Young-Jun Kim

List of Publications by Year in descending order

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Version: 2024-02-01

73 papers	5,390 citations	101543 36 h-index	79698 73 g-index
74 all docs	74 docs citations	74 times ranked	6419 citing authors

#	Article	IF	Citations
1	A technology review of electrodes and reaction mechanisms in vanadium redox flow batteries. Journal of Materials Chemistry A, 2015, 3, 16913-16933.	10.3	565
2	Prospective materials and applications for Li secondary batteries. Energy and Environmental Science, 2011, 4, 1986.	30.8	558
3	Improved electrochemical and thermal properties of nickel rich LiNi0.6Co0.2Mn0.2O2 cathode materials by SiO2 coating. Journal of Power Sources, 2015, 282, 45-50.	7.8	270
4	Effect of Residual Lithium Compounds on Layer Ni-Rich Li[Ni_{0.7}Mn_{0.3}]O₂. Journal of the Electrochemical Society, 2014, 161, A920-A926.	2.9	267
5	The effects of surface modification on carbon felt electrodes for use in vanadium redox flow batteries. Materials Chemistry and Physics, 2011, 131, 547-553.	4.0	264
6	Novel catalytic effects of Mn3O4 for all vanadium redox flow batteries. Chemical Communications, 2012, 48, 5455.	4.1	250
7	Coreâ€“Shell Structured Silicon Nanoparticles@TiO_{2â€“x}/Carbon Mesoporous Microfiber Composite as a Safe and High-Performance Lithium-Ion Battery Anode. ACS Nano, 2014, 8, 2977-2985.	14.6	227
8	A case study on fibrous porous SnO 2 anode for robust, high-capacity lithium-ion batteries. Nano Energy, 2014, 10, 53-62.	16.0	179
9	A new strategy for integrating abundant oxygen functional groups into carbon felt electrode for vanadium redox flow batteries. Scientific Reports, 2014, 4, 6906.	3.3	136
10	Facile Synthesis of Carbon-Coated Silicon/Graphite Spherical Composites for High-Performance Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 12109-12117.	8.0	130
11	Capacity fading mechanism of LiFePO4-based lithium secondary batteries for stationary energy storage. Journal of Power Sources, 2013, 229, 190-197.	7.8	118
12	Investigation of new manganese orthophosphate Mn3(PO4)2 coating for nickel-rich LiNi0.6Co0.2Mn0.2O2 cathode and improvement of its thermal properties. Electrochimica Acta, 2016, 198, 77-83.	5.2	117
13	Dual-Size Silicon Nanocrystal-Embedded SiO_x Nanocomposite as a High-Capacity Lithium Storage Material. ACS Nano, 2015, 9, 7690-7696.	14.6	107
14	Multifunctional TiO2 coating for a SiO anode in Li-ion batteries. Journal of Materials Chemistry, 2012, 22, 7999.	6.7	97
15	Superior Electrocatalytic Activity of a Robust Carbonâ€Felt Electrode with Oxygenâ€Rich Phosphate Groups for Allâ€Vanadium Redox Flow Batteries. ChemSusChem, 2016, 9, 1329-1338.	6.8	95
16	Hydrogen Silsequioxane-Derived Si/SiO_x Nanospheres for High-Capacity Lithium Storage Materials. ACS Applied Materials & Interfaces, 2014, 6, 9608-9613.	8.0	93
17	The origins and mechanism of phase transformation in bulk Li₂MnO₃: first-principles calculations and experimental studies. Journal of Materials Chemistry A, 2015, 3, 7066-7076.	10.3	91
18	Physically Cross-linked Polymer Binder Induced by Reversible Acidâ€“Base Interaction for High-Performance Silicon Composite Anodes. ACS Applied Materials & Interfaces, 2015, 7, 23545-23553.	8.0	88

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19	Effect of additives on electrochemical performance of lithium nickel cobalt manganese oxide at high temperature. Journal of Power Sources, 2014, 253, 48-54.	7.8	82
20	Understanding the effects of a multi-functionalized additive on the cathodeâ€“electrolyte interfacial stability of Ni-rich materials. Journal of Power Sources, 2016, 302, 431-438.	7.8	82
21	Capacity fading behavior of Ni-rich layered cathode materials in Li-ion full cells. Journal of Electroanalytical Chemistry, 2016, 782, 168-173.	3.8	76
22	Facile Mn Surface Doping of Ni-Rich Layered Cathode Materials for Lithium Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 38915-38921.	8.0	69
23	Dendrite-Free Polygonal Sodium Deposition with Excellent Interfacial Stability in a NaAlCl₄â€“2SO₂ Inorganic Electrolyte. ACS Applied Materials & Interfaces, 2015, 7, 27206-27214.	8.0	68
24	Ceramic composite separators coated with moisturized ZrO₂ nanoparticles for improving the electrochemical performance and thermal stability of lithium ion batteries. Physical Chemistry Chemical Physics, 2014, 16, 9337-9343.	2.8	65
25	Effect of aluminum fluoride coating on the electrochemical and thermal properties of 0.5Li2MnO3Â·0.5LiNi0.5Co0.2Mn0.3O2 composite material. Journal of Alloys and Compounds, 2012, 517, 20-25.	5.5	63
26	Few-Layer Graphene Island Seeding for Dendrite-Free Li Metal Electrodes. ACS Applied Materials & Interfaces, 2016, 8, 26895-26901.	8.0	63
27	Conductive porous carbon film as a lithium metal storage medium. Electrochimica Acta, 2015, 176, 172-178.	5.2	62
28	Shutdown-functionalized nonwoven separator with improved thermal and electrochemical properties for lithium-ion batteries. Journal of Power Sources, 2016, 305, 225-232.	7.8	62
29	High-Performance Si/SiO_x Nanosphere Anode Material by Multipurpose Interfacial Engineering with Black TiO_{2â€“x}. ACS Applied Materials & Interfaces, 2016, 8, 4541-4547.	8.0	62
30	Co-intercalation of Mg²⁺ and Na⁺ in Na_{0.69}Fe₂(CN)₆ as a High-Voltage Cathode for Magnesium Batteries. ACS Applied Materials & Interfaces, 2016, 8, 8554-8560.	8.0	57
31	Graphene collage on Ni-rich layered oxide cathodes for advanced lithium-ion batteries. Nature Communications, 2021, 12, 2145.	12.8	54
32	5V-class high-voltage batteries with over-lithiated oxide and a multi-functional additive. Journal of Materials Chemistry A, 2015, 3, 6157-6167.	10.3	51
33	Effect of gamma ray irradiation on thermal and electrochemical properties of polyethylene separator for Li ion batteries. Journal of Power Sources, 2010, 195, 6075-6080.	7.8	46
34	A Highly Resilient Mesoporous SiO_x Lithium Storage Material Engineered by Oilâ€“Water Templating. ChemSusChem, 2015, 8, 688-694.	6.8	45
35	Mechanism of Oxygen Vacancy on Impeded Phase Transformation and Electrochemical Activation in Inactive Li₂MnO₃. ChemElectroChem, 2016, 3, 943-949.	3.4	44
36	Incorporation of phosphorus into the surface of natural graphite anode for lithium ion batteries. Journal of Materials Chemistry, 2011, 21, 17960.	6.7	42

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37	Robust Design of Dualâ€Phasic Carbon Cathode for Lithiumâ€“Oxygen Batteries. Advanced Functional Materials, 2019, 29, 1902915.	14.9	34
38	Understanding of Surface Redox Behaviors of Li₂MnO₃ in Liâ€Ion Batteries: Firstâ€Principles Prediction and Experimental Validation. ChemSusChem, 2015, 8, 3255-3262.	6.8	31
39	Tuning the surface chemistry of natural graphite anode by H3PO4 and H3BO3 treatments for improving electrochemical and thermal properties. Carbon, 2013, 62, 278-287.	10.3	29
40	High Performance Naâ€“CuCl₂ Rechargeable Battery toward Room Temperature ZEBRAâ€Type Battery. Advanced Energy Materials, 2016, 6, 1600862.	19.5	28
41	Polymeric binder based on PAA and conductive PANI for high performance silicon-based anodes. RSC Advances, 2016, 6, 101622-101625.	3.6	28
42	Communicationâ€”Improvement of Structural Stability during High-Voltage Cycling in High-Nickel Cathode Materials with B₂O₃Addition. Journal of the Electrochemical Society, 2016, 163, A748-A750.	2.9	28
43	A room-temperature sodium rechargeable battery using an SO2-based nonflammable inorganic liquid catholyte. Scientific Reports, 2015, 5, 12827.	3.3	27
44	Thermal and chemical characterization of the solid-electrolyte interphase in Li-ion batteries using a novel separator sampling method. Journal of Power Sources, 2019, 440, 227083.	7.8	26
45	Insight into the electrochemical behaviors of 5Vâ€“class highâ€“voltage batteries composed of lithiumâ€“rich layered oxide with multifunctional additive. Journal of Power Sources, 2016, 336, 465-474.	7.8	24
46	Self-adaptive anode design with graphene-coated SiOx/graphite for high-energy Li-ion batteries. Chemical Engineering Journal, 2022, 442, 136166.	12.7	24
47	Nanotechnology enabled rechargeable Liâ€“SO₂ batteries: another approach towards post-lithium-ion battery systems. Energy and Environmental Science, 2015, 8, 3173-3180.	30.8	23
48	Rosin-Embedded Poly(acrylic acid) Binder for Silicon/Graphite Negative Electrode. ACS Sustainable Chemistry and Engineering, 2016, 4, 6362-6370.	6.7	22
49	Magnesium Anode Pretreatment Using a Titanium Complex for Magnesium Battery. ACS Sustainable Chemistry and Engineering, 2017, 5, 5733-5739.	6.7	22
50	Improved particle hardness of Ti-doped LiNi1/3Co1/3Mn1/3-xTixO2 as high-voltage cathode material for lithium-ion batteries. Journal of Physics and Chemistry of Solids, 2018, 123, 271-278.	4.0	22
51	Oriented TiO2 nanotubes as a lithium metal storage medium. Journal of Electroanalytical Chemistry, 2014, 726, 51-54.	3.8	21
52	Electron-beam-irradiated polyethylene membrane with improved electrochemical and thermal properties for lithium-ion batteries. Journal of Applied Electrochemistry, 2014, 44, 345-352.	2.9	19
53	Junction Welding Techniques for Metal Nanowire Network Electrodes. Macromolecular Research, 2018, 26, 1066-1073.	2.4	19
54	Comparative study of thermal runaway and cell failure of lab-scale Li-ion batteries using accelerating rate calorimetry. Journal of Industrial and Engineering Chemistry, 2020, 83, 247-251.	5.8	19

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55	Dendrite-Free Li Metal Anode for Rechargeable Liâ€“SO₂ Batteries Employing Surface Modification with a NaAlCl₄â€“2SO₂ Electrolyte. ACS Applied Materials & Interfaces, 2018, 10, 34699-34705.	8.0	18
56	New insights into the phase evolution in CuS during lithiation and delithiation processes. Journal of Materials Chemistry A, 2019, 7, 11699-11708.	10.3	16
57	Natural Activation of CuO to CuCl2 as a Cathode Material for Dual-Ion Lithium Metal Batteries. Energy Storage Materials, 2021, 41, 466-474.	18.0	16
58	1,3-Propanesultone as an effective functional additive to enhance the electrochemical performance of over-lithiated layered oxides. RSC Advances, 2014, 4, 19172.	3.6	15
59	Defect-Free Copolymer Gate Dielectrics for Gating MoS₂ Transistors. Journal of Physical Chemistry C, 2018, 122, 12193-12199.	3.1	15
60	Reversible dual-ion battery via mesoporous Cu2O cathode in SO2-in-salt non-flammable electrolyte. Nano Energy, 2019, 66, 104138.	16.0	14
61	Hard Carbonâ€coated Natural Graphite Electrodes for Highâ€Energy and Power Lithiumâ€Ion Capacitors. Bulletin of the Korean Chemical Society, 2015, 36, 150-155.	1.9	13
62	Si Nanocrystal-Embedded SiO x nanofoils: Two-Dimensional Nanotechnology-Enabled High Performance Li Storage Materials. Scientific Reports, 2018, 8, 6904.	3.3	11
63	Electrode Engineering with CNTs to Enhance the Electrochemical Performance of LiNi 0.6 Co 0.2 Mn 0.2 O 2 Cathodes with Commercial Level Design Parameters. ChemElectroChem, 2020, 7, 2621-2628.	3.4	11
64	NH₄PF₆ as a Structural Modifier for Building a Robust Carbonâ€Coated Natural Graphite Anode for Lithiumâ€Ion Batteries. ChemElectroChem, 2014, 1, 1672-1678.	3.4	10
65	Carbon <scp>nanotubesâ€coated Niâ€rich</scp> cathodes for the green manufacturing process of <scp>lithiumâ€ion</scp> batteries. International Journal of Energy Research, 2022, 46, 16061-16074.	4.5	10
66	Densification and charge transport characterization of composite cathodes with single-crystalline LiNi0.8Co0.15Al0.05O2 for solid-state batteries. Energy Storage Materials, 2022, 46, 155-164.	18.0	9
67	Effect of electrode design parameters on the rate performance of LiNi0.6Co0.2Mn0.2O2 cathodes using pulse measurements. Electrochimica Acta, 2020, 341, 135936.	5.2	8
68	Effects of Various Transition Metals on the Thermal Oxidative Stabilization of Polyacrylonitrile Nanofibers. Journal of Inorganic and Organometallic Polymers and Materials, 2021, 31, 3368-3377.	3.7	8
69	Selfâ€Formulated Naâ€Based Dualâ€Ion Battery Using Nonflammable SO₂â€Based Inorganic Liquid Electrolyte. Small, 2021, 17, e1902144.	10.0	7
70	Graphene/PVDF Composites for Ni-rich Oxide Cathodes toward High-Energy Density Li-ion Batteries. Materials, 2021, 14, 2271.	2.9	7
71	A joint experimental and theoretical determination of the structure of discharge products in Naâ€“SO₂ batteries. Physical Chemistry Chemical Physics, 2016, 18, 24841-24844.	2.8	5
72	Size effect of SO₂ receptors on the energy efficiency of Naâ€“SO₂ batteries: gallium-based inorganic electrolytes. RSC Advances, 2016, 6, 105105-105109.	3.6	4

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73	Enhanced Rate Capability of Naâ€“<scp>SO₂</scp> Rechargeable Battery by Ureaâ€templated Meso/Macroporous Carbon Electrode. Bulletin of the Korean Chemical Society, 2016, 37, 1285-1289.	1.9	2