppressed Mobility of Negative Charges in Polymer Electrolytes with an Etherâ€Functionalized Anion. Angewandte Chemie, 2019, 131, 12198-12203.	1.6	22
39	Designer Anion Enabling Solid-State Lithium-Sulfur Batteries. Joule, 2019, 3, 1689-1702.	11.7	108
40	Polymeric ionic liquids for lithium-based rechargeable batteries. Molecular Systems Design and Engineering, 2019, 4, 294-309.	1.7	114
41	Energy Density Assessment of Organic Batteries. ACS Applied Energy Materials, 2019, 2, 4008-4015.	2.5	26
42	Fluorineâ€Free Noble Salt Anion for Highâ€Performance Allâ€Solidâ€State Lithiumâ€“Sulfur Batteries. Advanced Energy Materials, 2019, 9, 1900763.	10.2	66
43	Lithium (fluorosulfonyl)(pentafluoroethylsulfonyl)imide/poly (ethylene oxide) polymer electrolyte: Physical and electrochemical properties. Solid State Ionics, 2019, 338, 161-167.	1.3	14
44	Editors' Choiceâ€”Reviewâ€”Innovative Polymeric Materials for Better Rechargeable Batteries: Strategies from CIC Energigune. Journal of the Electrochemical Society, 2019, 166, A679-A686.	1.3	36
45	Flowable polymer electrolytes for lithium metal batteries. Journal of Power Sources, 2019, 423, 218-226.	4.0	50
46	Purification of Flavonoids from Mulberry Leaves via High-Speed Counter-Current Chromatography. Processes, 2019, 7, 91.	1.3	5
47	Enhanced Lithiumâ€Ion Conductivity of Polymer Electrolytes by Selective Introduction of Hydrogen into the Anion. Angewandte Chemie - International Edition, 2019, 58, 7829-7834.	7.2	59
48	Enhanced Lithiumâ€Ion Conductivity of Polymer Electrolytes by Selective Introduction of Hydrogen into the Anion. Angewandte Chemie, 2019, 131, 7911-7916.	1.6	51
49	Improvement of the Cationic Transport in Polymer Electrolytes with (Difluoromethanesulfonyl)(trifluoromethanesulfonyl)imide Salts. ChemElectroChem, 2019, 6, 1019-1022.	1.7	29
50	Understanding the Role of Nanoâ€Aluminum Oxide in Allâ€Solidâ€State Lithiumâ€Sulfur Batteries. ChemElectroChem, 2019, 6, 326-330.	1.7	28
51	Solid Electrolytes for Lithium Metal and Future Lithium-ion Batteries. , 2019, , 72-101.		7
52	Lowering the operational temperature of all-solid-state lithium polymer cell with highly conductive and interfacially robust solid polymer electrolytes. Journal of Power Sources, 2018, 383, 144-149.	4.0	113
53	Elektrolytadditive fÃ¼r Lithiummetallanoden und wiederaufladbare Lithiummetallbatterien: Fortschritte und Perspektiven. Angewandte Chemie, 2018, 130, 15220-15246.	1.6	54
54	Electrolyte Additives for Lithium Metal Anodes and Rechargeable Lithium Metal Batteries: Progress and Perspectives. Angewandte Chemie - International Edition, 2018, 57, 15002-15027.	7.2	551

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55	S-containing copolymer as cathode material in poly(ethylene oxide)-based all-solid-state Li-S batteries. Journal of Power Sources, 2018, 390, 148-152.	4.0	43
56	Reviewâ€"Solid Electrolytes for Safe and High Energy Density Lithium-Sulfur Batteries: Promises and Challenges. Journal of the Electrochemical Society, 2018, 165, A6008-A6016.	1.3	146
57	Stable cycling of lithium metal electrode in nanocomposite solid polymer electrolytes with lithium bis (fluorosulfonyl)imide. Solid State Ionics, 2018, 318, 95-101.	1.3	44
58	Opportunities for Rechargeable Solid-State Batteries Based on Li-Intercalation Cathodes. Joule, 2018, 2, 2208-2224.	11.7	153
59	Role of asymmetry in the physiochemical and electrochemical behaviors of perfluorinated sulfonimide anions for lithium batteries: A DFT study. Electrochimica Acta, 2018, 280, 290-299.	2.6	26
60	Selfâ€Standing Highly Conductive Solid Electrolytes Based on Block Copolymers for Rechargeable Allâ€Solidâ€State Lithiumâ€Metal Batteries. Batteries and Supercaps, 2018, 1, 149-159.	2.4	41
61	Electrolyte Additives for Roomâ€Temperature, Sodiumâ€Based, Rechargeable Batteries. Chemistry - an Asian Journal, 2018, 13, 2770-2780.	1.7	53
62	Ultrahigh Performance All Solid-State Lithium Sulfur Batteries: Salt Anionâ€™s Chemistry-Induced Anomalous Synergistic Effect. Journal of the American Chemical Society, 2018, 140, 9921-9933.	6.6	249
63	Single lithium-ion conducting solid polymer electrolytes: advances and perspectives. Chemical Society Reviews, 2017, 46, 797-815.	18.7	862
64	JeffamineÂ® based polymers as highly conductive polymer electrolytes and cathode binder materials for battery application. Journal of Power Sources, 2017, 347, 37-46.	4.0	74
65	Vibrational spectroscopic studies combined with viscosity analysis and VTF calculation for hybrid polymer electrolytes. Solid State Ionics, 2017, 303, 78-88.	1.3	7
66	Lithium Bis(fluorosulfonyl)imide/Poly(ethylene oxide) Polymer Electrolyte for All Solid-State Liâ€"S Cell. Journal of Physical Chemistry Letters, 2017, 8, 1956-1960.	2.1	166
67	Lithium Azide as an Electrolyte Additive for Allâ€Solidâ€State Lithiumâ€"Sulfur Batteries. Angewandte Chemie - International Edition, 2017, 56, 15368-15372.	7.2	213
68	Lithium Azide as an Electrolyte Additive for Allâ€Solidâ€State Lithiumâ€"Sulfur Batteries. Angewandte Chemie, 2017, 129, 15570-15574.	1.6	12
69	Polymer-Rich Composite Electrolytes for All-Solid-State Liâ€"S Cells. Journal of Physical Chemistry Letters, 2017, 8, 3473-3477.	2.1	106
70	Single Lithiumâ€Ion Conducting Polymer Electrolytes Based on a Superâ€Delocalized Polyanion. Angewandte Chemie - International Edition, 2016, 55, 2521-2525.	7.2	411
71	Estimation of energy density of Li-S batteries with liquid and solid electrolytes. Journal of Power Sources, 2016, 326, 1-5.	4.0	88
72	New ionic liquids based on a super-delocalized perfluorinated sulfonimide anion: physical and electrochemical properties. Electrochimica Acta, 2016, 207, 66-75.	2.6	17

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73	Single Lithiumâ€Ion Conducting Polymer Electrolytes Based on a Superâ€Delocalized Polyanion. Angewandte Chemie, 2016, 128, 2567-2571.	1.6	26
74	Li[(FSO2)(n-C4F9SO2)N] versus LiPF6 for graphite/LiCoO2 lithium-ion cells at both room and elevated temperatures: A comprehensive understanding with chemical, electrochemical and XPS analysis. Electrochimica Acta, 2016, 196, 169-188.	2.6	79
75	Solid polymer electrolyte comprised of lithium salt/ether functionalized ammonium-based polymeric ionic liquid with bis(fluorosulfonyl)imide. Electrochimica Acta, 2015, 159, 93-101.	2.6	53
76	Lithium salt with a super-delocalized perfluorinated sulfonimide anion as conducting salt for lithium-ion cells: Physicochemical and electrochemical properties. Journal of Power Sources, 2015, 296, 142-149.	4.0	30
77	Recent progresses on electrolytes of fluorosulfonimide anions for improving the performances of rechargeable Li and Li-ion battery. Journal of Fluorine Chemistry, 2015, 174, 49-61.	0.9	63
78	Polymeric ionic liquids based on ether functionalized ammoniums and perfluorinated sulfonimides. Polymer, 2014, 55, 3339-3348.	1.8	43
79	Lithium bis(fluorosulfonyl)imide/poly(ethylene oxide) polymer electrolyte. Electrochimica Acta, 2014, 133, 529-538.	2.6	273
80	Ionic liquid electrolyte of lithium bis(fluorosulfonyl)imide/N-methyl-N-propylpiperidinium bis(fluorosulfonyl)imide for Li/natural graphite cells: Effect of concentration of lithium salt on the physicochemical and electrochemical properties. Electrochimica Acta, 2014, 149, 370-385.	2.6	91
81	Composite electrolytes of lithium salt/polymeric ionic liquid with bis(fluorosulfonyl)imide. Solid State Ionics, 2014, 256, 61-67.	1.3	36
82	New hydrophobic ionic liquids based on (fluorosulfonyl)(polyfluorooxaalkanesulfonyl)imides with various oniums. Electrochimica Acta, 2013, 99, 262-272.	2.6	19
83	Characterization and properties of the electrolyte using Li[N(SO₂OCH(CF₃)₂)<sub>2] as conductive salt. Chinese Science Bulletin, 2012, 57, 2623-2631.	1.2	2