Ji Heon Ryu

List of Publications by Year
in descending order

103	5,125	159585 30	88630 70
papers	citations	h-index	g-index

104	104	104	6705
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An Amorphous Red Phosphorus/Carbon Composite as a Promising Anode Material for Sodium Ion Batteries. Advanced Materials, 2013, 25, 3045-3049.	21.0	770
2	The Current Move of Lithium Ion Batteries Towards the Next Phase. Advanced Energy Materials, 2012, 2, 860-872.	19.5	611
3	Failure Modes of Silicon Powder Negative Electrode in Lithium Secondary Batteries. Electrochemical and Solid-State Letters, 2004, 7, A306.	2.2	576
4	Tin Phosphide as a Promising Anode Material for Naâ€Ion Batteries. Advanced Materials, 2014, 26, 4139-4144.	21.0	356
5	Effect of slurry preparation process on electrochemical performances of LiCoO2 composite electrode. Journal of Power Sources, 2010, 195, 6049-6054.	7.8	166
6	Reversible Lithium Storage with High Mobility at Structural Defects in Amorphous Molybdenum Dioxide Electrode. Advanced Functional Materials, 2012, 22, 3658-3664.	14.9	166
7	Impedance analysis of porous carbon electrodes to predict rate capability of electric double-layer capacitors. Journal of Power Sources, 2014, 267, 411-420.	7.8	164
8	Failure mechanisms of LiNi0.5Mn1.5O4 electrode at elevated temperature. Journal of Power Sources, 2012, 215, 312-316.	7.8	158
9	Improvement of silicon powder negative electrodes by copper electroless deposition for lithium secondary batteries. Journal of Power Sources, 2005, 147, 227-233.	7.8	154
10	Corrosion/passivation of aluminum current collector in bis(fluorosulfonyl)imide-based ionic liquid for lithium-ion batteries. Electrochemistry Communications, 2012, 22, 1-3.	4.7	142
11	Reversible Lithium Storage at Highly Populated Vacant Sites in an Amorphous Vanadium Pentoxide Electrode. Chemistry of Materials, 2014, 26, 5874-5881.	6.7	137
12	Sn-Carbon Core-Shell Powder for Anode in Lithium Secondary Batteries. Journal of the Electrochemical Society, 2005, 152, A1452.	2.9	133
13	Poly(phenanthrenequinone) as a conductive binder for nano-sized silicon negative electrodes. Energy and Environmental Science, 2015, 8, 1538-1543.	30.8	75
14	Cointercalation of Mg²⁺ Ions into Graphite for Magnesium-Ion Batteries. Chemistry of Materials, 2018, 30, 3199-3203.	6.7	71
15	A Bifunctional Electrolyte Additive for High-Voltage LiNi_{0.5}Mn_{1.5}O₄ Positive Electrodes. ACS Applied Materials & Interfaces, 2019, 11, 11306-11316.	8.0	69
16	Li2NiO2 as a sacrificing positive additive for lithium-ion batteries. Electrochimica Acta, 2013, 108, 591-595.	5.2	63
17	Linear-Sweep Thermammetry Study on Corrosion Behavior of Al Current Collector in Ionic Liquid Solvent. Electrochemical and Solid-State Letters, 2010, 13, A109.	2.2	52
18	Solid-state synthesis of Li4Ti5O12 for high power lithium ion battery applications. Journal of Alloys and Compounds, 2013, 570, 144-149.	5.5	47

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19	Effects of the starting materials and mechanochemical activation on the properties of solid-state reacted Li4Ti5O12 for lithium ion batteries. Ceramics International, 2012, 38, 301-310.	4.8	46
20	Capacity variation of carbon-coated silicon monoxide negative electrode for lithium-ion batteries. Electrochimica Acta, 2013, 103, 226-230.	5.2	43
21	Thermal Degradation of Solid Electrolyte Interphase (SEI) Layers by Phosphorus Pentafluoride (PF₅) Attack. Journal of the Electrochemical Society, 2017, 164, A2418-A2425.	2.9	42
22	A tetradentate Ni(II) complex cation as a single redox couple for non-aqueous flow batteries. Journal of Power Sources, 2015, 283, 300-304.	7.8	41
23	N-ferrocenylphthalimide; A single redox couple formed by attaching a ferrocene moiety to phthalimide for non-aqueous flow batteries. Journal of Power Sources, 2018, 395, 60-65.	7.8	40
24	Performance Improvement of Nano-Sized Zinc Oxide Electrode by Embedding in Carbon Matrix for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2013, 160, A11-A14.	2.9	39
25	Performance of electrochemically generated Li21Si5 phase for lithium-ion batteries. Electrochimica Acta, 2010, 55, 8051-8055.	5.2	37
26	A Comparative Study on Thermal Stability of Two Solid Electrolyte Interphase (SEI) Films on Graphite Negative Electrode. Journal of the Electrochemical Society, 2013, 160, A1539-A1543.	2.9	37
27	Increase of both solubility and working voltage by acetyl substitution on ferrocene for non-aqueous flow battery. Electrochemistry Communications, 2016, 69, 72-75.	4.7	37
28	Passivating Ability of Surface Film Derived from Vinylene Carbonate on Tin Negative Electrode. Journal of the Electrochemical Society, 2011, 158, A498.	2.9	36
29	Dissolution of cathodeâ€“electrolyte interphase deposited on LiNi0.5Mn1.5O4 for lithium-ion batteries. Journal of Power Sources, 2021, 503, 230051.	7.8	35
30	Low-Temperature Performance Improvement of Graphite Electrode by Allyl Sulfide Additive and Its Film-Forming Mechanism. Journal of the Electrochemical Society, 2016, 163, A1798-A1804.	2.9	34
31	Nano-scale uniform distribution of Ge/Cu3Ge phase and its electrochemical performance for lithium-ion batteries. Electrochimica Acta, 2010, 55, 2894-2900.	5.2	33
32	Thermo-electrochemical activation of Cu3Sn negative electrode for lithium-ion batteries. Journal of Alloys and Compounds, 2011, 509, 7595-7599.	5.5	31
33	Compositional Change of Surface Film Deposited on LiNi0.5Mn1.5O4Positive Electrode. Journal of the Electrochemical Society, 2014, 161, A519-A523.	2.9	31
34	Mediator-free glucose/O2 biofuel cell based on a 3-dimensional glucose oxidase/SWNT/polypyrrole composite electrode. Biotechnology and Bioprocess Engineering, 2010, 15, 371-375.	2.6	29
35	Electrochemical activation behaviors studied with graphitic carbon electrodes of different interlayer distance. Electrochimica Acta, 2011, 56, 9931-9936.	5.2	27
36	Unusual Conversion-type Lithiation in LiVO₃ Electrode for Lithium-Ion Batteries. Chemistry of Materials, 2016, 28, 5314-5320.	6.7	27

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37	A Firstâ€Cycle Coulombic Efficiency Higher than 100â€‰% Observed for a Li₂MO₃ (M=Mo or Ru) Electrode. Angewandte Chemie - International Edition, 2014, 53, 10654-10657.	13.8	26
38	Iron oxide/carbon black (Fe2O3/CB) composite electrode for the detection of reduced nicotinamide cofactors using an amperometric method under a low overpotential. Biosensors and Bioelectronics, 2010, 25, 1160-1165.	10.1	25
39	Thermal Behavior of Solid Electrolyte Interphase Films Deposited on Graphite Electrodes with Different States-of-Charge. Journal of the Electrochemical Society, 2015, 162, A892-A896.	2.9	25
40	Mechanical Damage of Surface Films and Failure of Nano-Sized Silicon Electrodes in Lithium Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A6103-A6109.	2.9	25
41	A comparative study on the solubility and stability of p -phenylenediamine-based organic redox couples for non-aqueous flow batteries. Journal of Power Sources, 2017, 348, 264-269.	7.8	24
42	An azamacrocyclic electrolyte additive to suppress metal deposition in lithium-ion batteries. Electrochemistry Communications, 2015, 58, 25-28.	4.7	23
43	Tris(pentafluorophenyl)silane as an Electrolyte Additive for 5 V LiNi_{0.5}Mn_{1.5}O₄Positive Electrode. Journal of the Electrochemical Society, 2016, 163, A898-A903.	2.9	23
44	Passivating film artificially built on LiNi0.5Mn1.5O4 by molecular layer deposition of (pentafluorophenylpropyl)trimethoxysilane. Journal of Power Sources, 2018, 392, 159-167.	7.8	21
45	A Calculation Model to Assess Two Irreversible Capacities Evolved in Silicon Negative Electrodes. Journal of the Electrochemical Society, 2015, 162, A1579-A1584.	2.9	19
46	N-(Î±-ferrocenyl)ethylphthalimide as a single redox couple for non-aqueous flow batteries. Journal of Power Sources, 2019, 421, 1-5.	7.8	17
47	Carbon fabric as a current collector for electroless-plated Cu6Sn5 negative electrode for lithium-ion batteries. Journal of Alloys and Compounds, 2017, 692, 583-588.	5.5	16
48	Solid Permeable Interface (SPI) on a High-Voltage Positive Electrode of Lithium-Ion Batteries. Journal of the Electrochemical Society, 2018, 165, A575-A583.	2.9	16
49	The feasibility of a pyrrolidinium-based ionic liquid solvent for non-graphitic carbon electrodes. Electrochemistry Communications, 2011, 13, 1256-1259.	4.7	14
50	The Investigation of Electrolyte Oxidation and Film Deposition Characteristics at High Potentials in a Carbonate-Based Electrolyte Using Pt Electrode. Journal of the Electrochemical Society, 2018, 165, A1095-A1098.	2.9	14
51	Electrode Performances of Amorphous Molybdenum Oxides of Different Molybdenum Valence for Lithiumâ€ion Batteries. Israel Journal of Chemistry, 2015, 55, 604-610.	2.3	13
52	Ni(II)-chelated thio-crown complex as a single redox couple for non-aqueous flow batteries. Electrochemistry Communications, 2017, 85, 36-39.	4.7	13
53	Effects of Li/Ti ratios on the electrochemical properties of Li4Ti5O12 examined by time-resolved X-ray diffraction. Applied Physics A: Materials Science and Processing, 2012, 107, 769-775.	2.3	12
54	Effects of post-treatments on the electrochemical properties of solid-state reacted Li4Ti5O12â€"high energy milling and annealing. Journal of Electroceramics, 2012, 28, 178-184.	2.0	12

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55	Effects of Interlayer Distance and van der Waals Energy on Electrochemical Activation of Partially Reduced Graphite Oxide. Electrochimica Acta, 2015, 173, 827-833.	5.2	12
56	Reinforcement of an electrically conductive network with ethanol as a dispersing agent in the slurry preparation step. Journal of Power Sources, 2015, 287, 359-362.	7.8	12
57	Amorphous V2O5 Positive Electrode Materials by Precipitation Method in Magnesium Rechargeable Batteries. Electronic Materials Letters, 2019, 15, 415-420.	2.2	12
58	Copper Oxide as a Hydrogen Fluoride Scavenger for High-Voltage LiNi0.5Mn1.5O4Positive Electrode. Journal of the Electrochemical Society, 2017, 164, A2677-A2682.	2.9	11
59	Counter anion effects on the energy density of Ni(II)-chelated tetradentate azamacrocyclic complex cation as single redox couple for non-aqueous flow batteries. Electrochimica Acta, 2019, 308, 227-230.	5.2	11
60	Bi-functional effects of lengthening aliphatic chain of phthalimide-based negative redox couple and its non-aqueous flow battery performance at stack cell. APL Materials, 2018, 6, .	5.1	10
61	Concentration Gradient Induced Delithiation Failure of MoO₃ for Li-Ion Batteries. Nano Letters, 2022, 22, 761-767.	9.1	10
62	Composites: An Amorphous Red Phosphorus/Carbon Composite as a Promising Anode Material for Sodium Ion Batteries (Adv. Mater. 22/2013). Advanced Materials, 2013, 25, 3010-3010.	21.0	9
63	One pot synthesis of ordered mesoporous carbonâ€"silicaâ€"titania with parallel alignment against graphene as advanced anode material in lithium ion batteries. Journal of Industrial and Engineering Chemistry, 2019, 71, 93-98.	5.8	9
64	Novel siliconâ€"tungsten oxideâ€"carbon composite as advanced negative electrode for lithium-ion batteries. Solid State Ionics, 2018, 314, 41-45.	2.7	8
65	Grafting Nitrophenyl Groups on Carbon Surfaces by Diazonium Chemistry to Suppress Irreversible Reactions in High-Voltage LiNi_{0.5}Mn_{1.5}O₄Positive Electrodes. Journal of the Electrochemical Society, 2018, 165, A1372-A1376.	2.9	8
66	Preparation and Characterization of Solâ€"Gel-Driven Li_{<i>x</i>}La₃Zr₂O₁₂ Solid Electrolytes and LiCoO₂ Cathodes for All-Solid-State Lithium-Ion Batteries. Journal of Nanoscience and Nanotechnology, 2020, 20, 7002-7009.	0.9	8
67	An Azamacrocyclic Ligand-Functionalized Transition-Metal Scavenging Polymer for 5.0 V Class High-Energy Lithium-Ion Batteries. ACS Applied Energy Materials, 2021, 4, 128-133.	5.1	8
68	Communicationâ€"A Phosphorus Pentafluoride Scavenger to Suppress Solid Electrolyte Interphase Damage at Moderately Elevated Temperature. Journal of the Electrochemical Society, 2017, 164, A3699-A3701.	2.9	8
69	Degradation of surface film on LiCoO2 electrode by hydrogen fluoride attack at moderately elevated temperature. Electrochimica Acta, 2018, 277, 59-66.	5.2	6
70	Communicationâ€"Lithium Bis(fluorosulfonyl)imide (LiFSI) as a Promising Salt to Suppress Solid Electrolyte Interphase Degradation at Elevated Temperatures. Journal of the Electrochemical Society, 2020, 167, 080529.	2.9	6
71	Binderâ€•and Carbonâ€free Porous Thick Tin Foil Electrode via a Spontaneous Electrochemical and Chemical Process. Bulletin of the Korean Chemical Society, 2016, 37, 48-51.	1.9	5
72	<scp>Oneâ€step</scp> surface nitridation of <scp>CoO</scp> for <scp>highâ€energyâ€density</scp> lithiumâ€ion batteries. International Journal of Energy Research, 2020, 44, 9233-9239.	4.5	5

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73	Amorphous Vanadium Titanates as a Negative Electrode for Lithium-ion Batteries. Journal of Electrochemical Science and Technology, 2016, 7, 306-315.	2.2	5
74	Reduction of heat generation for lithiated graphite by forming a local galvanic cell with Cu3Sn at elevated temperature. Electrochemistry Communications, 2013, 37, 88-90.	4.7	4
75	Re-Deposition of Aluminum Species after Dissolution to Improve Electrode Performances of Lithium Manganese Oxide. Journal of the Electrochemical Society, 2014, 161, A2020-A2025.	2.9	4
76	Influence of Surface Area Change of Spinel Cathode on Highâ€Temperature Storage Behavior of Lithiumâ€Ion Pouch Cell. Bulletin of the Korean Chemical Society, 2015, 36, 2658-2663.	1.9	4
77	Highly flexible TiO2-coated stainless steel fabric electrode prepared by liquid-phase deposition. Journal of Power Sources, 2016, 330, 204-210.	7.8	4
78	Artificially-built solid electrolyte interphase via surface-bonded vinylene carbonate derivative on graphite by molecular layer deposition. Journal of Power Sources, 2017, 370, 131-137.	7.8	4
79	Decrease in dendritic growth and overpotential through inâ€situ generated lithiumâ€aluminum alloys for lithium metal batteries. International Journal of Energy Research, 2021, 45, 16884-16890.	4.5	4
80	Surface nitridation of Li4Ti5O12 by thermal decomposition of urea to improve quick charging capability of lithium ion batteries. Scientific Reports, 2021, 11, 13095.	3.3	4
81	A comparative study of increased lithium storage with low resistance at structural defects in amorphous titanium dioxide electrode. Electrochimica Acta, 2021, 398, 139358.	5.2	4
82	Charge/discharge Capacity of Natural Graphite Anode According to the Charge/discharge Rate in Lithium Secondary Batteries. Journal of the Korean Electrochemical Society, 2004, 7, 32-37.	0.1	4
83	A comparative study of polarization during the initial lithiation step in tungsten-oxide negative electrodes for lithium-ion batteries. Solid State Ionics, 2017, 311, 1-5.	2.7	3
84	Li-Salt Concentration Effects on Quick-Charge Performances of Spinel Lithium Titanium Oxide Negative Electrodes for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2021, 168, 040523.	2.9	3
85	Permeable characteristics of surface film deposited on LiMn2O4 positive electrode revealed by redox-active indicator. Nano Convergence, 2021, 8, 21.	12.1	3
86	Communicationâ€"Aliphatic Chain Substitution for Enhancing Energy Density of <i>p</i>-Benzoquinone Redox Couple for Non-Aqueous Flow Batteries. Journal of the Electrochemical Society, 2020, 167, 020551.	2.9	3
87	Effect of Radicalâ€"Solvent Interaction on Battery Performance in Benzophenone-Based Charge Storage Systems. Journal of the Electrochemical Society, 2020, 167, 160526.	2.9	3
88	Development of La0.8Sr0.2MnO3+Î´ electrocatalysts by Pechini's methods as cathode electrocatalysts in alkaline anion exchange membrane fuel cells. Solid State Ionics, 2016, 290, 124-129.	2.7	2
89	Communicationâ€"Electrochemical Conversion of CuV₂O₆into Metallic Cu and LiVO₃with Highly Reversible Lithium Storage. Journal of the Electrochemical Society, 2017, 164, A864-A866.	2.9	2
90	Tris(pentafluorophenyl)silane as a Solid Electrolyte Interphase (SEI)-Forming Agent for Graphite Electrodes. Journal of the Electrochemical Society, 2017, 164, A1887-A1892.	2.9	2

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91	Ordered mesoporous tungsten oxideâ€“carbon nanocomposite for use as a highly reversible negative electrode in lithium-ion batteries. Journal of Alloys and Compounds, 2020, 832, 154816.	5.5	2
92	A comparative study of reaction mechanism of MoS2 negative electrode materials for sodium-ion batteries. Journal of Alloys and Compounds, 2021, 876, 160182.	5.5	2
93	Effect of Lithium Bis(oxalate)borate as an Electrolyte Additive on Carbon-coated SiO Negative Electrode. Journal of the Korean Electrochemical Society, 2014, 17, 49-56.	0.1	2
94	Electrochemical characteristics of high-capacity Mg/V2O5 hybrid batteries with Mg-Li dual salt electrolytes. Korean Journal of Chemical Engineering, 2020, 37, 184-187.	2.7	1
95	Amorphous Vanadium Titanates as a Negative Electrode for Lithium-ion Batteries. Journal of Electrochemical Science and Technology, 2016, 7, 306-315.	2.2	1
96	Enhanced High-Temperature Performance of LiNi0.6Co0.2Mn0.2O2Positive Electrode Materials by the Addition of nano-Al2O3during the Synthetic Process. Journal of the Korean Electrochemical Society, 2016, 19, 80-86.	0.1	1
97	Reduction of Li4Ti5O12Powder Agglomeration by the Addition of Carbon Black during Solid-state Synthesis. Journal of the Korean Electrochemical Society, 2016, 19, 63-68.	0.1	1
98	Surface Film Degradation on LiCoO2 Electrode by Hydrogen Fluoride Attack at Moderately Elevated Temperature and CuO Addition to Mitigate the Degradation. Journal of the Electrochemical Society, 2019, 166, A195-A200.	2.9	0
99	Improvement of Rate Capability and Low-temperature Performances of Graphite Negative Electrode by Surface Treatment with Copper Phthalocyanine. Journal of the Korean Electrochemical Society, 2015, 18, 130-135.	0.1	0
100	Poly(phenanthrenequinone)-Poly(acrylic acid) Composite as a Conductive Polymer Binder for Submicrometer-Sized Silicon Negative Electrodes. Journal of the Korean Electrochemical Society, 2016, 19, 87-94.	0.1	0
101	Effect of Pre-Cycling Rate on the Passivating Ability of Surface Films on Li4Ti5O12 Electrodes. Journal of Electrochemical Science and Technology, 2017, 8, 15-24.	2.2	0
102	Solâ€“Gel-Driven Al and Ta Co-Doped Li₇La₃Zr₂O₁₂ Solid Ceramic Electrolyte for All-Solid-State Lithium Ion Batteries. Nanoscience and Nanotechnology Letters, 2018, 10, 491-496.	0.4	0
103	Electrolyte Additives for Mg Stripping Reaction in Lithium-Magnesium Hybrid Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0