

Jae-Hun Kim

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111
papers

7,046
citations

39
h-index

83
g-index

119
ext. papers

7,693
ext. citations

6.6
avg, IF

6.01
L-index

#	Paper	IF	Citations
111	Li-alloy based anode materials for Li secondary batteries. <i>Chemical Society Reviews</i> , 2010 , 39, 3115-41	58.5	1308
110	Metallic anodes for next generation secondary batteries. <i>Chemical Society Reviews</i> , 2013 , 42, 9011-34	58.5	728
109	Microstructure and pseudocapacitive properties of electrodes constructed of oriented NiO-TiO ₂ nanotube arrays. <i>Nano Letters</i> , 2010 , 10, 4099-104	11.5	387
108	Quartz (SiO ₂): a new energy storage anode material for Li-ion batteries. <i>Energy and Environmental Science</i> , 2012 , 5, 6895	35.4	308
107	Effect of chemical reactivity of polysulfide toward carbonate-based electrolyte on the electrochemical performance of LiS batteries. <i>Electrochimica Acta</i> , 2013 , 107, 454-460	6.7	225
106	Novel catalytic effects of Mn ₃ O ₄ for all vanadium redox flow batteries. <i>Chemical Communications</i> , 2012 , 48, 5455-7	5.8	221
105	The effects of surface modification on carbon felt electrodes for use in vanadium redox flow batteries. <i>Materials Chemistry and Physics</i> , 2011 , 131, 547-553	4.4	209
104	Characterizations and electrochemical behaviors of disproportionated SiO and its composite for rechargeable Li-ion batteries. <i>Journal of Materials Chemistry</i> , 2010 , 20, 4854		195
103	Ni-NiO core-shell inverse opal electrodes for supercapacitors. <i>Chemical Communications</i> , 2011 , 47, 5214-6.8		193
102	One-step synthesis of a sulfur-impregnated graphene cathode for lithium-sulfur batteries. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 6796-804	3.6	164
101	Enhanced cycle performance of SiO-C composite anode for lithium-ion batteries. <i>Journal of Power Sources</i> , 2007 , 170, 456-459	8.9	156
100	Effect of carbon types on the electrochemical properties of negative electrodes for Li-ion capacitors. <i>Journal of Power Sources</i> , 2011 , 196, 10490-10495	8.9	142
99	Pseudocapacitive Lithium-Ion Storage in Oriented Anatase TiO ₂ Nanotube Arrays. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 11895-11899	3.8	124
98	Thermal decomposition behavior of calcium borohydride Ca(BH ₄) ₂ . <i>Journal of Alloys and Compounds</i> , 2008 , 461, L20-L22	5.7	102
97	Capacity fading mechanism of LiFePO ₄ -based lithium secondary batteries for stationary energy storage. <i>Journal of Power Sources</i> , 2013 , 229, 190-197	8.9	96
96	Enhancement of electrochemical and thermal properties of polyethylene separators coated with polyvinylidene fluoride hexafluoropropylene co-polymer for Li-ion batteries. <i>Journal of Power Sources</i> , 2012 , 198, 298-302	8.9	93
95	Electrochemical behavior of SiO anode for Li secondary batteries. <i>Journal of Electroanalytical Chemistry</i> , 2011 , 661, 245-249	4.1	93

94	Reversible hydrogen storage in calcium borohydride Ca(BH ₄) ₂ . <i>Scripta Materialia</i> , 2008 , 58, 481-483	5.6	93
93	Addition of Cu for carbon coated Si-based composites as anode materials for lithium-ion batteries. <i>Electrochemistry Communications</i> , 2005 , 7, 557-561	5.1	93
92	Multifunctional TiO ₂ coating for a SiO anode in Li-ion batteries. <i>Journal of Materials Chemistry</i> , 2012 , 22, 7999		91
91	On the reversibility of hydrogen storage in Ti- and Nb-catalyzed Ca(BH ₄) ₂ . <i>Journal of Power Sources</i> , 2008 , 181, 140-143	8.9	90
90	A New Approach to Synthesis of Porous SiO _x Anode for Li-ion Batteries via Chemical Etching of Si Crystallites. <i>Electrochimica Acta</i> , 2014 , 117, 426-430	6.7	86
89	High-Rate Capability and Enhanced Cyclability of Antimony-Based Composites for Lithium Rechargeable Batteries. <i>Journal of the Electrochemical Society</i> , 2007 , 154, A917	3.9	80
88	Development of metal-based electrodes for non-aqueous redox flow batteries. <i>Electrochemistry Communications</i> , 2011 , 13, 997-1000	5.1	72
87	Atomic-Level Understanding toward a High-Capacity and High-Power Silicon Oxide (SiO) Material. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 886-892	3.8	66
86	Capacity fading behavior of Ni-rich layered cathode materials in Li-ion full cells. <i>Journal of Electroanalytical Chemistry</i> , 2016 , 782, 168-173	4.1	58
85	Conductive porous carbon film as a lithium metal storage medium. <i>Electrochimica Acta</i> , 2015 , 176, 172-178	4.8	58
84	Nanostructured Sn/TiO ₂ /C composite as a high-performance anode for Li-ion batteries. <i>Electrochemistry Communications</i> , 2009 , 11, 2165-2168	5.1	57
83	Few-Layer Graphene Island Seeding for Dendrite-Free Li Metal Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 26895-26901	9.5	54
82	Mechanochemical synthesis and characterization of TiB ₂ and VB ₂ nanopowders. <i>Materials Letters</i> , 2008 , 62, 2461-2464	3.3	52
81	Characterizations of a new lithium ion conducting Li ₂ OBeO ₂ B ₂ O ₃ glass electrolyte. <i>Solid State Ionics</i> , 2002 , 149, 59-65	3.3	50
80	Mechanical and electrical properties of NbMoTaW refractory high-entropy alloy thin films. <i>International Journal of Refractory Metals and Hard Materials</i> , 2019 , 80, 286-291	4.1	47
79	Tin-Based Oxides as Anode Materials for Lithium Secondary Batteries. <i>Journal of the Electrochemical Society</i> , 2003 , 150, A1544	3.9	46
78	Hyperthermia with magnetic nanowires for inactivating living cells. <i>Journal of Nanoscience and Nanotechnology</i> , 2008 , 8, 2323-7	1.3	45
77	Porous carbon spheres as a functional conducting framework for use in lithium-sulfur batteries. <i>RSC Advances</i> , 2013 , 3, 11774	3.7	44

76	Structural Modification of Self-Organized Nanoporous Niobium Oxide via Hydrogen Treatment. <i>Chemistry of Materials</i> , 2016 , 28, 1453-1461	9.6	43
75	Fabrication and electrochemical characterization of a vertical array of MnO ₂ nanowires grown on silicon substrates as a cathode material for lithium rechargeable batteries. <i>Journal of Power Sources</i> , 2008 , 183, 366-369	8.9	43
74	Facile synthesis of Si nanoparticles using magnesium silicide reduction and its carbon composite as a high-performance anode for Li ion batteries. <i>Journal of Power Sources</i> , 2014 , 252, 144-149	8.9	40
73	Tailoring oriented TiO ₂ nanotube morphology for improved Li storage kinetics. <i>Electrochimica Acta</i> , 2013 , 88, 123-128	6.7	40
72	CoxP compounds: electrochemical conversion/partial recombination reaction and partially disproportionated nanocomposite for Li-ion battery anodes. <i>RSC Advances</i> , 2014 , 4, 43227-43234	3.7	38
71	Electrochemical characterization of vertical arrays of tin nanowires grown on silicon substrates as anode materials for lithium rechargeable microbatteries. <i>Electrochemistry Communications</i> , 2008 , 10, 1688-1690	5.1	38
70	Carbon coating for Si nanomaterials as high-capacity lithium battery electrodes. <i>Electrochemistry Communications</i> , 2014 , 46, 144-147	5.1	35
69	Niobium oxide nanoparticle core/morphous carbon shell structure for fast reversible lithium storage. <i>Electrochimica Acta</i> , 2017 , 240, 316-322	6.7	32
68	Effect of oxide layer thickness to nanoSi anode for Li-ion batteries. <i>RSC Advances</i> , 2013 , 3, 9408	3.7	31
67	Incorporation of phosphorus into the surface of natural graphite anode for lithium ion batteries. <i>Journal of Materials Chemistry</i> , 2011 , 21, 17960		31
66	Partially reversible Li ₂ O formation in ZnO: A critical finding supporting realization of highly reversible metal oxide electrodes. <i>Journal of Power Sources</i> , 2016 , 328, 607-614	8.9	30
65	Porous Silicon/Carbon Composite Materials Engineered by Simultaneous Alkaline Etching for High-Capacity Lithium Storage Anodes. <i>Electrochimica Acta</i> , 2016 , 196, 197-205	6.7	30
64	Facile synthesis of Si/TiO ₂ (anatase) core/shell nanostructured anodes for rechargeable Li-ion batteries. <i>Journal of Electroanalytical Chemistry</i> , 2014 , 712, 202-206	4.1	29
63	1-D structured flexible supercapacitor electrodes with prominent electronic/ionic transport capabilities. <i>ACS Applied Materials & Interfaces</i> , 2014 , 6, 268-74	9.5	29
62	Surface modification by sulfated zirconia on high-capacity nickel-based cathode materials for Li-ion batteries. <i>Electrochimica Acta</i> , 2015 , 153, 115-121	6.7	26
61	Copper incorporated CuxMo6S8 (x = 1) Chevrel-phase cathode materials synthesized by chemical intercalation process for rechargeable magnesium batteries. <i>RSC Advances</i> , 2014 , 4, 59048-59055	3.7	25
60	Facile and scalable synthesis of SiOx materials for Li-ion negative electrodes. <i>Journal of Power Sources</i> , 2019 , 436, 226883	8.9	24
59	Electrochemical characteristics of nano-sized MoO ₂ /C composite anode materials for lithium-ion batteries. <i>Journal of Applied Electrochemistry</i> , 2012 , 42, 909-915	2.6	22

58	Oriented TiO ₂ nanotubes as a lithium metal storage medium. <i>Journal of Electroanalytical Chemistry</i> , 2014 , 726, 51-54	4.1	21
57	Three-dimensional monolithic corrugated graphene/Ni foam for highly stable and efficient Li metal electrode. <i>Journal of Power Sources</i> , 2019 , 413, 467-475	8.9	21
56	Effect of carbon coating on nano-Si embedded SiO _x -Al ₂ O ₃ composites as lithium storage materials. <i>Applied Surface Science</i> , 2017 , 416, 527-535	6.7	20
55	Development of Carbon Composite Bipolar Plates for Vanadium Redox Flow Batteries. <i>Bulletin of the Korean Chemical Society</i> , 2012 , 33, 3589-3592	1.2	20
54	Reduced graphene oxide as a protection layer for Al. <i>Applied Surface Science</i> , 2017 , 407, 1-7	6.7	19
53	Characterizations and electrochemical behaviors of milled Si with a degree of amorphization and its composite for Li-ion batteries. <i>Journal of Power Sources</i> , 2014 , 260, 174-179	8.9	19
52	Electrochemical behavior of manganese oxides on flexible substrates for thin film supercapacitors. <i>Electrochimica Acta</i> , 2015 , 153, 184-189	6.7	18
51	Electrochemical lithium storage kinetics of self-organized nanochannel niobium oxide electrodes. <i>Journal of Electroanalytical Chemistry</i> , 2015 , 746, 45-50	4.1	17
50	Surface-oxidized, freeze-cast cobalt foams: Microstructure, mechanical properties and electrochemical performance. <i>Acta Materialia</i> , 2018 , 142, 213-225	8.4	17
49	Failure mechanism analysis of LiNi _{0.88} Co _{0.09} Mn _{0.03} O ₂ cathodes in Li-ion full cells. <i>Journal of Electroanalytical Chemistry</i> , 2017 , 799, 315-320	4.1	17
48	Mechanochemically Reduced SiO ₂ by Ti Incorporation as Lithium Storage Materials. <i>ChemSusChem</i> , 2015 , 8, 3111-7	8.3	17
47	Si-SiO _x -Al ₂ O ₃ nanocomposites as high-capacity anode materials for Li-ion batteries. <i>Electronic Materials Letters</i> , 2017 , 13, 152-159	2.9	16
46	Magnesium silicide-derived porous Sb-Si-C composite for stable lithium storage. <i>Journal of Alloys and Compounds</i> , 2019 , 782, 525-532	5.7	16
45	NbMoTaW refractory high entropy alloy composites strengthened by in-situ metal-non-metal compounds. <i>Journal of Alloys and Compounds</i> , 2020 , 822, 153423	5.7	15
44	Bottom-up self-assembly of nano-netting cluster microspheres as high-performance lithium storage materials. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 13321-13330	13	14
43	Nano Si embedded SiO _x -Nb ₂ O ₅ -C composite as reversible lithium storage materials. <i>Journal of Alloys and Compounds</i> , 2017 , 699, 351-357	5.7	13
42	Si/iron silicide nanocomposite anodes with furfuryl-alcohol-derived carbon coating for Li-ion batteries. <i>Journal of Materials Science</i> , 2017 , 52, 5027-5037	4.3	13
41	Nanostructured silicon/silicide/carbon composite anodes with controllable voids for Li-ion batteries. <i>Materials and Design</i> , 2017 , 120, 230-237	8.1	13

40	Anode Design Based on Microscale Porous Scaffolds for Advanced Lithium Ion Batteries. <i>Journal of Electronic Materials</i> , 2017 , 46, 3789-3795	1.9	12
39	Three-dimensional Ge/GeO ₂ shell-encapsulated Nb ₂ O ₅ nanoparticle assemblies for high-performance lithium-ion battery anodes. <i>Electrochimica Acta</i> , 2020 , 340, 135952	6.7	12
38	Surface-controlled Nb ₂ O ₅ nanoparticle networks for fast Li transport and storage. <i>Journal of Materials Science</i> , 2019 , 54, 2493-2500	4.3	12
37	Hydrogen Treated Niobium Oxide Nanotube Arrays for Photoelectrochemical Water Oxidation. <i>Journal of the Electrochemical Society</i> , 2016 , 163, H1165-H1170	3.9	11
36	Self-assembled monolayer modified MoO ₃ /Au/MoO ₃ multilayer anodes for high performance OLEDs. <i>Electronic Materials Letters</i> , 2017 , 13, 16-24	2.9	10
35	Zn-induced synthesis of porous SiO _x materials as negative electrodes for Li secondary batteries. <i>Journal of Alloys and Compounds</i> , 2019 , 803, 325-331	5.7	10
34	Integrated porous cobalt oxide/cobalt anode with micro- and nano-pores for lithium ion battery. <i>Applied Surface Science</i> , 2020 , 525, 146592	6.7	10
33	Facile synthesis and electrochemical properties of carbon-coated ZnO nanotubes for high-rate lithium storage. <i>Ceramics International</i> , 2018 , 44, 18222-18226	5.1	10
32	Size Effect of Chevrel Mg _x Mo ₆ S ₈ as Cathode Material for Magnesium Rechargeable Batteries. <i>Bulletin of the Korean Chemical Society</i> , 2015 , 36, 1209-1214	1.2	10
31	Morphological modification of alpha-MnO ₂ catalyst for use in Li/air batteries. <i>Journal of Nanoscience and Nanotechnology</i> , 2013 , 13, 3611-6	1.3	10
30	Impact of magnesium substitution in nickel ferrite: Optical and electrochemical studies. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2019 , 108, 100-104	3	10
29	Microstructural Tuning of Si/TiFeSi ₂ Nanocomposite as Lithium Storage Materials by Mechanical Deformation. <i>Electrochimica Acta</i> , 2016 , 210, 301-307	6.7	9
28	Effect of acid scavengers on electrochemical performance of lithium-sulfur batteries: Functional additives for utilization of LiPF ₆ . <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 08NK01	1.4	9
27	Reaction Behavior of Li _{4+x} Ti ₅ O ₁₂ Anode Material as Depth of Discharge. <i>Journal of Electrochemical Science and Technology</i> , 2010 , 1, 85-91	3.2	8
26	Electrochemical investigation on high-rate properties of graphene nanoplatelet-carbon nanotube hybrids for Li-ion capacitors. <i>Journal of Electroanalytical Chemistry</i> , 2020 , 863, 114060	4.1	7
25	Synthesis and Electrochemical Reaction Mechanism of Zn-TiO _x -C Nanocomposite Anode Materials for Li Secondary Batteries. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A2683-A2688	3.9	7
24	SnS nanosheets on carbon foam as a flexible anode platform for rechargeable Li- and Na-ion batteries. <i>Applied Surface Science</i> , 2021 , 544, 148837	6.7	7
23	Effect of Powder Morphology and Chemical Distribution on Properties of Multicomponent Alloys Produced Via Powder Metallurgy. <i>Metals and Materials International</i> , 2020 , 26, 1385-1393	2.4	6

22	Novel synthesis of porous Si-TiO ₂ composite as a high-capacity anode material for Li secondary batteries. <i>Journal of Alloys and Compounds</i> , 2021 , 872, 159640	5.7	6
21	Interfacial reaction between electrode and electrolyte for a ramsdellite type Li _{2+x} Ti ₃ O ₇ anode material during lithium insertion. <i>Electrochimica Acta</i> , 2012 , 63, 263-268	6.7	5
20	Microstructure Design of Carbon-Coated Nb ₂ O ₅ /Bi Composites as Reversible Li Storage Materials. <i>Electronic Materials Letters</i> , 2020 , 16, 376-384	2.9	5
19	Porous SiO composite tailored by scalable mechanochemical oxidation of Si for Li-ion anodes. <i>Electrochimica Acta</i> , 2020 , 357, 136862	6.7	5
18	Deformation behavior of nanocrystalline and ultrafine-grained CoCrCuFeNi high-entropy alloys. <i>Journal of Materials Research</i> , 2019 , 34, 720-731	2.5	4
17	Synthesis of a High-Capacity NiO/Ni Foam Anode for Advanced Lithium-Ion Batteries. <i>Advanced Engineering Materials</i> , 2020 , 22, 2000351	3.5	4
16	Spherical Sb Core/Nb ₂ O ₅ -C Double-Shell Structured Composite as an Anode Material for Li Secondary Batteries. <i>Energies</i> , 2020 , 13, 1999	3.1	4
15	Galvanically Replaced, Single-Bodied Lithium-Ion Battery Fabric Electrodes. <i>Advanced Functional Materials</i> , 2020 , 30, 1908633	15.6	4
14	Effects of Chlorine Contents on Perovskite Solar Cell Structure Formed on CdS Electron Transport Layer Probed by Rutherford Backscattering. <i>Electronic Materials Letters</i> , 2018 , 14, 700-711	2.9	4
13	Effect of Lithiation on the Microstructure of a Cobalt Foam Processed by Freeze Casting. <i>Advanced Engineering Materials</i> , 2018 , 20, 1800343	3.5	3
12	Size-Controlled Synthesis of Copper Oxide Particles on Reduced Graphene Oxide for Lithium-Ion Battery Anode Applications. <i>Journal of Nanoscience and Nanotechnology</i> , 2015 , 15, 9039-44	1.3	2
11	Synthesis of highly conductive cobalt thin films by LCVD at atmospheric pressure. <i>Materials Science in Semiconductor Processing</i> , 2017 , 68, 245-251	4.3	2
10	Nano-spatially stable Si ₂ O composite and its balanced electrochemical performance for Li rechargeable batteries. <i>Journal of Power Sources</i> , 2022 , 519, 230777	8.9	2
9	Manganese oxide on fluorine-doped SnO ₂ inverse opal frame as pseudocapacitor electrodes. <i>Ceramics International</i> , 2020 , 46, 22557-22563	5.1	2
8	Controlling a lithium surface with an alkyl halide nucleophile exchange. <i>Journal of Energy Chemistry</i> , 2021 , 62, 617-626	12	2
7	Physical, electrochemical, and thermal properties of granulated natural graphite as anodes for Li-ion batteries. <i>Journal of Nanoscience and Nanotechnology</i> , 2013 , 13, 3731-6	1.3	1
6	Scalable Synthesis and Electrochemical Properties of Porous Si-CoSi-C Composites as an Anode for Li-ion Batteries. <i>Materials</i> , 2021 , 14,	3.5	1
5	Surfactant-derived porous Sn ₂ Nb ₂ O ₇ -graphene oxide composite as Li- and Na-ion storage materials. <i>Journal of Alloys and Compounds</i> , 2022 , 164943	5.7	0

- 4 Post oxygen treatment characteristics of coke as an anode material for Li-ion batteries. *Journal of Nanoscience and Nanotechnology*, **2013**, 13, 3298-302 1.3
- 3 Effect of Electrolytes on Electrochemical Properties of Magnesium Electrodes. *Journal of Electrochemical Science and Technology*, **2012**, 3, 159-164 3.2
- 2 Synthesis and electrochemical analysis of Sn₂Fe-TiO_x-C composite as a high-performance anode material for Li-ion batteries. *Ceramics International*, **2021**, 48, 597-597 5.1
- 1 Synthesis of Si-Zn₂SiO₄ composite as Li-ion battery anodes and its electrochemical mechanism analysis. *Electrochemistry Communications*, **2022**, 138, 107284 5.1