Jae-Kwang Kim

List of Publications by Year
in descending order

116 papers	4,451 citations	76326 40 h-index	118850 62 g-index
120 all docs	120 docs citations	120 times ranked	4942 citing authors

#	Article	IF	Citations
1	Stretchable self-charging energy integrated device of high storage efficiency. Journal of Power Sources, 2022, 525, 231079.	7.8	1
2	Stabilizing the Li_{1.3}Al_{0.3}Ti_{1.7}(PO₄)₃|Li Interface for High Efficiency and Long Lifespan Quasiâ€Solidâ€State Lithium Metal Batteries. ChemSusChem, 2022, 15, .	6.8	11
3	Recent Advances in Layered Metalâ€Oxide Cathodes for Application in Potassiumâ€Ion Batteries. Advanced Science, 2022, 9, e2105882.	11.2	35
4	Preparation of fully flexible lithium metal batteries with free-standing Î²-Na0.33V2O5 cathodes and LAGP hybrid solid electrolytes. Journal of Industrial and Engineering Chemistry, 2021, 94, 368-375.	5.8	7
5	Optimization of high potential cathode materials and lithium conducting hybrid solid electrolyte for high-voltage all-solid-state batteries. Electrochimica Acta, 2021, 365, 137349.	5.2	10
6	Redox chemistry of nitrogen-doped CNT-encapsulated nitroxide radical polymers for high energy density and rate-capability organic batteries. Chemical Engineering Journal, 2021, 413, 127402.	12.7	13
7	Highly Stable Quasiâ€Solidâ€State Lithium Metal Batteries: Reinforced Li_{1.3}Al_{0.3}Ti_{1.7}(PO₄)₃/Li Interface by a Protection Interlayer. Advanced Energy Materials, 2021, 11, 2101339.	19.5	62
8	Lithium Phosphonate Functionalized Polymer Coating for Highâ€Energy Li[Ni_{0.8}Co_{0.1}Mn_{0.1}]O₂ with Superior Performance at Ambient and Elevated Temperatures. Advanced Functional Materials, 2021, 31, 2105343.	14.9	42
9	Rational Design of Perforated Bimetallic (Ni, Mo) Sulfides/Nâ€doped Graphitic Carbon Composite Microspheres as Anode Materials for Superior Naâ€Ion Batteries. Small Methods, 2021, 5, e2100195.	8.6	17
10	Low-cost and highly safe solid-phase sodium ion battery with a Snâ€“C nanocomposite anode. Journal of Industrial and Engineering Chemistry, 2021, 100, 112-118.	5.8	8
11	Dual-anion ionic liquid electrolyte enables stable Ni-rich cathodes in lithium-metal batteries. Joule, 2021, 5, 2177-2194.	24.0	83
12	Redox chemistry of advanced functional material for low-cost and environment-friendly seawater energy storage. Materials Today Energy, 2021, 21, 100805.	4.7	8
13	An Integrated Device of a Lithium-Ion Battery Combined with Silicon Solar Cells. Energies, 2021, 14, 6010.	3.1	3
14	Quasi-Solid-State Lithium Metal Batteries Using the LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂â€“Li_{1+<i>x</i>}Al_{<i>x</i>}Ti<sub>2 Composite Positive Electrode. ACS Applied Materials & Interfaces, 2021, 13, 53810-53817.	8.0	9
15	Recent progress on cesium lead/tin halide-based inorganic perovskites for stable and efficient solar cells: A review. Solar Energy Materials and Solar Cells, 2020, 204, 110212.	6.2	56
16	Physico-electrochemical properties of carbon coated LiFePO4 nanoparticles prepared by different preparation method. Applied Surface Science, 2020, 505, 144630.	6.1	14
17	High-performance quasi-solid-state flexible sodium metal battery: Substrate-free FeS2â€“C composite fibers cathode and polyimide film-stuck sodium metal anode. Chemical Engineering Journal, 2020, 391, 123510.	12.7	13
18	Porous SnO₂/C Nanofiber Anodes and LiFePO₄/C Nanofiber Cathodes with a Wrinkle Structure for Stretchable Lithium Polymer Batteries with High Electrochemical Performance. Advanced Science, 2020, 7, 2001358.	11.2	22

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19	High-energy lithium batteries based on single-ion conducting polymer electrolytes and Li[Ni0.8Co0.1Mn0.1]O2 cathodes. Nano Energy, 2020, 77, 105129.	16.0	76
20	Single- and double-redox reaction of poly(2,2,6,6-tetramethylpiperidinyloxy-4-vinylmethacrylate)/ordered mesoporous carbon composite nitroxide radical polymer battery. Journal of Power Sources, 2020, 477, 228670.	7.8	8
21	Development of a Self-Charging Lithium-Ion Battery Using Perovskite Solar Cells. Nanomaterials, 2020, 10, 1705.	4.1	12
22	Binder-free organic cathode based on nitroxide radical polymer-functionalized carbon nanotubes and gel polymer electrolyte for high-performance sodium organic polymer batteries. Journal of Materials Chemistry A, 2020, 8, 17980-17986.	10.3	25
23	Stretchable electrolytes for stretchable/flexible energy storage systems â€" Recent developments. Energy Storage Materials, 2020, 28, 315-324.	18.0	27
24	Electrode Materials with a Craterâ€Type Morphology Prepared by Electrospraying for Highâ€Performance Lithiumâ€Ion Batteries. ChemSusChem, 2019, 12, 4487-4492.	6.8	4
25	Preparation of Highly Porous PAN-LATP Membranes as Separators for Lithium Ion Batteries. Nanomaterials, 2019, 9, 1581.	4.1	13
26	Multi-channel-contained few-layered MoSe2 nanosheet/N-doped carbon hybrid nanofibers prepared using diethylenetriamine as anodes for high-performance sodium-ion batteries. Journal of Industrial and Engineering Chemistry, 2019, 75, 100-107.	5.8	39
27	Highly integrated and interconnected CNT hybrid nanofibers decorated with Î±-iron oxide as freestanding anodes for flexible lithium polymer batteries. Journal of Materials Chemistry A, 2019, 7, 12480-12488.	10.3	19
28	Properties of lithium iron phosphate prepared by biomass-derived carbon coating for flexible lithium ion batteries. Electrochimica Acta, 2019, 300, 18-25.	5.2	29
29	Optimized hard carbon derived from starch for rechargeable seawater batteries. Carbon, 2018, 129, 564-571.	10.3	54
30	Optimization of electrolyte and carbon conductor for dilithium terephthalate organic batteries. Korean Journal of Chemical Engineering, 2018, 35, 2464-2467.	2.7	11
31	Comparison of the structural and electrochemical properties of LiMn0.4Fe0.6PO4 cathode materials with different synthetic routes. Journal of Industrial and Engineering Chemistry, 2018, 66, 94-99.	5.8	1
32	Ultralong Life Organic Sodium Ion Batteries Using a Polyimide/Multiwalled Carbon Nanotubes Nanocomposite and Gel Polymer Electrolyte. ACS Sustainable Chemistry and Engineering, 2018, 6, 8159-8166.	6.7	47
33	Influence of ionic liquid structures on polyimide-based gel polymer electrolytes for high-safety lithium batteries. Journal of Industrial and Engineering Chemistry, 2018, 68, 168-172.	5.8	5
34	An Electrospun Coreâ€"Shell Nanofiber Web as a Highâ€Performance Cathode for Iron Disulfideâ€Based Rechargeable Lithium Batteries. ChemSusChem, 2018, 11, 3625-3630.	6.8	13
35	Binder-free hybrid Li4Ti5O12 anode for high performance lithium-ion batteries. Electrochimica Acta, 2018, 282, 270-275.	5.2	13
36	Electrochemical properties of LiMn 0.4 Fe 0.6 PO 4 with polyimide-based gel polymer electrolyte for high safety and improvement of rate capability. Electrochimica Acta, 2017, 238, 107-111.	5.2	7

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37	Zr doping effect with low-cost solid-state reaction method to synthesize submicron Li 4 Ti 5 O 12 anode material. Journal of Physics and Chemistry of Solids, 2017, 108, 25-29.	4.0	20
38	Composite gel polymer electrolyte with ceramic particles for LiNi 1/3 Mn 1/3 Co 1/3 O 2 -Li 4 Ti 5 O 12 lithium ion batteries. Electrochimica Acta, 2017, 236, 394-398.	5.2	23
39	Facile fabrication of patterned Si film electrodes containing trench-structured Cu current collectors for thin-film batteries. Electrochimica Acta, 2017, 224, 649-659.	5.2	21
40	Carbon conductor- and binder-free organic electrode for flexible organic rechargeable batteries with high energy density. Journal of Power Sources, 2017, 361, 15-20.	7.8	28
41	Hybrid gel polymer electrolyte for high-safety lithium-sulfur batteries. Materials Letters, 2017, 187, 40-43.	2.6	43
42	Electrochemical properties of sulfurized poly-acrylonitrile (SPAN) cathode containing carbon fiber current collectors. Surface and Coatings Technology, 2017, 326, 443-449.	4.8	8
43	Effect of Carbon Coating and Magnesium Doping on Electrochemical Properties of LiFePO4 for Lithium Ion Batteries. Science of Advanced Materials, 2017, 9, 1266-1271.	0.7	3
44	Inâ€…Situ Coating of Li[Ni_{0.33}Mn_{0.33}Co_{0.33}]O₂ Particles to Enable Aqueous Electrode Processing. ChemSusChem, 2016, 9, 1112-1117.	6.8	74
45	Comparison of structural characteristics and electrochemical properties of LiMPO 4 (M=Fe, Mn, and) Tj ETQq1 1 0.784314 rgBT /Overlo	2.6	11
46	Characterization of fibrous gel polymer electrolyte for lithium polymer batteries with enhanced electrochemical properties. Journal of Electroanalytical Chemistry, 2016, 775, 37-42.	3.8	18
47	Atomic structural and electrochemical impact of Fe substitution on nano porous LiMnPO4. Journal of Power Sources, 2016, 320, 59-67.	7.8	33
48	Si film electrodes containing surface-modified Cu current collectors prepared by a low temperature oxidation-reduction process. Vacuum, 2016, 132, 130-137.	3.5	1
49	Effect of sol-gel process parameters on the properties of a Li1.3Ti1.7Al0.3(PO4)3 solid electrolyte for Li-ion batteries. Journal of the Korean Physical Society, 2016, 68, 28-34.	0.7	4
50	Electrochemical characterization of micro-rod Î²-Na0.33V2O5 for high performance lithium ion batteries. Electrochimica Acta, 2016, 193, 160-165.	5.2	13
51	Organic di-radical rechargeable battery with an ionic liquid-based gel polymer electrolyte. Korean Journal of Chemical Engineering, 2016, 33, 858-861.	2.7	11
52	Encapsulation of organic active materials in carbon nanotubes for application to high-electrochemical-performance sodium batteries. Energy and Environmental Science, 2016, 9, 1264-1269.	30.8	148
53	Electrochemical properties of a ceramic-polymer-composite-solid electrolyte for Li-ion batteries. Solid State Ionics, 2016, 284, 20-24.	2.7	19
54	Eco-friendly Energy Storage System: Seawater and Ionic Liquid Electrolyte. ChemSusChem, 2016, 9, 2-2.	6.8	1

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55	Ecoâ€friendly Energy Storage System: Seawater and Ionic Liquid Electrolyte. ChemSusChem, 2016, 9, 42-49.	6.8	42
56	Polymer-Ceramic Composite Gel Polymer Electrolyte for High-Electrochemical-Performance Lithium-Ion Batteries. Journal of the Korean Electrochemical Society, 2016, 19, 123-128.	0.1	1
57	Electrochemical Properties of Poly(Styrenesulfonate)-Carbon Composite Anode for Organic Rechargeable Battery. Journal of the Korean Electrochemical Society, 2016, 19, 129-133.	0.1	1
58	Electrochemical Properties of Ionic Liquid Composite Poly(ethylene oxide)(PEO) Solid Polymer Electrolyte. Journal of the Korean Electrochemical Society, 2016, 19, 101-106.	0.1	0
59	Ceramicâ€Based Composite Solid Electrolyte for Lithiumâ€Ion Batteries. ChemPlusChem, 2015, 80, 1100-1103.	2.8	36
60	Spectroscopic characterization of biochemical states of myoglobin in beef in different environments. Journal of Industrial and Engineering Chemistry, 2015, 28, 302-306.	5.8	2
61	New Chemical Route for the Synthesis of Î2-Na_{0.33}V₂O₅ and Its Fully Reversible Li Intercalation. ACS Applied Materials & Interfaces, 2015, 7, 7025-7032.	8.0	41
62	A hybrid solid electrolyte for flexible solid-state sodium batteries. Energy and Environmental Science, 2015, 8, 3589-3596.	30.8	204
63	Superior Ionâ€Conducting Hybrid Solid Electrolyte for Allâ€Solidâ€State Batteries. ChemSusChem, 2015, 8, 636-641.	6.8	70
64	Improving electrochemical properties of porous iron substituted lithium manganese phosphate in additive addition electrolyte. Journal of Power Sources, 2015, 275, 106-110.	7.8	17
65	Metal-free hybrid seawater fuel cell with an ether-based electrolyte. Journal of Materials Chemistry A, 2014, 2, 19584-19588.	10.3	59
66	Rechargeable-hybrid-seawater fuel cell. NPG Asia Materials, 2014, 6, e144-e144.	7.9	68
67	Electrochemical properties of a full cell of lithium iron phosphate cathode using thin amorphous silicon anode. Solid State Ionics, 2014, 268, 256-260.	2.7	15
68	All fluorine-free lithium battery electrolytes. Journal of Power Sources, 2014, 251, 451-458.	7.8	32
69	Li-Water Battery with Oxygen Dissolved in Water as a Cathode. Journal of the Electrochemical Society, 2014, 161, A285-A289.	2.9	20
70	Supercritical synthesis in combination with a spray process for 3D porous microsphere lithium iron phosphate. CrystEngComm, 2014, 16, 2818-2822.	2.6	21
71	Î3-Fe2O3 nanoparticles encapsulated in polypyrrole for quasi-solid-state lithium batteries. Journal of Materials Chemistry A, 2014, 2, 3551.	10.3	11
72	Electrochemical characterization of poly(vinylidene fluoride-co-hexafluoro propylene) based electrospun gel polymer electrolytes incorporating room temperature ionic liquids as green electrolytes for lithium batteries. Solid State Ionics, 2014, 262, 77-82.	2.7	23

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73	Influence of temperature on ionic liquid-based gel polymer electrolyte prepared by electrospun fibrous membrane. Electrochimica Acta, 2014, 116, 321-325.	5.2	15
74	Effect of carbon coating methods on structural characteristics and electrochemical properties of carbon-coated lithium iron phosphate. Solid State Ionics, 2014, 262, 25-29.	2.7	11
75	A layer-built rechargeable lithium ribbon-type battery for high energy density textile battery applications. Journal of Materials Chemistry A, 2014, 2, 1774-1780.	10.3	19
76	A ternary sulfur/polyaniline/carbon composite as cathode material for lithium sulfur batteries. Electrochimica Acta, 2013, 109, 145-152.	5.2	78
77	Facile preparation of nanoporous and nanocrystalline LiFePO4 with excellent electrochemical properties. RSC Advances, 2013, 3, 20836.	3.6	6
78	Characterization of N-butyl-N-methyl-pyrrolidinium bis(trifluoromethanesulfonyl)imide-based polymer electrolytes for high safety lithium batteries. Journal of Power Sources, 2013, 224, 93-98.	7.8	73
79	Micro-fibrous organic radical electrode to improve the electrochemical properties of organic rechargeable batteries. Journal of Power Sources, 2013, 242, 683-686.	7.8	19
80	Role of lithium precursor in the structure and electrochemical performance of LiFePO4. Scripta Materialia, 2013, 69, 716-719.	5.2	12
81	Nano-fibrous polymer films for organic rechargeable batteries. Journal of Materials Chemistry A, 2013, 1, 2426-2430.	10.3	45
82	Manganese Doped LiFePO₄as a Cathode for High Energy Density Lithium Batteries. Journal of the Korean Electrochemical Society, 2013, 16, 157-161.	0.1	2
83	Synthesis and Electrochemical Properties of Polyaniline Nanofibers by Interfacial Polymerization. Journal of Nanoscience and Nanotechnology, 2012, 12, 3534-3537.	0.9	4
84	Preparation and application of TEMPO-based di-radical organic electrode with ionic liquid-based polymer electrolyte. RSC Advances, 2012, 2, 10394.	3.6	14
85	2,3,6,7,10,11-Hexamethoxytriphenylene (HMTP): A new organic cathode material for lithium batteries. Electrochemistry Communications, 2012, 21, 50-53.	4.7	12
86	Polymer electrolytes based on poly(vinylidene fluoride-co-hexafluoropropylene) nanofibrous membranes containing polymer plasticizers for lithium batteries. Solid State Ionics, 2012, 225, 631-635.	2.7	27
87	Electrochemical properties of lithium polymer batteries with doped polyaniline as cathode material. Materials Research Bulletin, 2012, 47, 2815-2818.	5.2	23
88	Improving the stability of an organic battery with an ionic liquid-based polymer electrolyte. RSC Advances, 2012, 2, 9795.	3.6	23
89	Phase behaviour, transport properties, and interactions in Li-salt doped ionic liquids. Faraday Discussions, 2012, 154, 71-80.	3.2	77
90	Towards flexible secondary lithium batteries: polypyrrole-LiFePO4 thin electrodes with polymer electrolytes. Journal of Materials Chemistry, 2012, 22, 15045.	6.7	44

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91	Ionic liquids and oligomer electrolytes based on the B(CN)4â˘ anion; ion association, physical and electrochemical properties. Physical Chemistry Chemical Physics, 2011, 13, 14953.	2.8	29
92	Highly porous LiMnPO4 in combination with an ionic liquid-based polymer gel electrolyte for lithium batteries. Electrochemistry Communications, 2011, 13, 1105-1108.	4.7	43
93	Properties of N-butyl-N-methyl-pyrrolidinium Bis(trifluoromethanesulfonyl) Imide Based Electrolytes as a Function of Lithium Bis(trifluoromethanesulfonyl) Imide Doping. Journal of the Korean Electrochemical Society, 2011, 14, 92-97.	0.1	15
94	An imidazolium based ionic liquid electrolyte for lithium batteries. Journal of Power Sources, 2010, 195, 7639-7643.	7.8	146
95	Ionic liquid-based gel polymer electrolyte for LiMn0.4Fe0.6PO4 cathode prepared by electrospinning technique. Electrochimica Acta, 2010, 55, 1366-1372.	5.2	32
96	Electrochemical properties of rechargeable organic radical battery with PTMA cathode. Metals and Materials International, 2009, 15, 77-82.	3.4	53
97	Effect of synthetic conditions on the electrochemical properties of LiMn0.4Fe0.6PO4/C synthesized by solâ€"gel technique. Journal of Power Sources, 2009, 189, 391-396.	7.8	49
98	Effect of firing temperature on the electrochemical performance of LiMn0.4Fe0.6PO4/C materials prepared by mechanical activation. Journal of Power Sources, 2009, 189, 59-65.	7.8	32
99	Organic radical battery with PTMA cathode: Effect of PTMA content on electrochemical properties. Journal of Industrial and Engineering Chemistry, 2008, 14, 371-376.	5.8	84
100	Electrochemical properties of carbon-coated LiFePO4 synthesized by a modified mechanical activation process. Journal of Physics and Chemistry of Solids, 2008, 69, 2371-2377.	4.0	56
101	Electrochemical properties of new organic radical materials for lithium secondary batteries. Journal of Power Sources, 2008, 184, 503-507.	7.8	45
102	Ionic conductivity and electrochemical properties of nanocomposite polymer electrolytes based on electrospun poly(vinylidene fluoride-co-hexafluoropropylene) with nano-sized ceramic fillers. Electrochimica Acta, 2008, 54, 228-234.	5.2	177
103	Electrochemical properties of LiFePO4/C synthesized by mechanical activation using sucrose as carbon source. Journal of Solid State Electrochemistry, 2008, 12, 799-805.	2.5	66
104	Preparation and electrochemical characterization of electrospun, microporous membrane-based composite polymer electrolytes for lithium batteries. Journal of Power Sources, 2008, 178, 815-820.	7.8	126
105	Surface-modified maghemite as the cathode material for lithium batteries. Journal of Power Sources, 2008, 184, 527-531.	7.8	22
106	Electrochemical properties of LiFePO4/C composite cathode material: Carbon coating by the precursor method and direct addition. Journal of Physics and Chemistry of Solids, 2008, 69, 1257-1260.	4.0	55
107	Li(Mn0.4Fe0.6)PO4 cathode active material: Synthesis and electrochemical performance evaluation. Journal of Physics and Chemistry of Solids, 2008, 69, 1253-1256.	4.0	21
108	Enhancement of electrochemical performance of lithium iron phosphate by controlled solâ€"gel synthesis. Electrochimica Acta, 2008, 53, 8258-8264.	5.2	131

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109	Electrochemical Properties of LiMPO4(M = Fe, Mn) Synthesized by Sol-Gel Method. Journal of the Korean Electrochemical Society, 2008, 11, 120-124.	0.1	0
110	Electrochemical properties of lithium iron phosphate cathode material using polymer electrolyte. Physica Scripta, 2007, T129, 66-69.	2.5	2
111	Rechargeable Organic Radical Battery with Electrospun, Fibrous Membrane-Based Polymer Electrolyte. Journal of the Electrochemical Society, 2007, 154, A839.	2.9	63
112	Poly(ethylene oxide)-based polymer electrolyte incorporating room-temperature ionic liquid for lithium batteries. Solid State Ionics, 2007, 178, 1235-1241.	2.7	121
113	Electrospun polymer membrane activated with room temperature ionic liquid: Novel polymer electrolytes for lithium batteries. Journal of Power Sources, 2007, 172, 863-869.	7.8	97
114	A modified mechanical activation synthesis for carbon-coated LiFePO4 cathode in lithium batteries. Materials Letters, 2007, 61, 3822-3825.	2.6	98
115	Effect of mechanical activation process parameters on the properties of LiFePO4 cathode material. Journal of Power Sources, 2007, 166, 211-218.	7.8	110
116	Polymer electrolytes based on an electrospun poly(vinylidene fluoride-co-hexafluoropropylene) membrane for lithium batteries. Journal of Power Sources, 2007, 167, 491-498.	7.8	165