

# Jihyeon Gim

## List of Publications by Year in descending order

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99  
papers

5,199  
citations

101384

36  
h-index

88477

70  
g-index

101  
all docs

101  
docs citations

101  
times ranked

6136  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrochemically Induced Structural Transformation in a $\delta$ - $\text{MnO}_2$ Cathode of a High Capacity Zinc-Ion Battery System. <i>Chemistry of Materials</i> , 2015, 27, 3609-3620.	3.2	788
2	A layered $\delta$ - $\text{MnO}_2$ nanoflake cathode with high zinc-storage capacities for eco-friendly battery applications. <i>Electrochemistry Communications</i> , 2015, 60, 121-125.	2.3	434
3	Enhanced reversible divalent zinc storage in a structurally stable $\delta$ - $\text{MnO}_2$ nanorod electrode. <i>Journal of Power Sources</i> , 2015, 288, 320-327.	4.0	322
4	Amorphous iron phosphate: potential host for various charge carrier ions. <i>NPG Asia Materials</i> , 2014, 6, e138-e138.	3.8	213
5	High rate performance of a $\text{Na}_3\text{V}_2(\text{PO}_4)_3/\text{C}$ cathode prepared by pyro-synthesis for sodium-ion batteries. <i>Journal of Materials Chemistry</i> , 2012, 22, 20857.	6.7	182
6	Correlation between manganese dissolution and dynamic phase stability in spinel-based lithium-ion battery. <i>Nature Communications</i> , 2019, 10, 4721.	5.8	182
7	High performance of Co-doped NiO nanoparticle anode material for rechargeable lithium ion batteries. <i>Journal of Power Sources</i> , 2015, 292, 23-30.	4.0	159
8	Insights into the structural effects of layered cathode materials for high voltage sodium-ion batteries. <i>Energy and Environmental Science</i> , 2017, 10, 1677-1693.	15.6	143
9	A high surface area tunnel-type $\delta$ - $\text{MnO}_2$ nanorod cathode by a simple solvent-free synthesis for rechargeable aqueous zinc-ion batteries. <i>Chemical Physics Letters</i> , 2016, 650, 64-68.	1.2	142
10	Partially reduced $\text{Co}_3\text{O}_4/\text{graphene}$ nanocomposite as an anode material for secondary lithium ion battery. <i>Electrochimica Acta</i> , 2013, 100, 63-71.	2.6	124
11	Facile approach to synthesize $\text{CuO}/\text{reduced graphene oxide}$ nanocomposite as anode materials for lithium-ion battery. <i>Journal of Power Sources</i> , 2013, 244, 435-441.	4.0	116
12	High Rate Capability and Long Cycle Stability of $\text{Co}_3\text{O}_4/\text{CoFe}_2\text{O}_4$ Nanocomposite as an Anode Material for High-Performance Secondary Lithium Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2014, 118, 11234-11243.	1.5	100
13	Simple synthesis and particle size effects of $\text{TiO}_2$ nanoparticle anodes for rechargeable lithium ion batteries. <i>Electrochimica Acta</i> , 2013, 90, 112-118.	2.6	98
14	Insight into $\text{Ca}^{2+}$ Substitution Effects on $\text{O}_3$ Type $\text{NaNi}_{1/3}\text{Fe}_{1/3}\text{Mn}_{1/3}\text{O}_2$ Cathode Materials for Sodium-Ion Batteries Application. <i>Small</i> , 2018, 14, e1704523.	5.2	97
15	Rational design of mechanically robust Ni-rich cathode materials via concentration gradient strategy. <i>Nature Communications</i> , 2021, 12, 6024.	5.8	80
16	MOF-derived mesoporous anatase $\text{TiO}_2$ as anode material for lithium-ion batteries with high rate capability and long cycle stability. <i>Journal of Alloys and Compounds</i> , 2016, 674, 174-178.	2.8	78
17	Enhanced High-Rate Performance of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ Nanoparticles for Rechargeable Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2011, 158, A275.	1.3	77
18	The effects of Mo doping on $0.3\text{Li}[\text{Li}_{0.33}\text{Mn}_{0.67}]\text{O}_2 \cdot 0.7\text{Li}[\text{Ni}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}]\text{O}_2$ cathode material. <i>Dalton Transactions</i> , 2012, 41, 3053.	1.6	76

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19	A Lithium-Sulfur Battery using a 2D Current Collector Architecture with a Large-Sized Sulfur Host Operated under High Areal Loading and Low E/S Ratio. <i>Advanced Materials</i> , 2018, 30, e1804271.	11.1	74
20	Improving the electrochemical performance of anatase titanium dioxide by vanadium doping as an anode material for lithium-ion batteries. <i>Journal of Power Sources</i> , 2013, 243, 891-898.	4.0	73
21	Hierarchical porous anatase TiO <sub>2</sub> derived from a titanium metal-organic framework as a superior anode material for lithium ion batteries. <i>Chemical Communications</i> , 2015, 51, 12274-12277.	2.2	73
22	Electrochemical properties of Na <sub>x</sub> CoO <sub>2</sub> (x~0.71) cathode for rechargeable sodium-ion batteries. <i>Ceramics International</i> , 2014, 40, 2411-2417.	2.3	68
23	Fully activated Li <sub>2</sub> MnO <sub>3</sub> nanoparticles by oxidation reaction. <i>Journal of Materials Chemistry</i> , 2012, 22, 11772.	6.7	63
24	High rate performance of a NaTi <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> /rGO composite electrode via pyro synthesis for sodium ion batteries. <i>Journal of Materials Chemistry A</i> , 2016, 4, 7815-7822.	5.2	60
25	Facile synthesis of reduced graphene oxide by modified Hummer's method as anode material for Li-, Na- and K-ion secondary batteries. <i>Royal Society Open Science</i> , 2019, 6, 181978.	1.1	60
26	Effect of Mo <sup>6+</sup> doping on electrochemical performance of anatase TiO <sub>2</sub> as a high performance anode material for secondary lithium-ion batteries. <i>Journal of Alloys and Compounds</i> , 2014, 598, 16-22.	2.8	59
27	One-step synthesis of CoO anode material for rechargeable lithium-ion batteries. <i>Ceramics International</i> , 2013, 39, 9325-9330.	2.3	58
28	Pyro-synthesis of a high rate nano-Li <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> /C cathode with mixed morphology for advanced Li-ion batteries. <i>Scientific Reports</i> , 2014, 4, 4047.	1.6	57
29	Combustion synthesis of MgFe <sub>2</sub> O <sub>4</sub> /graphene nanocomposite as a high-performance negative electrode for lithium ion batteries. <i>Materials Characterization</i> , 2014, 95, 259-265.	1.9	53
30	Enhanced electrochemical performance of novel K-doped Co <sub>3</sub> O <sub>4</sub> as the anode material for secondary lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2014, 2, 6966-6975.	5.2	45
31	Improved electrochemical performance of Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> with a variable amount of graphene as a conductive agent for rechargeable lithium-ion batteries by solvothermal method. <i>Materials Chemistry and Physics</i> , 2012, 136, 1044-1051.	2.0	43
32	Pyro-Synthesis of Functional Nanocrystals. <i>Scientific Reports</i> , 2012, 2, 946.	1.6	42
33	Electrochemical and safety characteristics of Ti <sub>2</sub> O <sub>7</sub> -graphene nanocomposite anode for rechargeable lithium-ion batteries. <i>Electrochimica Acta</i> , 2012, 75, 247-253.	2.6	41
34	One-Step Pyro-Synthesis of a Nanostructured Mn <sub>3</sub> O <sub>4</sub> /C Electrode with Long Cycle Stability for Rechargeable Lithium-Ion Batteries. <i>Chemistry - A European Journal</i> , 2016, 22, 2039-2045.	1.7	40
35	Self-assembled mesoporous manganese oxide with high surface area by ambient temperature synthesis and its enhanced electrochemical properties. <i>Electrochemistry Communications</i> , 2011, 13, 730-733.	2.3	39
36	Porous TiN nanoparticles embedded in a N-doped carbon composite derived from metal-organic frameworks as a superior anode in lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2016, 4, 4706-4710.	5.2	39

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37	Synthesis of $x\text{Li}_2\text{MnO}_3 \cdot (1-x)\text{LiMO}_2$ (M=Cr, Mn, Co, Ni) nanocomposites and their electrochemical properties. <i>Materials Research Bulletin</i> , 2010, 45, 252-255.	2.7	35
38	An Enhanced High-Rate $\text{Na}_{0.3}\text{V}_2(\text{PO}_4)_3\text{-Ni}_2\text{P}$ Nanocomposite Cathode with Stable Lifetime for Sodium-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 35235-35242.	4.0	35
39	Direct formation of $\text{LiFePO}_4/\text{graphene}$ composite via microwave-assisted polyol process. <i>Journal of Power Sources</i> , 2016, 304, 354-359.	4.0	35
40	Potassium-doped copper oxide nanoparticles synthesized by a solvothermal method as an anode material for high-performance lithium ion secondary battery. <i>Applied Surface Science</i> , 2014, 305, 617-625.	3.1	32
41	Identifying Active Sites for Parasitic Reactions at the Cathode-Electrolyte Interface. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 589-594.	2.1	31
42	Electrochemical lithium storage of a $\text{ZnFe}_2\text{O}_4/\text{graphene}$ nanocomposite as an anode material for rechargeable lithium ion batteries. <i>RSC Advances</i> , 2014, 4, 47087-47095.	1.7	27
43	A two-step solid state synthesis of $\text{LiFePO}_4/\text{C}$ cathode with varying carbon contents for Li-ion batteries. <i>Ceramics International</i> , 2014, 40, 1561-1567.	2.3	25
44	Morphology-controlled $\text{LiFePO}_4$ cathodes by a simple polyol reaction for Li-ion batteries. <i>Materials Characterization</i> , 2014, 89, 93-101.	1.9	24
45	Simple, robust metal fluoride coating on layered $\text{Li}_{1.23}\text{Ni}_{0.13}\text{Co}_{0.14}\text{Mn}_{0.56}\text{O}_2$ and its effects on enhanced electrochemical properties. <i>Electrochimica Acta</i> , 2013, 100, 10-17.	2.6	23
46	A Sodium Manganese Oxide Cathode by Facile Reduction for Sodium Batteries. <i>Chemistry - an Asian Journal</i> , 2014, 9, 1550-1556.	1.7	23
47	A rapid polyol combustion strategy towards scalable synthesis of nanostructured $\text{LiFePO}_4/\text{C}$ cathodes for Li-ion batteries. <i>Journal of Solid State Electrochemistry</i> , 2014, 18, 1557-1567.	1.2	23
48	$\text{Li}_3\text{V}_2(\text{PO}_4)_3/\text{graphene}$ nanocomposite as a high performance cathode material for lithium ion battery. <i>Ceramics International</i> , 2015, 41, 389-396.	2.3	23
49	Unravelling the Nature of the Intrinsic Complex Structure of Binary-Phase Na-Layered Oxides. <i>Advanced Materials</i> , 2022, 34, e2202137.	11.1	21
50	Synthesis of $\text{LiFePO}_4$ Nanoparticles and Crystal Formation Mechanism during Solvothermal Reaction. <i>Journal of the Electrochemical Society</i> , 2012, 159, A479-A484.	1.3	20
51	Plate-Type $\text{NaV}_3\text{O}_8$ Cathode by Solid State Reaction for Sodium-Ion Batteries. <i>ECS Electrochemistry Letters</i> , 2014, 3, A69-A71.	1.9	20
52	Low temperature synthesis of porous tin oxide anode for high-performance lithium-ion battery. <i>Electrochimica Acta</i> , 2013, 109, 461-467.	2.6	19
53	Revealing the Structural Evolution and Phase Transformation of $\text{O}_3$ -Type $\text{NaNi}_{1/3}\text{Fe}_{1/3}\text{Mn}_{1/3}\text{O}_2$ Cathode Material on Sintering and Cycling Processes. <i>ACS Applied Energy Materials</i> , 2020, 3, 6107-6114.	2.5	19
54	In Situ Monitoring of the Growth of Nickel, Manganese, and Cobalt Hydroxide Precursors during Co-Precipitation Synthesis of Li-Ion Cathode Materials. <i>Journal of the Electrochemical Society</i> , 2018, 165, A3077-A3083.	1.3	18

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55	Origins of Irreversibility in Layered $\text{NaNi}_x\text{Fe}_y\text{Mn}_z\text{O}_2$ Cathode Materials for Sodium Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 51397-51408.	4.0	18
56	SYNTHESIS OF HIGHLY CRYSTALLINE OLIVINE-TYPE $\text{LiFePO}_4$ NANOPARTICLES BY SOLUTION-BASED REACTIONS. <i>Surface Review and Letters</i> , 2010, 17, 111-119.	0.5	17
57	Probing solid-state reaction through microstrain: A case study on synthesis of $\text{LiCoO}_2$ . <i>Journal of Power Sources</i> , 2020, 469, 228422.	4.0	17
58	Enhanced Storage Capacities in Carbon-Coated Triclinic- $\text{LiVOPO}_4$ Cathode with Porous Structure for Li-Ion Batteries. <i>ECS Electrochemistry Letters</i> , 2012, 1, A63-A65.	1.9	16
59	A Porous $\text{TiO}_2$ Electrode Prepared by an Energy Efficient Pyro-Synthesis for Advanced Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2015, 162, A1220-A1226.	1.3	16
60	Investigation of Ca Insertion into $\text{Ca-MoO}_3$ Nanoparticles for High Capacity Ca-Ion Cathodes. <i>Nano Letters</i> , 2022, 22, 2228-2235.	4.5	16
61	A high voltage $\text{LiMnPO}_4$ - $\text{LiMn}_2\text{O}_4$ nanocomposite cathode synthesized by a one-pot pyro synthesis for Li-ion batteries. <i>RSC Advances</i> , 2013, 3, 25640.	1.7	15
62	Ultra-small ZnS quantum dots embedded in N-doped carbon matrix for high-performance Li-ion battery anode. <i>Composites Part B: Engineering</i> , 2022, 231, 109548.	5.9	15
63	Effects of praseodymium substitution on electrical properties of $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ ceramics. <i>Ceramics International</i> , 2014, 40, 181-189.	2.3	13
64	Dual-Salt Electrolytes to Effectively Reduce Impedance Rise of High-Nickel Lithium-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 40502-40512.	4.0	13
65	Impact of glucose on the electrochemical performance of nano- $\text{LiCoPO}_4$ cathode for Li-ion batteries. <i>Journal of Solid State Electrochemistry</i> , 2012, 16, 149-155.	1.2	12
66	Mesoporous manganese dioxide cathode prepared by an ambient temperature synthesis for Na-ion batteries. <i>RSC Advances</i> , 2013, 3, 26328.	1.7	12
67	High rate capability of $\text{LiFePO}_4$ cathodes doped with a high amount of Ti. <i>Ceramics International</i> , 2016, 42, 7230-7236.	2.3	12
68	Highly reversible capacity nanocomposite anode for secondary lithium-ion batteries. <i>Electrochemistry Communications</i> , 2012, 19, 9-12.	2.3	11
69	One-pot pyro-synthesis of a high energy density $\text{LiFePO}_4$ - $\text{Li}_3\text{V}_2(\text{PO}_4)_3$ nanocomposite cathode for lithium-ion battery applications. <i>Ceramics International</i> , 2017, 43, 4288-4294.	2.3	11
70	Sodium manganese oxide electrodes accompanying self-ion exchange for lithium/sodium hybrid ion batteries. <i>Electrochimica Acta</i> , 2018, 261, 42-48.	2.6	10
71	Understanding the constant-voltage fast-charging process using a high-rate Ni-rich cathode material for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021, 10, 288-295.	5.2	10
72	Intercalation of Ca into a Highly Defective Manganese Oxide at Room Temperature. <i>Chemistry of Materials</i> , 2022, 34, 836-846.	3.2	10

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73	Effect of Electrolytes on the Cathode-Electrolyte Interfacial Stability of Fe-Based Layered Cathodes for Sodium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2022, 169, 030536.	1.3	10
74	Concealed Cathode Degradation in Lithium-Ion Cells with a Ni-Rich Oxide. <i>Journal of the Electrochemical Society</i> , 2022, 169, 040539.	1.3	9
75	Synthesis and Electrochemical Properties of $\text{LiMPO}_4$ (M = Fe, Mn, Co) Nanocrystals in Polyol Medium. <i>Journal of Nanoscience and Nanotechnology</i> , 2010, 10, 3357-3361.	0.9	8
76	$\text{LT-LiMn}_{0.5}\text{Ni}_{0.5}\text{O}_2$ : a unique co-free cathode for high energy Li-ion cells. <i>Chemical Communications</i> , 2021, 57, 11009-11012.	2.2	8
77	Synthesis and characterization of integrated layered nanocomposites for lithium ion batteries. <i>Nanoscale Research Letters</i> , 2012, 7, 60.	3.1	7
78	Nucleation and Growth Controlled Polyol Synthesis of Size-Focused Nanocrystalline $\text{LiFePO}_4$ Cathode for High Performance Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2014, 161, A1468-A1473.	1.3	7
79	An in-situ gas chromatography investigation into the suppression of oxygen gas evolution by coated amorphous cobalt-phosphate nanoparticles on oxide electrode. <i>Scientific Reports</i> , 2016, 6, 23394.	1.6	6
80	New High-Performance Pb-Based Nanocomposite Anode Enabled by Wide-Range Pb Redox and Zintl Phase Transition. <i>Advanced Functional Materials</i> , 2021, 31, 2005362.	7.8	6
81	Nanorod-assembled spinel $\text{Li}_{1.05}\text{Mn}_{1.95}\text{O}_4$ rods with a central tunnel along the rod-axis for high rate capability of rechargeable lithium-ion batteries. <i>Electrochimica Acta</i> , 2010, 55, 8888-8893.	2.6	5
82	Optimized $\text{Li}_4\text{Ti}_5\text{O}_{12}$ Nanoparticles by Solvothermal Route for Li-Ion Batteries. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 7294-7298.	0.9	5
83	Synthesis of $\text{LiFePO}_4$ Using $\text{Fe}^{3+}$ Precursors in Polyol Medium. <i>Journal of the Electrochemical Society</i> , 2012, 159, A459-A463.	1.3	5
84	Carbon Coated CoO Electrode Synthesized by Urea-Assisted Auto Combustion for Rechargeable Lithium Battery. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 540-543.	0.9	5
85	Facile Electrochemical Mg-Ion Transport in a Defect-Free Spinel Oxide. <i>Chemistry of Materials</i> , 2022, 34, 3789-3797.	3.2	5
86	$\text{Co}_{1-x}\text{Fe}_{2+x}\text{O}_4$ ( $x = 0.1, 0.2$ ) anode materials for rechargeable lithium-ion batteries. <i>Solid State Sciences</i> , 2014, 36, 1-7.	1.5	4
87	Structural and electrochemical behavior of a $\text{NiMn}_3/\text{Mn}_2\text{O}_3$ nanocomposite as an anode for high rate and long cycle lithium ion batteries. <i>New Journal of Chemistry</i> , 2019, 43, 12916-12922.	1.4	4
88	Enhanced Electrochemical Properties of $\text{LiMnPO}_4/\text{C}$ by Glucose-Assisted Polyol Synthesis. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 6053-6057.	0.9	3
89	Effect of Extended Nickel Doping and Secondary Heat Treatment on the Electrochemical Properties of High Energy Spinel $\text{LiMn}_{1.3}\text{Ni}_{0.7}\text{O}_y$ Cathode. <i>Journal of the Electrochemical Society</i> , 2014, 161, A1508-A1513.	1.3	1
90	Rapid Polyol-Assisted Microwave Synthesis of Nanocrystalline $\text{LiFePO}_4/\text{C}$ Cathode for Lithium-Ion Batteries. <i>Journal of Nanoscience and Nanotechnology</i> , 2015, 15, 6168-6171.	0.9	1

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91	Performance Loss Mechanisms in Lithium-Ion Cells with Nickel-Dominant Oxide Cathodes. ECS Meeting Abstracts, 2021, MA2021-01, 92-92.	0.0	0
92	The Effect of Tailoring Morphology of Ni-Rich Cathode Oxides on Electrochemical Stability for Lithium Ion Batteries. ECS Meeting Abstracts, 2017, , .	0.0	0
93	Conditioning Safety Index of Ni-Rich Cathode Oxides for Lithium Ion Batteries. ECS Meeting Abstracts, 2017, , .	0.0	0
94	Evolution of Nickel, Manganese, and Cobalt Hydroxide Precursor for Li-Ion Battery Cathode Materials in Co-Precipitation Reactions. ECS Meeting Abstracts, 2018, , .	0.0	0
95	The Correlation between the Particle Morphology and the Electrochemical Stability for High-Ni Cathode and Understanding of the Mechanism of Parasitic Reaction.. ECS Meeting Abstracts, 2019, , .	0.0	0
96	Performance Optimization of High Ni (≈90%) Cathode Materials: Synthesis & Calcination. ECS Meeting Abstracts, 2021, MA2021-02, 397-397.	0.0	0
97	Room-Temperature Aerosol Deposition of Dense Li <sub>6.25</sub> Al <sub>0.25</sub> La <sub>3</sub> Zr <sub>2</sub> O <sub>12</sub> Thick Film Electrolyte for All-Solid-State Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 146-146.	0.0	0
98	Electrolyte Engineering to Improve Cathode-Electrolyte Interface of Na <sub>1-x</sub> FeO <sub>2</sub> Cathode for Sodium Ion Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 203-203.	0.0	0
99	(Invited) Performance and (de)lithiation Mechanism of Lithium-Lead (Pb) Anode for Li Battery. ECS Meeting Abstracts, 2020, MA2020-02, 31-31.	0.0	0