Xiaoen Wang

List of Publications by Year
in descending order

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45	2,210	218677	233421
papers	citations	26 h-index	45 g-index

47	47	47	2223
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Innovative Electrolytes Based on Ionic Liquids and Polymers for Next-Generation Solid-State Batteries. Accounts of Chemical Research, 2019, 52, 686-694.	15.6	276
2	Microporous polymer electrolyte based on PVDF/PEO star polymer blends for lithium ion batteries. Journal of Membrane Science, 2015, 491, 82-89.	8.2	161
3	Toward Highâ€Energyâ€Density Lithium Metal Batteries: Opportunities and Challenges for Solid Organic Electrolytes. Advanced Materials, 2020, 32, e1905219.	21.0	154
4	Solid-state rigid-rod polymer composite electrolytes with nanocrystalline lithium ion pathways. Nature Materials, 2021, 20, 1255-1263.	27.5	110
5	Preparation and characterization of gel polymer electrolytes using poly(ionic liquids) and high lithium salt concentration ionic liquids. Journal of Materials Chemistry A, 2017, 5, 23844-23852.	10.3	109
6	Poly(Ionic Liquid)s-in-Salt Electrolytes with Co-coordination-Assisted Lithium-Ion Transport for Safe Batteries. Joule, 2019, 3, 2687-2702.	24.0	108
7	Ultra-stable all-solid-state sodium metal batteries enabled by perfluoropolyether-based electrolytes. Nature Materials, 2022, 21, 1057-1065.	27.5	92
8	Gelled microporous polymer electrolyte with low liquid leakage for lithium-ion batteries. Journal of Membrane Science, 2014, 454, 298-304.	8.2	64
9	Poly(ionic liquid)s/Electrospun Nanofiber Composite Polymer Electrolytes for High Energy Density and Safe Li Metal Batteries. ACS Applied Energy Materials, 2019, 2, 6237-6245.	5.1	63
10	N-ethyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide-electrospun polyvinylidene fluoride composite electrolytes: characterization and lithium cell studies. Physical Chemistry Chemical Physics, 2017, 19, 2225-2234.	2.8	61
11	Poly(ethylene glycol) grafted multi-walled carbon nanotubes/LiFePO4 composite cathodes for lithium ion batteries. Journal of Power Sources, 2014, 246, 260-268.	7.8	59
12	Comb-like solid polymer electrolyte based on polyethylene glycol-grafted sulfonated polyether ether ketone. Electrochimica Acta, 2017, 255, 396-404.	5.2	59
13	Solidâ€State Lithium Conductors for Lithium Metal Batteries Based on Electrospun Nanofiber/Plastic Crystal Composites. ChemSusChem, 2017, 10, 3135-3145.	6.8	58
14	Fabrication and characterization of PFSI/ePTFE composite proton exchange membranes of polymer electrolyte fuel cells. Electrochimica Acta, 2007, 52, 5304-5311.	5.2	56
15	Enhancement of ion dynamics in organic ionic plastic crystal/PVDF composite electrolytes prepared by co-electrospinning. Journal of Materials Chemistry A, 2016, 4, 9873-9880.	10.3	49
16	Organic Ionic Plastic Crystalâ€Based Composite Electrolyte with Surface Enhanced Ion Transport and Its Use in Allâ€Solidâ€State Lithium Batteries. Advanced Materials Technologies, 2017, 2, 1700046.	5.8	49
17	Poly(ionic liquid) iongels for all-solid rechargeable zinc/PEDOT batteries. Electrochimica Acta, 2018, 278, 271-278.	5.2	47
18	Ternary lithium-salt organic ionic plastic crystal polymer composite electrolytes for high voltage, all-solid-state batteries. Energy Storage Materials, 2018, 15, 407-414.	18.0	45

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19	Phosphonium plastic crystal salt alloyed with a sodium salt as a solid-state electrolyte for sodium devices: phase behaviour and electrochemical performance. Journal of Materials Chemistry A, 2017, 5, 5770-5780.	10.3	40
20	Structure and Property Changes in Self-Assembled Lubricin Layers Induced by Calcium Ion Interactions. Langmuir, 2017, 33, 2559-2570.	3.5	38
21	Fabrication and characterization of improved PFSA/ePTFE composite polymer electrolyte membranes. Journal of Membrane Science, 2007, 306, 298-306.	8.2	35
22	Sustainable, Dendrite Free Lithiumâ€Metal Electrode Cycling Achieved with Polymer Composite Electrolytes Based on a Poly(Ionic Liquid) Host. Batteries and Supercaps, 2019, 2, 229-239.	4.7	35
23	Nanofiber-reinforced polymer electrolytes toward room temperature solid-state lithium batteries. Journal of Power Sources, 2020, 448, 227424.	7.8	34
24	Improved Li-Ion Transport by DME Chelation in a Novel Ionic Liquid-Based Hybrid Electrolyte for Liâ€“S Battery Application. Journal of Physical Chemistry C, 2018, 122, 14373-14382.	3.1	33
25	Lubricin Antiadhesive Coatings Exhibit Sizeâ€Selective Transport Properties that Inhibit Biofouling of Electrode Surfaces with Minimal Loss in Electrochemical Activity. Advanced Materials Interfaces, 2018, 5, 1701296.	3.7	31
26	Synthesis of Sodium Poly[4-styrenesulfonyl(trifluoromethylsulfonyl)imide]-co-ethylacrylate] Solid Polymer Electrolytes. Electrochimica Acta, 2015, 175, 232-239.	5.2	27
27	Novel sound insulation materials based on epoxy/hollow silica nanotubes composites. Composites Part B: Engineering, 2017, 131, 125-133.	12.0	27
28	The anion effect in ternary electrolyte systems using poly(diallyldimethylammonium) and phosphonium-based ionic liquid with high lithium salt concentration. Solid State Ionics, 2018, 327, 83-92.	2.7	27
29	The influence of interfacial interactions on the conductivity and phase behaviour of organic ionic plastic crystal/polymer nanoparticle composite electrolytes. Journal of Materials Chemistry A, 2020, 8, 5350-5362.	10.3	26
30	A novel proton conducting ionogel electrolyte based on poly(ionic liquids) and protic ionic liquid. Electrochimica Acta, 2020, 346, 136224.	5.2	24
31	Development and Progression of Polymer Electrolytes for Batteries: Influence of Structure and Chemistry. Polymers, 2021, 13, 4127.	4.5	23
32	Strongly Correlated Ion Dynamics in Plastic Ionic Crystals and Polymerized Ionic Liquids. Journal of Physical Chemistry C, 2020, 124, 17889-17896.	3.1	22
33	Structure and Ion Dynamics in Imidazolium-Based Protic Organic Ionic Plastic Crystals. Journal of Physical Chemistry Letters, 2018, 9, 3904-3909.	4.6	20
34	Increased ion conduction in dual cation [sodium][tetraalkylammonium] poly[4-styrenesulfonyl(trifluoromethylsulfonyl)imide-co-ethylacrylate] ionomers. Journal of Materials Chemistry A, 2015, 3, 19989-19995.	10.3	19
35	Anion effects on the properties of OIPC/PVDF composites. Materials Advances, 2021, 2, 1683-1694.	5.4	17
36	A Self-Humidifying Composite Membrane with Self-Assembled Pt Nanoparticles for Polymer Electrolyte Membrane Fuel Cells. Journal of the Electrochemical Society, 2006, 153, A1868.	2.9	16

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37	Mixed Ionic-Electronic Conductors Based on PEDOT:PolyDADMA and Organic Ionic Plastic Crystals. Polymers, 2020, 12, 1981.	4.5	15
38	Stable performance of an all-solid-state Li metal cell coupled with a high-voltage NCA cathode and ultra-high lithium content poly(ionic liquid)s-based polymer electrolyte. Journal of Solid State Electrochemistry, 2020, 24, 2479-2485.	2.5	13
39	Highly conductive ionogel electrolytes based on N-ethyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide FSI and NaFSI mixtures and their applications in sodium batteries. JPhys Materials, 2021, 4, 044005.	4.2	12
40	Functional Binders Based on Polymeric Ionic Liquids for Sodium Oxygen Batteries Using Ionic Liquid Electrolytes. ACS Applied Energy Materials, 2021, 4, 434-444.	5.1	11
41	Influence of Electrospun Poly(vinylidene difluoride) Nanofiber Matrix on the Ion Dynamics of a Protic Organic Ionic Plastic Crystal. Journal of Physical Chemistry C, 2018, 122, 14546-14553.	3.1	10
42	Durable perfluorosulfonic polymer electrolyte membranes prepared from alkaline-ion-assisted heat treatment. Journal of Membrane Science, 2011, 379, 106-111.	8.2	9
43	Solid (cyanomethyl)trimethylammonium salts for electrochemically stable electrolytes for lithium metal batteries. Journal of Materials Chemistry A, 2020, 8, 14721-14735.	10.3	9
44	Ion Transport in Li-Doped Triethyl(methyl)phosphonium Tetrafluoroborate (Li-[P₁₂₂₂][BF₄]) Impregnated with PVDF Nanoparticles. Journal of Physical Chemistry C, 2022, 126, 3839-3852.	3.1	9
45	Phase behavior and electrochemical properties of solid lithium electrolytes based on N-ethyl-N-methylpyrrolidinium bis(fluorosulfonyl)imide and PVdF composites. Solid State Ionics, 2021, 363, 115588.	2.7	7