Jae-Hun Kim

List of Publications by Year
in descending order

113	8,325	70961 41	45213 90
papers	citations	h-index	g-index

119	119	119	10029
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Li-alloy based anode materials for Li secondary batteries. Chemical Society Reviews, 2010, 39, 3115.	18.7	1,498
2	Metallic anodes for next generation secondary batteries. Chemical Society Reviews, 2013, 42, 9011.	18.7	872
3	Microstructure and Pseudocapacitive Properties of Electrodes Constructed of Oriented NiO-TiO₂ Nanotube Arrays. Nano Letters, 2010, 10, 4099-4104.	4.5	417
4	Quartz (SiO2): a new energy storage anode material for Li-ion batteries. Energy and Environmental Science, 2012, 5, 6895.	15.6	371
5	Effect of chemical reactivity of polysulfide toward carbonate-based electrolyte on the electrochemical performance of Liâ€“S batteries. Electrochimica Acta, 2013, 107, 454-460.	2.6	272
6	The effects of surface modification on carbon felt electrodes for use in vanadium redox flow batteries. Materials Chemistry and Physics, 2011, 131, 547-553.	2.0	264
7	Novel catalytic effects of Mn3O4 for all vanadium redox flow batteries. Chemical Communications, 2012, 48, 5455.	2.2	250
8	Characterizations and electrochemical behaviors of disproportionated SiO and its composite for rechargeable Li-ion batteries. Journal of Materials Chemistry, 2010, 20, 4854.	6.7	232
9	Niâ€“NiO coreâ€“shell inverse opal electrodes for supercapacitors. Chemical Communications, 2011, 47, 5214.	2.2	202
10	Enhanced cycle performance of SiO-C composite anode for lithium-ion batteries. Journal of Power Sources, 2007, 170, 456-459.	4.0	179
11	One-step synthesis of a sulfur-impregnated graphene cathode for lithiumâ€“sulfur batteries. Physical Chemistry Chemical Physics, 2012, 14, 6796.	1.3	177
12	Effect of carbon types on the electrochemical properties of negative electrodes for Li-ion capacitors. Journal of Power Sources, 2011, 196, 10490-10495.	4.0	162
13	Pseudocapacitive Lithium-Ion Storage in Oriented Anatase TiO₂ Nanotube Arrays. Journal of Physical Chemistry C, 2012, 116, 11895-11899.	1.5	138
14	Electrochemical behavior of SiO anode for Li secondary batteries. Journal of Electroanalytical Chemistry, 2011, 661, 245-249.	1.9	118
15	Capacity fading mechanism of LiFePO4-based lithium secondary batteries for stationary energy storage. Journal of Power Sources, 2013, 229, 190-197.	4.0	118
16	Thermal decomposition behavior of calcium borohydride Ca(BH4)2. Journal of Alloys and Compounds, 2008, 461, L20-L22.	2.8	112
17	A New Approach to Synthesis of Porous SiOx Anode for Li-ion Batteries via Chemical Etching of Si Crystallites. Electrochimica Acta, 2014, 117, 426-430.	2.6	112
18	Enhancement of electrochemical and thermal properties of polyethylene separators coated with polyvinylidene fluorideâ€“hexafluoropropylene co-polymer for Li-ion batteries. Journal of Power Sources, 2012, 198, 298-302.	4.0	106

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19	Atomic-Level Understanding toward a High-Capacity and High-Power Silicon Oxide (SiO) Material. Journal of Physical Chemistry C, 2016, 120, 886-892.	1.5	105
20	Reversible hydrogen storage in calcium borohydride Ca(BH4)2. Scripta Materialia, 2008, 58, 481-483.	2.6	104
21	Addition of Cu for carbon coated Si-based composites as anode materials for lithium-ion batteries. Electrochemistry Communications, 2005, 7, 557-561.	2.3	97
22	On the reversibility of hydrogen storage in Ti- and Nb-catalyzed Ca(BH4)2. Journal of Power Sources, 2008, 181, 140-143.	4.0	97
23	Multifunctional TiO2 coating for a SiO anode in Li-ion batteries. Journal of Materials Chemistry, 2012, 22, 7999.	6.7	97
24	Mechanical and electrical properties of NbMoTaW refractory high-entropy alloy thin films. International Journal of Refractory Metals and Hard Materials, 2019, 80, 286-291.	1.7	96
25	High-Rate Capability and Enhanced Cyclability of Antimony-Based Composites for Lithium Rechargeable Batteries. Journal of the Electrochemical Society, 2007, 154, A917.	1.3	85
26	Development of metal-based electrodes for non-aqueous redox flow batteries. Electrochemistry Communications, 2011, 13, 997-1000.	2.3	80
27	Capacity fading behavior of Ni-rich layered cathode materials in Li-ion full cells. Journal of Electroanalytical Chemistry, 2016, 782, 168-173.	1.9	76
28	Characterizations of a new lithium ion conducting Li2Oâ€“SeO2â€“B2O3 glass electrolyte. Solid State Ionics, 2002, 149, 59-65.	1.3	65
29	Mechanochemical synthesis and characterization of TiB2 and VB2 nanopowders. Materials Letters, 2008, 62, 2461-2464.	1.3	63
30	Few-Layer Graphene Island Seeding for Dendrite-Free Li Metal Electrodes. ACS Applied Materials & Interfaces, 2016, 8, 26895-26901.	4.0	63
31	Conductive porous carbon film as a lithium metal storage medium. Electrochimica Acta, 2015, 176, 172-178.	2.6	62
32	Nanostructured Sn/TiO2/C composite as a high-performance anode for Li-ion batteries. Electrochemistry Communications, 2009, 11, 2165-2168.	2.3	61
33	Hyperthermia with Magnetic Nanowires for Inactivating Living Cells. Journal of Nanoscience and Nanotechnology, 2008, 8, 2323-2327.	0.9	51
34	Porous carbon spheres as a functional conducting framework for use in lithiumâ€“sulfur batteries. RSC Advances, 2013, 3, 11774.	1.7	51
35	Structural Modification of Self-Organized Nanoporous Niobium Oxide via Hydrogen Treatment. Chemistry of Materials, 2016, 28, 1453-1461.	3.2	50
36	Tin-Based Oxides as Anode Materials for Lithium Secondary Batteries. Journal of the Electrochemical Society, 2003, 150, A1544.	1.3	48

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37	Fabrication and electrochemical characterization of a vertical array of MnO2 nanowires grown on silicon substrates as a cathode material for lithium rechargeable batteries. Journal of Power Sources, 2008, 183, 366-369.	4.0	44
38	Tailoring oriented TiO2 nanotube morphology for improved Li storage kinetics. Electrochimica Acta, 2013, 88, 123-128.	2.6	44
39	Facile synthesis of Si nanoparticles using magnesium silicide reduction and its carbon composite as a high-performance anode for Li ion batteries. Journal of Power Sources, 2014, 252, 144-149.	4.0	44
40	Electrochemical characterization of vertical arrays of tin nanowires grown on silicon substrates as anode materials for lithium rechargeable microbatteries. Electrochemistry Communications, 2008, 10, 1688-1690.	2.3	42
41	Incorporation of phosphorus into the surface of natural graphite anode for lithium ion batteries. Journal of Materials Chemistry, 2011, 21, 17960.	6.7	42
42	Co_xP compounds: electrochemical conversion/partial recombination reaction and partially disproportionated nanocomposite for Li-ion battery anodes. RSC Advances, 2014, 4, 43227-43234.	1.7	42
43	Carbon coating for Si nanomaterials as high-capacity lithium battery electrodes. Electrochemistry Communications, 2014, 46, 144-147.	2.3	40
44	Partially reversible Li2O formation in ZnO: A critical finding supporting realization of highly reversible metal oxide electrodes. Journal of Power Sources, 2016, 328, 607-614.	4.0	37
45	Porous Siliconâ€“Carbon Composite Materials Engineered by Simultaneous Alkaline Etching for High-Capacity Lithium Storage Anodes. Electrochimica Acta, 2016, 196, 197-205.	2.6	37
46	Facile and scalable synthesis of SiOx materials for Li-ion negative electrodes. Journal of Power Sources, 2019, 436, 226883.	4.0	36
47	Effect of oxide layer thickness to nanoâ€“Si anode for Li-ion batteries. RSC Advances, 2013, 3, 9408.	1.7	34
48	1-D Structured Flexible Supercapacitor Electrodes with Prominent Electronic/Ionic Transport Capabilities. ACS Applied Materials & Interfaces, 2014, 6, 268-274.	4.0	34
49	Niobium oxide nanoparticle coreâ€“amorphous carbon shell structure for fast reversible lithium storage. Electrochimica Acta, 2017, 240, 316-322.	2.6	34
50	NbMoTaW refractory high entropy alloy composites strengthened by in-situ metal-non-metal compounds. Journal of Alloys and Compounds, 2020, 822, 153423.	2.8	34
51	Copper incorporated Cu_xMo₆S₈ (x â‰¥ 1) Chevrel-phase cathode materials synthesized by chemical intercalation process for rechargeable magnesium batteries. RSC Advances, 2014, 4, 59048-59055.	1.7	32
52	Surface modification by sulfated zirconia on high-capacity nickel-based cathode materials for Li-ion batteries. Electrochimica Acta, 2015, 153, 115-121.	2.6	32
53	Facile synthesis of Si/TiO2 (anatase) coreâ€“shell nanostructured anodes for rechargeable Li-ion batteries. Journal of Electroanalytical Chemistry, 2014, 712, 202-206.	1.9	31
54	Effect of carbon coating on nano-Si embedded SiO x -Al 2 O 3 composites as lithium storage materials. Applied Surface Science, 2017, 416, 527-535.	3.1	31

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55	Reduced graphene oxide as a protection layer for Al. Applied Surface Science, 2017, 407, 1-7.	3.1	26
56	Electrochemical characteristics of nano-sized MoO2/C composite anode materials for lithium-ion batteries. Journal of Applied Electrochemistry, 2012, 42, 909-915.	1.5	25
57	Impact of magnesium substitution in nickel ferrite: Optical and electrochemical studies. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 108, 100-104.	1.3	24
58	Development of Carbon Composite Bipolar Plates for Vanadium Redox Flow Batteries. Bulletin of the Korean Chemical Society, 2012, 33, 3589-3592.	1.0	24
59	Surface-oxidized, freeze-cast cobalt foams: Microstructure, mechanical properties and electrochemical performance. Acta Materialia, 2018, 142, 213-225.	3.8	23
60	Three-dimensional monolithic corrugated graphene/Ni foam for highly stable and efficient Li metal electrode. Journal of Power Sources, 2019, 413, 467-475.	4.0	23
61	Electrochemical behavior of manganese oxides on flexible substrates for thin film supercapacitors. Electrochimica Acta, 2015, 153, 184-189.	2.6	22
62	Characterizations and electrochemical behaviors of milled Si with a degree of amorphization and its composite for Li-ion batteries. Journal of Power Sources, 2014, 260, 174-179.	4.0	21
63	Oriented TiO2 nanotubes as a lithium metal storage medium. Journal of Electroanalytical Chemistry, 2014, 726, 51-54.	1.9	21
64	Magnesium silicide-derived porous Sb-Si-C composite for stable lithium storage. Journal of Alloys and Compounds, 2019, 782, 525-532.	2.8	20
65	Electrochemical lithium storage kinetics of self-organized nanochannel niobium oxide electrodes. Journal of Electroanalytical Chemistry, 2015, 746, 45-50.	1.9	19
66	Failure mechanism analysis of LiNi 0.88 Co 0.09 Mn 0.03 O 2 cathodes in Li-ion full cells. Journal of Electroanalytical Chemistry, 2017, 799, 315-320.	1.9	19
67	Zn-induced synthesis of porous SiOx materials as negative electrodes for Li secondary batteries. Journal of Alloys and Compounds, 2019, 803, 325-331.	2.8	19
68	Integrated porous cobalt oxide/cobalt anode with micro- and nano-pores for lithium ion battery. Applied Surface Science, 2020, 525, 146592.	3.1	19
69	Mechanochemically Reduced SiO₂ by Ti Incorporation as Lithium Storage Materials. ChemSusChem, 2015, 8, 3111-3117.	3.6	17
70	Si/iron silicide nanocomposite anodes with furfuryl-alcohol-derived carbon coating for Li-ion batteries. Journal of Materials Science, 2017, 52, 5027-5037.	1.7	17
71	Si-SiOx-Al2O3 nanocomposites as high-capacity anode materials for Li-ion batteries. Electronic Materials Letters, 2017, 13, 152-159.	1.0	17
72	Surface-controlled Nb2O5 nanoparticle networks for fast Li transport and storage. Journal of Materials Science, 2019, 54, 2493-2500.	1.7	17

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73	Bottom-up self-assembly of nano-netting cluster microspheres as high-performance lithium storage materials. Journal of Materials Chemistry A, 2018, 6, 13321-13330.	5.2	16
74	Nano Si embedded SiO x -Nb 2 O 5 -C composite as reversible lithium storage materials. Journal of Alloys and Compounds, 2017, 699, 351-357.	2.8	14
75	Nanostructured silicon/silicide/carbon composite anodes with controllable voids for Li-ion batteries. Materials and Design, 2017, 120, 230-237.	3.3	14
76	Facile synthesis and electrochemical properties of carbon-coated ZnO nanotubes for high-rate lithium storage. Ceramics International, 2018, 44, 18222-18226.	2.3	14
77	Deformation behavior of nanocrystalline and ultrafine-grained CoCrCuFeNi high-entropy alloys. Journal of Materials Research, 2019, 34, 720-731.	1.2	14
78	Three-dimensional Ge/GeO2 shell-encapsulated Nb2O5 nanoparticle assemblies for high-performance lithium-ion battery anodes. Electrochimica Acta, 2020, 340, 135952.	2.6	14
79	Effect of acid scavengers on electrochemical performance of lithiumâ€“sulfur batteries: Functional additives for utilization of LiPF₆. Japanese Journal of Applied Physics, 2014, 53, 08NK01.	0.8	13
80	Microstructural Tuning of Si/TiFeSi2 Nanocomposite as Lithium Storage Materials by Mechanical Deformation. Electrochimica Acta, 2016, 210, 301-307.	2.6	13
81	Novel synthesis of porous Si-TiO2 composite as a high-capacity anode material for Li secondary batteries. Journal of Alloys and Compounds, 2021, 872, 159640.	2.8	13
82	Hydrogen Treated Niobium Oxide Nanotube Arrays for Photoelectrochemical Water Oxidation. Journal of the Electrochemical Society, 2016, 163, H1165-H1170.	1.3	12
83	Self-assembled monolayer modified MoO3/Au/MoO3 multilayer anodes for high performance OLEDs. Electronic Materials Letters, 2017, 13, 16-24.	1.0	12
84	Anode Design Based on Microscale Porous Scaffolds for Advanced Lithium Ion Batteries. Journal of Electronic Materials, 2017, 46, 3789-3795.	1.0	12
85	Synthesis of a Highâ€Capacity NiO/Ni Foam Anode for Advanced Lithiumâ€Ion Batteries. Advanced Engineering Materials, 2020, 22, 2000351.	1.6	12
86	Electrochemical investigation on high-rate properties of graphene nanoplatelet-carbon nanotube hybrids for Li-ion capacitors. Journal of Electroanalytical Chemistry, 2020, 863, 114060.	1.9	12
87	Morphological Modification of Î±-MnO₂ Catalyst for Use in Li/Air Batteries. Journal of Nanoscience and Nanotechnology, 2013, 13, 3611-3616.	0.9	11
88	Galvanically Replaced, Singleâ€Bodied Lithiumâ€Ion Battery Fabric Electrodes. Advanced Functional Materials, 2020, 30, 1908633.	7.8	11
89	SnS nanosheets on carbon foam as a flexible anode platform for rechargeable Li- and Na-ion batteries. Applied Surface Science, 2021, 544, 148837.	3.1	11
90	Size Effect of Chevrel <scp>Mg_xMo₆S₈</scp> as Cathode Material for Magnesium Rechargeable Batteries. Bulletin of the Korean Chemical Society, 2015, 36, 1209-1214.	1.0	10

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91	Microstructure Design of Carbon-Coated Nb2O5â€“Si Composites as Reversible Li Storage Materials. Electronic Materials Letters, 2020, 16, 376-384.	1.0	10
92	Effect of Powder Morphology and Chemical Distribution on Properties of Multicomponent Alloys Produced Via Powder Metallurgy. Metals and Materials International, 2020, 26, 1385-1393.	1.8	8
93	Reaction Behavior of Li_{4+x}Ti₅O₁₂Anode Material as Depth of Discharge. Journal of Electrochemical Science and Technology, 2010, 1, 85-91.	0.9	8
94	Interfacial reaction between electrode and electrolyte for a ramsdellite type Li2+xTi3O7 anode material during lithium insertion. Electrochimica Acta, 2012, 63, 263-268.	2.6	7
95	Synthesis and Electrochemical Reaction Mechanism of Zn-TiOx-C Nanocomposite Anode Materials for Li Secondary Batteries. Journal of the Electrochemical Society, 2017, 164, A2683-A2688.	1.3	7
96	Porous SiO composite tailored by scalable mechanochemical oxidation of Si for Li-ion anodes. Electrochimica Acta, 2020, 357, 136862.	2.6	7
97	Effects of Chlorine Contents on Perovskite Solar Cell Structure Formed on CdS Electron Transport Layer Probed by Rutherford Backscattering. Electronic Materials Letters, 2018, 14, 700-711.	1.0	6
98	Effect of Heat Treatment on the Microstructure and Performance of Cu Nanofoams Processed by Dealloying. Materials, 2021, 14, 2691.	1.3	6
99	Spherical Sb Core/Nb2O5-C Double-Shell Structured Composite as an Anode Material for Li Secondary Batteries. Energies, 2020, 13, 1999.	1.6	5
100	Scalable Synthesis and Electrochemical Properties of Porous Si-CoSi2-C Composites as an Anode for Li-ion Batteries. Materials, 2021, 14, 5397.	1.3	5
101	Nano-spatially stable Si2O composite and its balanced electrochemical performance for Li rechargeable batteries. Journal of Power Sources, 2022, 519, 230777.	4.0	4
102	Effect of Lithiation on the Microstructure of a Cobalt Foam Processed by Freeze Casting. Advanced Engineering Materials, 2018, 20, 1800343.	1.6	3
103	Manganese oxide on fluorine-doped SnO2 inverse opal frame as pseudocapacitor electrodes. Ceramics International, 2020, 46, 22557-22563.	2.3	3
104	Controlling a lithium surface with an alkyl halide nucleophile exchange. Journal of Energy Chemistry, 2021, 62, 617-626.	7.1	3
105	Effects of the PbBr2:PbI2 Molar Ratio on the Formation of Lead Halide Thin Films, and the Ratioâ€™s Application for High Performance and Wide Bandgap Solar Cells. Materials, 2022, 15, 837.	1.3	3
106	Size-Controlled Synthesis of Copper Oxide Particles on Reduced Graphene Oxide for Lithium-Ion Battery Anode Applications. Journal of Nanoscience and Nanotechnology, 2015, 15, 9039-9044.	0.9	2
107	Synthesis of highly conductive cobalt thin films by LCVD at atmospheric pressure. Materials Science in Semiconductor Processing, 2017, 68, 245-251.	1.9	2
108	Synthesis of Si-Zn2SiO4 composite as Li-ion battery anodes and its electrochemical mechanism analysis. Electrochemistry Communications, 2022, 138, 107284.	2.3	2

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109	Physical, Electrochemical, and Thermal Properties of Granulated Natural Graphite as Anodes for Li-Ion Batteries. Journal of Nanoscience and Nanotechnology, 2013, 13, 3731-3736.	0.9	1
110	Synthesis and electrochemical analysis of Sn2Fe-TiOx-C composite as a high-performance anode material for Li-ion batteries. Ceramics International, 2022, 48, 597-603.	2.3	1
111	Surfactant-derived porous Sn2Nb2O7-graphene oxide composite as Li- and Na-ion storage materials. Journal of Alloys and Compounds, 2022, , 164943.	2.8	1
112	Post Oxygen Treatment Characteristics of Coke as an Anode Material for Li-Ion Batteries. Journal of Nanoscience and Nanotechnology, 2013, 13, 3298-3302.	0.9	0
113	Effect of Electrolytes on Electrochemical Properties of Magnesium Electrodes. Journal of Electrochemical Science and Technology, 2012, 3, 159-164.	0.9	0