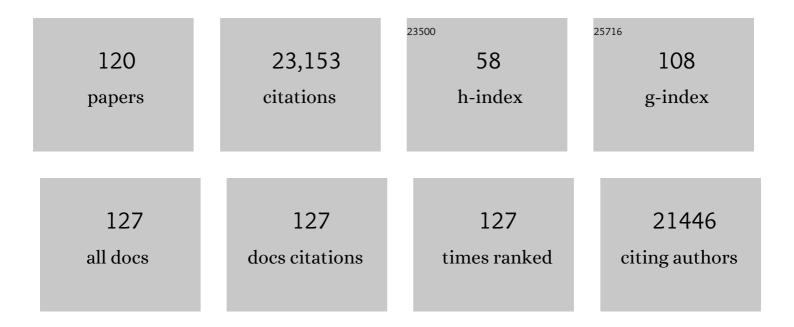
Hyun-wook Lee

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Mitigating Jahn–Teller Effects by Fast Electrode Kinetics Inducing Charge Redistribution. Advanced Functional Materials, 2022, 32, 2111901.	7.8	18
2	Nitrogen Plasma-Assisted Functionalization of Silicon/Graphite Anodes to Enable Fast Kinetics. ACS Applied Materials & Interfaces, 2022, 14, 5237-5246.	4.0	14
3	Role of Areal Capacity in Determining Short Circuiting of Sulfide-Based Solid-State Batteries. ACS Applied Materials & Interfaces, 2022, 14, 4051-4060.	4.0	35
4	Strong interfacial energetics between catalysts and current collectors in aqueous sodium–air batteries. Journal of Materials Chemistry A, 2022, 10, 4601-4610.	5.2	10
5	Understanding the Role of a Water-Soluble Catechol-Functionalized Binder for Silicon Anodes by Diverse In Situ Analyses. , 2022, 4, 831-839.		15
6	Universal Solution Synthesis of Sulfide Solid Electrolytes Using Alkahest for All‣olid‣tate Batteries. Advanced Materials, 2022, 34, e2200083.	11.1	36
7	Prussian Blue Nanolayer-Embedded Separator for Selective Segregation of Nickel Dissolution in High Nickel Cathodes. Nano Letters, 2022, 22, 1804-1811.	4.5	10
8	Mitigating Jahn–Teller Effects by Fast Electrode Kinetics Inducing Charge Redistribution (Adv. Funct.) Tj ETQq0	0 0 rgBT /	Overlock 10
9	Support structure-catalyst electroactivity relation for oxygen reduction reaction on platinum supported by two-dimensional titanium carbide. Nano Energy, 2021, 79, 105363.	8.2	23
10	The Role of Polymer and Inorganic Coatings to Enhance Interparticle Connections Diagnosed by <i>In Situ</i> Techniques. Nano Letters, 2021, 21, 1530-1537.	4.5	9

11	Linking void and interphase evolution to electrochemistry in solid-state batteries using operando X-ray tomography. Nature Materials, 2021, 20, 503-510.	13.3	194
12	Efficient Lowâ€Grade Heat Harvesting Enabled by Tuning the Hydration Entropy in an Electrochemical System. Advanced Materials, 2021, 33, e2004717.	11.1	22
13	Na/Al Codoped Layered Cathode with Defects as Bifunctional Electrocatalyst for Highâ€Performance Liâ€Ion Battery and Oxygen Evolution Reaction. Small, 2021, 17, e2005605.	5.2	31
14	Lowâ€Grade Heat Harvesting: Efficient Lowâ€Grade Heat Harvesting Enabled by Tuning the Hydration Entropy in an Electrochemical System (Adv. Mater. 13/2021). Advanced Materials, 2021, 33, 2170096.	11.1	0
15	Anomalous Si-based composite anode design by densification and coating strategies for practical applications in Li-ion batteries. Composites Part B: Engineering, 2021, 215, 108799.	5.9	29
16	Stack Pressure Measurements to Probe the Evolution of the Lithium–Solid-State Electrolyte Interface. ACS Energy Letters, 2021, 6, 3261-3269.	8.8	66

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17	Synthesis of porous CuCo2O4 nanorods/reduced graphene oxide composites via a facile microwave hydrothermal method for high-performance hybrid supercapacitor applications. Electrochimica Acta, 2021, 390, 138865.	2.6	23
18	In situ visualization of zinc plating in gel polymer electrolyte. Electrochimica Acta, 2021, 391, 138877.	2.6	6

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#	Article	IF	CITATIONS
19	Stress evolution during cycling of alloy-anode solid-state batteries. Joule, 2021, 5, 2450-2465.	11.7	85
20	Chemical Stability and Degradation Mechanism of Solid Electrolytes/Aqueous Media at a Steady State for Long-Lasting Sodium Batteries. Chemistry of Materials, 2021, 33, 126-135.	3.2	14
21	Vertically aligned carbon nanotubular structure for guiding uniform lithium deposition via capillary pressure as stable metallic lithium anodes. Energy Storage Materials, 2020, 24, 602-609.	9.5	34
22	Electrochemo-Mechanical Properties of Red Phosphorus Anodes in Lithium, Sodium, and Potassium Ion Batteries. Matter, 2020, 3, 2012-2028.	5.0	25
23	Pyridinic-to-graphitic conformational change of nitrogen in graphitic carbon nitride by lithium coordination during lithium plating. Energy Storage Materials, 2020, 31, 505-514.	9.5	20
24	Back Cover: Enhanced Functional Properties of Ti ₃ C ₂ T <i>_x</i> MXenes as Negative Electrodes in Sodiumâ€Ion Batteries by Chemical Tuning (Small Methods 9/2020). Small Methods, 2020, 4, 2070037.	4.6	0
25	An electrochromic alarm system for smart contact lenses. Sensors and Actuators B: Chemical, 2020, 322, 128601.	4.0	20
26	Unveiling interfacial dynamics and structural degradation of solid electrolytes in a seawater battery system. Journal of Materials Chemistry A, 2020, 8, 21804-21811.	5.2	8
27	Tailoring Solution-Processable Li Argyrodites Li _{6+<i>x</i>} P _{1–<i>x</i>} M _{<i>x</i>} S ₅ I (M = Ge, Sn) and Their Microstructural Evolution Revealed by Cryo-TEM for All-Solid-State Batteries. Nano Letters, 2020, 20, 4337-4345.	4.5	67
28	Structure-dependent sodium ion storage mechanism of cellulose nanocrystal-based carbon anodes for highly efficient and stable batteries. Journal of Power Sources, 2020, 468, 228371.	4.0	24
29	Enhanced Functional Properties of Ti 3 C 2 T x MXenes as Negative Electrodes in Sodium″on Batteries by Chemical Tuning. Small Methods, 2020, 4, 2000314.	4.6	27
30	Understanding the conversion mechanism and performance of monodisperse FeF2 nanocrystal cathodes. Nature Materials, 2020, 19, 644-654.	13.3	97
31	Mechanical rolling formation of interpenetrated lithium metal/lithium tin alloy foil for ultrahigh-rate battery anode. Nature Communications, 2020, 11, 829.	5.8	246
32	Electrical Conductivity Gradient Based on Heterofibrous Scaffolds for Stable Lithiumâ€Metal Batteries. Advanced Functional Materials, 2020, 30, 1908868.	7.8	64
33	Selective Ion Sweeping on Prussian Blue Analogue Nanoparticles and Activated Carbon for Electrochemical Kinetic Energy Harvesting. Nano Letters, 2020, 20, 1800-1807.	4.5	8
34	Sideâ€View Operando Optical Microscopy Analysis of a Graphite Anode to Study Its Kinetic Hysteresis. ChemSusChem, 2020, 13, 1480-1484.	3.6	16
35	Electrochromic Alarm System with Computer Vision in Smart Contact Lens. ECS Meeting Abstracts, 2020, MA2020-02, 2081-2081.	0.0	1
36	Hexacyanometalate-Based Redox Couple for High-Efficiency Iron-Chromium Flow Battery. ECS Meeting Abstracts, 2020, MA2020-02, 1048-1048.	0.0	0

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37	Native Void Space for Maximum Volumetric Capacity in Silicon-Based Anodes. Nano Letters, 2019, 19, 8793-8800.	4.5	36
38	Ordered Mesoporous Metastable αâ€MoC _{1â^'} <i>_x</i> with Enhanced Water Dissociation Capability for Boosting Alkaline Hydrogen Evolution Activity. Advanced Functional Materials, 2019, 29, 1901217.	7.8	92
39	Graphene oxide nanosheet as a two-dimensional polyelectrolyte: pH-responsive behavior of a multilayered nanomembrane. Journal of Membrane Science, 2019, 585, 191-198.	4.1	27
40	Highly robust silicon bimorph plate anode and its mechanical analysis upon electrochemical lithiation. Energy Storage Materials, 2019, 23, 292-298.	9.5	2
41	Tailored Assembly of Molecular Water Oxidation Catalysts on Photoelectrodes for Artificial Photosynthesis. European Journal of Inorganic Chemistry, 2019, 2019, 2040-2057.	1.0	28
42	Interface Engineering of Hematite with Nacre-like Catalytic Multilayers for Solar Water Oxidation. ACS Nano, 2019, 13, 467-475.	7.3	43
43	Nanocrevasse-Rich Carbon Fibers for Stable Lithium and Sodium Metal Anodes. Nano Letters, 2019, 19, 1504-1511.	4.5	123
44	Robust Pitch on Silicon Nanolayer–Embedded Graphite for Suppressing Undesirable Volume Expansion. Advanced Energy Materials, 2019, 9, 1803121.	10.2	107
45	The Chemical Stability of Nasicon As a Solid Electrolyte for Seawater Batteries. ECS Meeting Abstracts, 2019, MA2019-02, 73-73.	0.0	2
46	Innate Voids of Halloysite Enabling High-Volumetric Density Anodes for Silicon/Graphite Composites. ECS Meeting Abstracts, 2019, , .	0.0	0
47	Side-View Operando microscopy of Graphite Anodes to Understand Kinetic Hysteresis. ECS Meeting Abstracts, 2019, , .	0.0	0
48	The Pyridinic-to-Graphitic Conformational Change of Nitrogen of Graphitic Carbon Nitride on Lithium Coordination during Lithium Plating. ECS Meeting Abstracts, 2019, , .	0.0	0
49	(Invited) Nanocrevasse-Rich Carbon Fibers for Scalable Production and Stable Performance of Lithium and Sodium Metal Anodes. ECS Meeting Abstracts, 2019, , .	0.0	0
50	Impact of Textural Properties of Mesoporous Porphyrinic Carbon Electrocatalysts on Oxygen Reduction Reaction Activity. ChemElectroChem, 2018, 5, 1928-1936.	1.7	25
51	Fluoroethylene Carbonate-Based Electrolyte with 1 M Sodium Bis(fluorosulfonyl)imide Enables High-Performance Sodium Metal Electrodes. ACS Applied Materials & Interfaces, 2018, 10, 15270-15280.	4.0	133
52	Suppressing Polysulfide Dissolution via Cohesive Forces by Interwoven Carbon Nanofibers for High-Areal-Capacity Lithium–Sulfur Batteries. Nano Letters, 2018, 18, 475-481.	4.5	137
53	Promoting Oxygen Reduction Reaction Activity of Fe–N/C Electrocatalysts by Silica-Coating-Mediated Synthesis for Anion-Exchange Membrane Fuel Cells. Chemistry of Materials, 2018, 30, 6684-6701.	3.2	105
54	Lithium Silicide Surface Enrichment: A Solution to Lithium Metal Battery. Advanced Materials, 2018, 30, e1801745.	11.1	163

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55	Realizing Highâ€Performance Li–Polysulfide Full Cells by using a Lithium Bis(trifluoromethanesulfonyl)imide Salt Electrolyte for Stable Cyclability. ChemSusChem, 2018, 11, 3402-3409.	3.6	8
56	Enhanced Mechanical Properties of Polymer Nanocomposites Using Dopamine-Modified Polymers at Nanoparticle Surfaces in Very Low Molecular Weight Polymers. ACS Macro Letters, 2018, 7, 962-967.	2.3	23
57	Engineering the Electrochemical Temperature Coefficient for Efficient Lowâ€Grade Heat Harvesting. Advanced Functional Materials, 2018, 28, 1803129.	7.8	64
58	Diffusion controlled multilayer electrocatalysts <i>via</i> graphene oxide nanosheets of varying sizes. Nanoscale, 2018, 10, 16159-16168.	2.8	22
59	Coordination Polymers for High-Capacity Li-Ion Batteries: Metal-Dependent Solid-State Reversibility. ACS Applied Materials & Interfaces, 2018, 10, 22110-22118.	4.0	31
60	Self–adaptive Si/reduced graphene oxide scrolls for high–performance Li–ion battery anodes. Carbon, 2017, 120, 397-404.	5.4	51
61	Solid-State Lithium–Sulfur Batteries Operated at 37 °C with Composites of Nanostructured Li ₇ La ₃ Zr ₂ O ₁₂ /Carbon Foam and Polymer. Nano Letters, 2017, 17, 2967-2972.	4.5	384
62	Encapsulation of Lithium Vanadium Phosphate in Reduced Graphene Oxide for a Lithium-ion Battery Cathode with Stable Elevated Temperature Performance. Electrochimica Acta, 2017, 253, 208-217.	2.6	14
63	A Flexible Glass Fiber Based Freestanding Composite Electrode for Highâ€Performance Lithium Polysulfide Batteries. Advanced Sustainable Systems, 2017, 1, 1700083.	2.7	15
64	Practical considerations of Si-based anodes for lithium-ion battery applications. Nano Research, 2017, 10, 3970-4002.	5.8	102
65	Unveiling the synergistic effect of polysulfide additive and MnO2 hollow spheres in evolving a stable cyclic performance in Li–S batteries. Chemical Communications, 2017, 53, 8782-8785.	2.2	26
66	<i>In Situ</i> Observation and Electrochemical Study of Encapsulated Sulfur Nanoparticles by MoS ₂ Flakes. Journal of the American Chemical Society, 2017, 139, 10133-10141.	6.6	126
67	Extending the Life of Lithiumâ€Based Rechargeable Batteries by Reaction of Lithium Dendrites with a Novel Silica Nanoparticle Sandwiched Separator. Advanced Materials, 2017, 29, 1603987.	11.1	202
68	A Robust Glass Fiber Based Free Standing Composite Electrode for Lithium-Polysulfide Batteries. ECS Meeting Abstracts, 2017, , .	0.0	0
69	Enhanced Intrinsic Catalytic Activity of λâ€MnO ₂ by Electrochemical Tuning and Oxygen Vacancy Generation. Angewandte Chemie - International Edition, 2016, 55, 8599-8604.	7.2	107
70	Lithium Sulfide/Metal Nanocomposite as a High apacity Cathode Prelithiation Material. Advanced Energy Materials, 2016, 6, 1600154.	10.2	87
71	Enhanced Intrinsic Catalytic Activity of λâ€MnO ₂ by Electrochemical Tuning and Oxygen Vacancy Generation. Angewandte Chemie, 2016, 128, 8741-8746.	1.6	18
72	Composites of a Prussian Blue Analogue and Gelatinâ€Derived Nitrogenâ€Doped Carbonâ€Supported Porous Spinel Oxides as Electrocatalysts for a Zn–Air Battery. Advanced Energy Materials, 2016, 6, 1601052.	10.2	98

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73	Rapid water disinfection using vertically aligned MoS2 nanofilms and visible light. Nature Nanotechnology, 2016, 11, 1098-1104.	15.6	681
74	Zn-Air Batteries: Composites of a Prussian Blue Analogue and Gelatin-Derived Nitrogen-Doped Carbon-Supported Porous Spinel Oxides as Electrocatalysts for a Zn-Air Battery (Adv. Energy Mater.) Tj ETQq0 0 C) r g6.1 2/0ve	erlock 10 Tf 5
	Scalable synthesis of silicon-nanolaver-embedded graphite for high-energy lithium-ion batteries.		

75	Nature Energy, 2016, 1, .	19.8	563
76	High-Performance Lithium Metal Negative Electrode with a Soft and Flowable Polymer Coating. ACS Energy Letters, 2016, 1, 1247-1255.	8.8	281
77	Growth of conformal graphene cages on micrometre-sized silicon particles as stable battery anodes. Nature Energy, 2016, 1, .	19.8	609
78	High-capacity battery cathode prelithiation to offset initial lithium loss. Nature Energy, 2016, 1, .	19.8	265
79	Selective deposition and stable encapsulation of lithium through heterogeneous seeded growth. Nature Energy, 2016, 1, .	19.8	1,516
80	A Stretchable Graphitic Carbon/Si Anode Enabled by Conformal Coating of a Selfâ€Healing Elastic Polymer. Advanced Materials, 2016, 28, 2455-2461.	11.1	197
81	Carbothermic reduction synthesis of red phosphorus-filled 3D carbon material as a high-capacity anode for sodium ion batteries. Energy Storage Materials, 2016, 4, 130-136.	9.5	167
82	Perspectives in in situ transmission electron microscopy studies on lithium battery electrodes. Current Opinion in Chemical Engineering, 2016, 12, 37-43.	3.8	26
83	Layered reduced graphene oxide with nanoscale interlayer gaps as a stable host for lithium metal anodes. Nature Nanotechnology, 2016, 11, 626-632.	15.6	1,557
84	In Situ Chemical Synthesis of Lithium Fluoride/Metal Nanocomposite for High Capacity Prelithiation of Cathodes. Nano Letters, 2016, 16, 1497-1501.	4.5	112
85	Design and synthesis of nitrogen and sulfur co-doped porous carbon via two-dimensional interlayer confinement for a high-performance anode material for lithium-ion batteries. Journal of Materials Chemistry A, 2016, 4, 5802-5809.	5.2	92
86	Manganese–cobalt hexacyanoferrate cathodes for sodium-ion batteries. Journal of Materials Chemistry A, 2016, 4, 4211-4223.	5.2	180
87	Metallurgically lithiated SiO _x anode with high capacity and ambient air compatibility. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7408-7413.	3.3	145
88	Synthesis, Electrochemical Properties of 3D Structured Red P-Carbon As an Anode Material for Na-Ion Battery. ECS Meeting Abstracts, 2016, , .	0.0	0
89	in Situ Transmission Electron Microscopy Studies on Silicon Anodes in Lithium Ion Batteries. ECS Meeting Abstracts, 2016, , .	0.0	0
90	Prussian Blue Analogue Materials for Sodium-Ion Batteries. ECS Meeting Abstracts, 2016, , .	0.0	0

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91	Ionic Conductivity Enhancement of Polymer Electrolytes with Ceramic Nanowire Fillers. Nano Letters, 2015, 15, 2740-2745.	4.5	782
92	Transparent air filter for high-efficiency PM2.5 capture. Nature Communications, 2015, 6, 6205.	5.8	690
93	Vertical Heterostructure of Two-Dimensional MoS ₂ and WSe ₂ with Vertically Aligned Layers. Nano Letters, 2015, 15, 1031-1035.	4.5	194
94	Nonfilling Carbon Coating of Porous Silicon Micrometer-Sized Particles for High-Performance Lithium Battery Anodes. ACS Nano, 2015, 9, 2540-2547.	7.3	433
95	Kinetics and fracture resistance of lithiated silicon nanostructure pairs controlled by their mechanical interaction. Nature Communications, 2015, 6, 7533.	5.8	107
96	Artificial Solid Electrolyte Interphase-Protected Li _{<i>x</i>} Si Nanoparticles: An Efficient and Stable Prelithiation Reagent for Lithium-Ion Batteries. Journal of the American Chemical Society, 2015, 137, 8372-8375.	6.6	297
97	Bifunctional non-noble metal oxide nanoparticle electrocatalysts through lithium-induced conversion for overall water splitting. Nature Communications, 2015, 6, 7261.	5.8	1,006
98	Reversible Multivalent (Monovalent, Divalent, Trivalent) Ion Insertion in Open Framework Materials. Advanced Energy Materials, 2015, 5, 1401869.	10.2	185
99	A reaction-controlled diffusion model for the lithiation of silicon in lithium-ion batteries. Extreme Mechanics Letters, 2015, 4, 61-75.	2.0	22
100	A phosphorene–graphene hybrid material as a high-capacity anode for sodium-ion batteries. Nature Nanotechnology, 2015, 10, 980-985.	15.6	1,287
101	Electrochemical conversion and storage systems: general discussion. Faraday Discussions, 2014, 176, 153-184.	1.6	1
102	Effect of the alkali insertion ion on the electrochemical properties of nickel hexacyanoferrate electrodes. Faraday Discussions, 2014, 176, 69-81.	1.6	68
103	A pomegranate-inspired nanoscale design for large-volume-change lithium battery anodes. Nature Nanotechnology, 2014, 9, 187-192.	15.6	2,109
104	An electrochemical system for efficiently harvesting low-grade heat energy. Nature Communications, 2014, 5, 3942.	5.8	324
105	High Electrochemical Selectivity of Edge versus Terrace Sites in Two-Dimensional Layered MoS ₂ Materials. Nano Letters, 2014, 14, 7138-7144.	4.5	269
106	Manganese hexacyanomanganate open framework as a high-capacity positive electrode material for sodium-ion batteries. Nature Communications, 2014, 5, 5280.	5.8	446
107	Interconnected hollow carbon nanospheres for stable lithium metal anodes. Nature Nanotechnology, 2014, 9, 618-623.	15.6	1,535
108	Ultrathin Two-Dimensional Atomic Crystals as Stable Interfacial Layer for Improvement of Lithium Metal Anode. Nano Letters, 2014, 14, 6016-6022.	4.5	656

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109	Dry-air-stable lithium silicide–lithium oxide core–shell nanoparticles as high-capacity prelithiation reagents. Nature Communications, 2014, 5, 5088.	5.8	276
110	Formation of Stable Phosphorus–Carbon Bond for Enhanced Performance in Black Phosphorus Nanoparticle–Graphite Composite Battery Anodes. Nano Letters, 2014, 14, 4573-4580.	4.5	764
111	A high power density electrode with ultralow carbon via direct growth of particles on graphene sheets. Journal of Materials Chemistry A, 2013, 1, 6183.	5.2	20
112	Diffusion behavior of sodium ions in Na0.44MnO2 in aqueous and non-aqueous electrolytes. Journal of Power Sources, 2013, 244, 758-763.	4.0	158
113	Influence of Ammonia on Properties of Nanocrystalline Barium Titanate Particles Prepared by a Hydrothermal Method. Journal of the American Ceramic Society, 2012, 95, 2248-2253.	1.9	22
114	Synthesis and Size Control of Tetragonal Barium Titanate Nanopowders by Facile Solvothermal Method. Journal of the American Ceramic Society, 2012, 95, 2429-2434.	1.9	112
115	Facile synthesis and electrochemical performance of ordered LiNi0.5Mn1.5O4 nanorods as a high power positive electrode for rechargeable Li-ion batteries. Journal of Power Sources, 2011, 196, 10712-10716.	4.0	63
116	Electrochemical performance and ex situ analysis of ZnMn2O4 nanowires as anode materials for lithium rechargeable batteries. Nano Research, 2011, 4, 505-510.	5.8	170
117	Synthesis of One-dimensional Spinel LiMn ₂ O ₄ Nanostructures as a Positive Electrode in Lithium Ion Battery. Journal of the Korean Ceramic Society, 2011, 48, 379-383.	1.1	6
118	Ultrathin Spinel LiMn ₂ O ₄ Nanowires as High Power Cathode Materials for Li-Ion Batteries. Nano Letters, 2010, 10, 3852-3856.	4.5	452
119	Spinel LiMn ₂ O ₄ Nanorods as Lithium Ion Battery Cathodes. Nano Letters, 2008, 8, 3948-3952.	4.5	579
120	Nanocrevass-Rich Carbon Fibers for Stable Lithium and Sodium Metal Anodes. SSRN Electronic Journal, 0, , .	0.4	0