Xiao-Guang Sun

List of Publications by Year
in descending order

95 papers	6,288 citations	57631 44 h-index	66788 78 g-index
100 all docs	100 docs citations	100 times ranked	8525 citing authors

#	Article	IF	Citations
1	Ionic liquids and derived materials for lithium and sodium batteries. Chemical Society Reviews, 2018, 47, 2020-2064.	18.7	452
2	Mesoporous TiO₂â€“B Microspheres with Superior Rate Performance for Lithium Ion Batteries. Advanced Materials, 2011, 23, 3450-3454.	11.1	361
3	Softâ€Templated Mesoporous Carbonâ€Carbon Nanotube Composites for High Performance Lithiumâ€ion Batteries. Advanced Materials, 2011, 23, 4661-4666.	11.1	352
4	A long-life lithium-ion battery with a highly porous TiNb₂O₇ anode for large-scale electrical energy storage. Energy and Environmental Science, 2014, 7, 2220-2226.	15.6	312
5	Self-organized amorphous TiO2 nanotube arrays on porous Ti foam for rechargeable lithium and sodium ion batteries. Journal of Power Sources, 2013, 222, 461-466.	4.0	235
6	Seawater Uranium Sorbents: Preparation from a Mesoporous Copolymer Initiator by Atomâ€Transfer Radical Polymerization. Angewandte Chemie - International Edition, 2013, 52, 13458-13462.	7.2	222
7	Lithiumâ€“Sulfur Batteries Based on Nitrogenâ€Doped Carbon and an Ionicâ€Liquid Electrolyte. ChemSusChem, 2012, 5, 2079-2085.	3.6	187
8	Electrochemical and Solid-State Lithiation of Graphitic C₃N₄. Chemistry of Materials, 2013, 25, 503-508.	3.2	141
9	Synthesis and Characterization of Network Single Ion Conductors Based on Comb-Branched Polyepoxide Ethers and Lithium Bis(allylmalonato)borate. Macromolecules, 2006, 39, 362-372.	2.2	129
10	Doped sulfone electrolytes for high voltage Li-ion cell applications. Electrochemistry Communications, 2009, 11, 1418-1421.	2.3	118
11	Superior Conductive Solid-like Electrolytes: Nanoconfining Liquids within the Hollow Structures. Nano Letters, 2015, 15, 3398-3402.	4.5	115
12	Electrochemical Windows of Sulfone-Based Electrolytes for High-Voltage Li-Ion Batteries. Journal of Physical Chemistry B, 2011, 115, 12120-12125.	1.2	113
13	Polymerized Ionic Networks with High Charge Density: Quasiâ€Solid Electrolytes in Lithiumâ€Metal Batteries. Advanced Materials, 2015, 27, 8088-8094.	11.1	110
14	An AlCl3 based ionic liquid with a neutral substituted pyridine ligand for electrochemical deposition of aluminum. Electrochimica Acta, 2015, 160, 82-88.	2.6	108
15	Highly dispersed sulfur in a porous aromatic framework as a cathode for lithiumâ€“sulfur batteries. Chemical Communications, 2013, 49, 4905.	2.2	103
16	A Novel Electrolyte Salt Additive for Lithiumâ€Ion Batteries with Voltages Greater than 4.7 V. Advanced Energy Materials, 2017, 7, 1601397.	10.2	103
17	Low-Temperature Fluorination of Soft-Templated Mesoporous Carbons for a High-Power Lithium/Carbon Fluoride Battery. Chemistry of Materials, 2011, 23, 4420-4427.	3.2	102
18	New sulfone electrolytes for rechargeable lithium batteries.. Electrochemistry Communications, 2005, 7, 261-266.	2.3	101

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19	Polymer gel electrolytes for application in aluminum deposition and rechargeable aluminum ion batteries. Chemical Communications, 2016, 52, 292-295.	2.2	101
20	Synthesis and Characterization of Network Type Single Ion Conductors. Macromolecules, 2004, 37, 2219-2227.	2.2	94
21	In Situ Observation of Solid Electrolyte Interphase Formation in Ordered Mesoporous Hard Carbon by Small-Angle Neutron Scattering. Journal of Physical Chemistry C, 2012, 116, 7701-7711.	1.5	92
22	Electrochemical investigations of ionic liquids with vinylene carbonate for applications in rechargeable lithium ion batteries. Electrochimica Acta, 2010, 55, 4618-4626.	2.6	85
23	Crosslinked gel polymer electrolytes based on polyethylene glycol methacrylate and ionic liquid for lithium ion battery applications. Electrochimica Acta, 2013, 87, 889-894.	2.6	83
24	Direct Visualization of Solid Electrolyte Interphase Formation in Lithium-Ion Batteries with <i>In Situ</i> Electrochemical Transmission Electron Microscopy. Microscopy and Microanalysis, 2014, 20, 1029-1037.	0.2	83
25	Conductive surface modification of LiFePO4 with nitrogen-doped carbon layers for lithium-ion batteries. Journal of Materials Chemistry, 2012, 22, 4611.	6.7	76
26	Lithium malonatoborate additives enabled stable cycling of 5 V lithium metal and lithium ion batteries. Nano Energy, 2017, 40, 9-19.	8.2	72
27	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Li</mml:mi><mml:mo>+</mml:mo></mml:msup></mml:math>Transport in Poly(Ethylene Oxide) Based Electrolytes: Neutron Scattering, Dielectric Spectroscopy, and Molecular Dynamics Simulations. Physical Review Letters, 2013, 111, 018301.	2.9	71
28	Ionic Liquidâ€Directed Nanoporous TiNb₂O₇ Anodes with Superior Performance for Fastâ€Rechargeable Lithiumâ€Ion Batteries. Small, 2020, 16, e2001884.	5.2	69
29	Decoupling charge transport from the structural dynamics in room temperature ionic liquids. Journal of Chemical Physics, 2011, 135, 114509.	1.2	67
30	Highly soluble alkoxide magnesium salts for rechargeable magnesium batteries. Journal of Materials Chemistry A, 2014, 2, 581-584.	5.2	66
31	Oxidation Potentials of Functionalized Sulfone Solvents for High-Voltage Li-Ion Batteries: A Computational Study. Journal of Physical Chemistry B, 2012, 116, 3235-3238.	1.2	63
32	Mesoporous carbonâ€"Cr2O3 composite as an anode material for lithium ion batteries. Journal of Power Sources, 2012, 205, 495-499.	4.0	62
33	Ambient Lithiumâ€"SO₂ Batteries with Ionic Liquids as Electrolytes. Angewandte Chemie - International Edition, 2014, 53, 2099-2103.	7.2	62
34	Organic Cathode Materials for Lithiumâ€Ion Batteries: Past, Present, and Future. Advanced Energy and Sustainability Research, 2021, 2, 2000044.	2.8	61
35	High performance Cr, N-codoped mesoporous TiO₂microspheres for lithium-ion batteries. Journal of Materials Chemistry A, 2014, 2, 1818-1824.	5.2	58
36	Aromatic Polyimide/Graphene Composite Organic Cathodes for Fast and Sustainable Lithiumâ€Ion Batteries. ChemSusChem, 2018, 11, 763-772.	3.6	58

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37	Insights into the Enhanced Cycle and Rate Performances of the Fâ€Substituted P2â€Type Oxide Cathodes for Sodiumâ€Ion Batteries. Advanced Energy Materials, 2020, 10, 2000135.	10.2	57
38	Comb-shaped single ion conductors based on polyacrylate ethers and lithium alkyl sulfonate. Electrochimica Acta, 2005, 50, 1139-1147.	2.6	53
39	Carbon Coated Porous Titanium Niobium Oxides as Anode Materials of Lithium-Ion Batteries for Extreme Fast Charge Applications. ACS Applied Energy Materials, 2020, 3, 5657-5665.	2.5	53
40	Nitrogenâ€Enriched Carbons from Alkali Salts with High Coulombic Efficiency for Energy Storage Applications. Advanced Energy Materials, 2013, 3, 708-712.	10.2	51
41	Physicochemical properties of imidazolium-derived ionic liquids with different C-2 substitutions. Physical Chemistry Chemical Physics, 2011, 13, 21503.	1.3	48
42	A high performance hybrid battery based on aluminum anode and LiFePO₄ cathode. Chemical Communications, 2016, 52, 1713-1716.	2.2	48
43	Membraneâ€Based Gas Separation Accelerated by Hollow Nanosphere Architectures. Advanced Materials, 2017, 29, 1603797.	11.1	48
44	Supramolecular Selfâ€Assembled Multiâ€Electronâ€Acceptor Organic Molecule as Highâ€Performance Cathode Material for Liâ€Ion Batteries. Advanced Energy Materials, 2021, 11, 2100330.	10.2	48
45	Bis(trimethylsilyl) 2-fluoromalonate derivatives as electrolyte additives for high voltage lithium ion batteries. Journal of Power Sources, 2019, 412, 527-535.	4.0	47
46	â€œAcid-in-chainâ€•versus â€œbase-in-chainâ€•anionic polymer electrolytes for electrochemical devices. Electrochimica Acta, 2001, 46, 1467-1473.	2.6	45
47	Aqueous solution of [EMIM][OAc]: Property formulations for use in air conditioning equipment design. Applied Thermal Engineering, 2017, 124, 271-278.	3.0	44
48	All-solid-state interpenetrating network polymer electrolytes for long cycle life of lithium metal batteries. Journal of Materials Chemistry A, 2018, 6, 14847-14855.	5.2	44
49	Synthesis and Characterization of Lithium Bis(fluoromalonato)borate for Lithiumâ€Ion Battery Applications. Advanced Energy Materials, 2014, 4, 1301368.	10.2	43
50	New ionic liquids based on the complexation of dipropyl sulfide and AlCl₃for electrodeposition of aluminum. Chemical Communications, 2015, 51, 13286-13289.	2.2	42
51	Persistent Electrochemical Performance in Epitaxial VO₂(B). Nano Letters, 2017, 17, 2229-2233.	4.5	41
52	New gel polyelectrolytes for rechargeable lithium batteries. Solid State Ionics, 2004, 175, 713-716.	1.3	39
53	Bicyclic imidazolium ionic liquids as potential electrolytes for rechargeable lithium ion batteries. Journal of Power Sources, 2013, 237, 5-12.	4.0	37
54	New single ion conductors (?polyBOP? and analogs) for rechargeable lithium batteries. Solid State Ionics, 2004, 175, 743-746.	1.3	36

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55	Probing microstructure and electrolyte concentration dependent cell chemistry <i>via operando</i> small angle neutron scattering. Energy and Environmental Science, 2019, 12, 1866-1877.	15.6	36
56	A dicyanobenzoquinone based cathode material for rechargeable lithium and sodium ion batteries. Journal of Materials Chemistry A, 2019, 7, 17888-17895.	5.2	35
57	Network Single Ion Conductors Based on Comb-Branched Polyepoxide Ethers and Lithium Bis(allylmalonato)borate. Macromolecules, 2004, 37, 5133-5135.	2.2	31
58	Bis(fluoromalonato)borate (BFMB) anion based ionic liquid as an additive for lithium-ion battery electrolytes. Journal of Materials Chemistry A, 2014, 2, 7606-7614.	5.2	31
59	Design of a multi-functional gel polymer electrolyte with a 3D compact stacked polymer micro-sphere matrix for high-performance lithium metal batteries. Journal of Materials Chemistry A, 2022, 10, 12563-12574.	5.2	31
60	Insight into the Solid Electrolyte Interphase Formation in Bis(fluorosulfonyl)Imide Based Ionic Liquid Electrolytes. Advanced Functional Materials, 2021, 31, 2008708.	7.8	30
61	Anion-trapping and polyanion electrolytes based on acid-in-chain borate polymers. Electrochimica Acta, 2003, 48, 2255-2266.	2.6	29
62	Polythiophene coated aromatic polyimide enabled ultrafast and sustainable lithium ion batteries. Journal of Materials Chemistry A, 2017, 5, 24083-24090.	5.2	29
63	New sulfone electrolytesPart II. Cyclo alkyl group containing sulfones. Solid State Ionics, 2004, 175, 257-260.	1.3	28
64	Synergistic Effects of Mixing Sulfone and Ionic Liquid as Safe Electrolytes for Lithium Sulfur Batteries. ChemSusChem, 2015, 8, 353-360.	3.6	28
65	Fluorination of MXene by Elemental F₂ as Electrode Material for Lithiumâ€Ion Batteries. ChemSusChem, 2019, 12, 1316-1324.	3.6	28
66	A sodiumâ€“aluminum hybrid battery. Journal of Materials Chemistry A, 2017, 5, 6589-6596.	5.2	25
67	New promising lithium malonatoborate salts for high voltage lithium ion batteries. Journal of Materials Chemistry A, 2017, 5, 1233-1241.	5.2	25
68	In situ polymerized succinonitrile-based solid polymer electrolytes for lithium ion batteries. Solid State Ionics, 2020, 345, 115159.	1.3	24
69	Interfacial behavior of polymer electrolytes. Electrochimica Acta, 2004, 50, 235-242.	2.6	23
70	Fluorination of â€œbrick and mortarâ€• soft-templated graphitic ordered mesoporous carbons for high power lithium-ion battery. Journal of Materials Chemistry A, 2013, 1, 9414.	5.2	23
71	Deep eutectic solvents formed by quaternary ammonium salts and aprotic organic compound succinonitrile. Journal of Molecular Liquids, 2019, 274, 414-417.	2.3	23
72	Ion Dynamics in Ionicâ€Liquidâ€Based Liâ€Ion Electrolytes Investigated by Neutron Scattering and Dielectric Spectroscopy. ChemSusChem, 2018, 11, 3512-3523.	3.6	22

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73	The surface triple-coupling on single crystalline cathode for lithium ion batteries. Nano Energy, 2021, 86, 106096.	8.2	22
74	A stable fluorinated and alkylated lithium malonatoborate salt for lithium ion battery application. Chemical Communications, 2015, 51, 9817-9820.	2.2	21
75	Simultaneously Boosting the Ionic Conductivity and Mechanical Strength of Polymer Gel Electrolyte Membranes by Confining Ionic Liquids into Hollow Silica Nanocavities. Batteries and Supercaps, 2019, 2, 985-991.	2.4	21
76	Direct Electrodeposition of UO2 from Uranyl Bis(trifluoromethanesulfonyl)imide Dissolved in 1-Ethyl-3-methylimidazolium Bis(trifluoromethanesulfonyl)imide Room Temperature Ionic Liquid System. Electrochimica Acta, 2014, 115, 630-638.	2.6	17
77	Observing Framework Expansion of Ordered Mesoporous Hard Carbon Anodes with Ionic Liquid Electrolytes via in Situ Small-Angle Neutron Scattering. ACS Energy Letters, 2017, 2, 1698-1704.	8.8	16
78	Operando Analysis of Gas Evolution in TiNb₂O₇ (TNO)-Based Anodes for Advanced High-Energy Lithium-Ion Batteries under Fast Charging. ACS Applied Materials & Interfaces, 2021, 13, 55145-55155.	4.0	15
79	Facile Surface Coatings for Performance Improvement of NMC811 Battery Cathode Material. Journal of the Electrochemical Society, 2022, 169, 020565.	1.3	15
80	Electrochemical and impedance investigation of the effect of lithium malonate on the performance of natural graphite electrodes in lithium-ion batteries. Journal of Power Sources, 2010, 195, 4266-4271.	4.0	14
81	Tandem dissolution of UO₃in amide-based acidic ionic liquid and in situ electrodeposition of UO₂with regeneration of the ionic liquid: a closed cycle. Dalton Transactions, 2016, 45, 10151-10154.	1.6	14
82	Investigation of carbon-2 substituted imidazoles and their corresponding ionic liquids. Tetrahedron Letters, 2011, 52, 5308-5310.	0.7	12
83	Ionic conductivity of polymer gel electrolytes based on poly(polyethylene glycol dimethacrylate). Electrochimica Acta, 1996, 41, 1573-1575.	2.6	11
84	A Multidimensional Operando Study Showing the Importance of the Electrode Macrostructure in Lithium Sulfur Batteries. ACS Applied Energy Materials, 2020, 3, 6965-6976.	2.5	11
85	An investigation on ion solvation and ion association in a gel-type solid state polymer electrolyte. Solid State Ionics, 1996, 83, 79-85.	1.3	9
86	Polyanionic electrolytes with high alkali ion conductivity. Journal of Physics Condensed Matter, 2001, 13, 8235-8243.	0.7	9
87	Diffusion coefficients in trimethyleneoxide containing comb branch polymer electrolytes. Solid State Ionics, 2004, 175, 781-783.	1.3	9
88	Dynamics of Emim⁺ in [Emim][TFSI]/LiTFSI Solutions as Bulk and under Confinement in a Quasi-liquid Solid Electrolyte. Journal of Physical Chemistry B, 2021, 125, 5443-5450.	1.2	8
89	Easy synthesis of poly(ionic liquid) for use as a porous carbon precursor. New Carbon Materials, 2014, 29, 78-80.	2.9	7
90	Quantifying the chemical, electrochemical heterogeneity and spatial distribution of (poly) sulfide species using Operando SANS. Energy Storage Materials, 2021, 40, 219-228.	9.5	7

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91	Ionic conductivity of gel electrolyte based on polydiethylene glycol dimethacrylate and its copolymer. European Polymer Journal, 1996, 32, 801-803.	2.6	5
92	Methyl quantum tunneling in ionic liquid [DMIm][TFSI] facilitated by Bis(trifluoromethane)sulfonimide lithium salt. Scientific Reports, 2018, 8, 10354.	1.6	5
93	Polypeptide-based batteries toward sustainable and cyclic manufacturing. CheM, 2021, 7, 1705-1707.	5.8	4
94	Fluorination of MXene by Elemental F ₂ as Electrode Material for Lithiumâ€Ion Batteries. ChemSusChem, 0, , .	3.6	0
95	Fluorination of MXene by Elemental F 2 as Electrode Material for Lithiumâ€Ion Batteries. ChemSusChem, 2019, 12, 1271-1271.	3.6	0