

# Jihyun Hong

## List of Publications by Year in descending order

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72  
papers

10,532  
citations

57758

44  
h-index

71685

76  
g-index

79  
all docs

79  
docs citations

79  
times ranked

11861  
citing authors

#	ARTICLE	IF	CITATIONS
1	Aqueous Rechargeable Li and Na Ion Batteries. <i>Chemical Reviews</i> , 2014, 114, 11788-11827.	47.7	1,183
2	Understanding the Degradation Mechanisms of $\text{LiNi}_{0.5}\text{Co}_{0.2}\text{Mn}_{0.3}\text{O}_2$ Cathode Material in Lithium Ion Batteries. <i>Advanced Energy Materials</i> , 2014, 4, 1300787.	19.5	893
3	Sodium Storage Behavior in Natural Graphite using Ether-based Electrolyte Systems. <i>Advanced Functional Materials</i> , 2015, 25, 534-541.	14.9	625
4	Noncovalent functionalization of graphene with end-functional polymers. <i>Journal of Materials Chemistry</i> , 2010, 20, 1907.	6.7	553
5	Coupling between oxygen redox and cation migration explains unusual electrochemistry in lithium-rich layered oxides. <i>Nature Communications</i> , 2017, 8, 2091.	12.8	469
6	Superior Rechargeability and Efficiency of Lithium-Oxygen Batteries: Hierarchical Air Electrode Architecture Combined with a Soluble Catalyst. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 3926-3931.	13.8	407
7	High-performance sodium-organic battery by realizing four-sodium storage in disodium rhodizonate. <i>Nature Energy</i> , 2017, 2, 861-868.	39.5	372
8	Sodium intercalation chemistry in graphite. <i>Energy and Environmental Science</i> , 2015, 8, 2963-2969.	30.8	369
9	Recent progress on flexible lithium rechargeable batteries. <i>Energy and Environmental Science</i> , 2014, 7, 538-551.	30.8	355
10	Rational design of redox mediators for advanced Li-O <sub>2</sub> batteries. <i>Nature Energy</i> , 2016, 1, .	39.5	321
11	Toward a Lithium-Air-Battery: The Effect of CO <sub>2</sub> on the Chemistry of a Lithium-Oxygen Cell. <i>Journal of the American Chemical Society</i> , 2013, 135, 9733-9742.	13.7	307
12	Metal-oxygen decoordination stabilizes anion redox in Li-rich oxides. <i>Nature Materials</i> , 2019, 18, 256-265.	27.5	280
13	Critical Role of Oxygen Evolved from Layered Li-Excess Metal Oxides in Lithium Rechargeable Batteries. <i>Chemistry of Materials</i> , 2012, 24, 2692-2697.	6.7	255
14	Biologically inspired pteridine redox centres for rechargeable batteries. <i>Nature Communications</i> , 2014, 5, 5335.	12.8	254
15	Structural evolution of layered $\text{Li}_{1.2}\text{Ni}_{0.2}\text{Mn}_{0.6}\text{O}_2$ upon electrochemical cycling in a Li rechargeable battery. <i>Journal of Materials Chemistry</i> , 2010, 20, 10179.	6.7	211
16	Organic Nanohybrids for Fast and Sustainable Energy Storage. <i>Advanced Materials</i> , 2014, 26, 2558-2565.	21.0	210
17	All-graphene-battery: bridging the gap between supercapacitors and lithium ion batteries. <i>Scientific Reports</i> , 2014, 4, 5278.	3.3	185
18	High Energy Organic Cathode for Sodium Rechargeable Batteries. <i>Chemistry of Materials</i> , 2015, 27, 7258-7264.	6.7	160

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19	Redox Cofactor from Biological Energy Transduction as Molecularly Tunable Energy Storage Compound. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 8322-8328.	13.8	147
20	Review Lithium-Excess Layered Cathodes for Lithium Rechargeable Batteries. <i>Journal of the Electrochemical Society</i> , 2015, 162, A2447-A2467.	2.9	141
21	Multi-electron redox phenazine for ready-to-charge organic batteries. <i>Green Chemistry</i> , 2017, 19, 2980-2985.	9.0	139
22	Redox-Active Organic Compounds for Future Sustainable Energy Storage System. <i>Advanced Energy Materials</i> , 2020, 10, 2001445.	19.5	139
23	Multicomponent Effects on the Crystal Structures and Electrochemical Properties of Spinel-Structured $M_3O_4$ (M = Fe, Mn, Co) Anodes in Lithium Rechargeable Batteries. <i>Chemistry of Materials</i> , 2012, 24, 720-725.	6.7	138
24	High-Performance Hybrid Supercapacitor Based on Graphene-Wrapped $Li_4Ti_5O_{12}$ and Activated Carbon. <i>ChemElectroChem</i> , 2014, 1, 125-130.	3.4	137
25	Molecularly Tailored Lithium-Arene Complex Enables Chemical Prelithiation of High-Capacity Lithium-Ion Battery Anodes. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 14473-14480.	13.8	127
26	Multi-redox Molecule for High-Energy Redox Flow Batteries. <i>Joule</i> , 2018, 2, 1771-1782.	24.0	123
27	Weakly Solvating Solution Enables Chemical Prelithiation of Graphite-SiO <sub>x</sub> Anodes for High-Energy Li-Ion Batteries. <i>Journal of the American Chemical Society</i> , 2021, 143, 9169-9176.	13.7	106
28	Fluid-enhanced surface diffusion controls intraparticle phase transformations. <i>Nature Materials</i> , 2018, 17, 915-922.	27.5	104
29	Fictitious phase separation in Li layered oxides driven by electro-autocatalysis. <i>Nature Materials</i> , 2021, 20, 991-999.	27.5	101
30	The potential for long-term operation of a lithium-oxygen battery using a non-carbonate-based electrolyte. <i>Chemical Communications</i> , 2012, 48, 8374.	4.1	100
31	Suppression of Voltage Decay through Manganese Deactivation and Nickel Redox Buffering in High-Energy Layered Lithium-Rich Electrodes. <i>Advanced Energy Materials</i> , 2018, 8, 1800606.	19.5	97
32	Lithium-free transition metal monoxides for positive electrodes in lithium-ion batteries. <i>Nature Energy</i> , 2017, 2, .	39.5	94
33	High-Voltage-Driven Surface Structuring and Electrochemical Stabilization of Ni-Rich Layered Cathode Materials for Li Rechargeable Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2000521.	19.5	90
34	Scalable Functionalized Graphene Nano-platelets as Tunable Cathodes for High-performance Lithium Rechargeable Batteries. <i>Scientific Reports</i> , 2013, 3, 1506.	3.3	84
35	Extremely High Yield Conversion from Low-Cost Sand to High-Capacity Si Electrodes for Li-Ion Batteries. <i>Advanced Energy Materials</i> , 2014, 4, 1400622.	19.5	75
36	$Bi_2O_3/BiO_2$ Nanoheterojunction for Highly Efficient Electrocatalytic $CO_2$ Reduction to Formate. <i>Nano Letters</i> , 2022, 22, 1656-1664.	9.1	72

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37	Novel transition-metal-free cathode for high energy and power sodium rechargeable batteries. <i>Nano Energy</i> , 2014, 4, 97-104.	16.0	71
38	Charge-transfer complexes for high-power organic rechargeable batteries. <i>Energy Storage Materials</i> , 2019, 20, 462-469.	18.0	70
39	Highly Stable Iron- and Manganese-Based Cathodes for Long-Lasting Sodium Rechargeable Batteries. <i>Chemistry of Materials</i> , 2016, 28, 7241-7249.	6.7	66
40	Stimulating Cu-Zn alloying for compact Zn metal growth towards high energy aqueous batteries and hybrid supercapacitors. <i>Energy and Environmental Science</i> , 2022, 15, 2889-2899.	30.8	63
41	Synthesis of graphene-wrapped CuO hybrid materials by CO <sub>2</sub> mineralization. <i>Green Chemistry</i> , 2012, 14, 2391.	9.0	53
42	Anti-Site Reordering in LiFePO <sub>4</sub> : Defect Annihilation on Charge Carrier Injection. <i>Chemistry of Materials</i> , 2014, 26, 5345-5351.	6.7	52
43	Utilizing Latent Multi-Redox Activity of p-Type Organic Cathode Materials toward High Energy Density Lithium-Organic Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2001635.	19.5	47
44	Graphene-Based Hybrid Electrode Material for High-Power Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2011, 158, A930.	2.9	44
45	Energy storage in composites of a redox couple host and a lithium ion host. <i>Nano Today</i> , 2012, 7, 168-173.	11.9	44
46	Thermal stability of Fe-Mn binary olivine cathodes for Li rechargeable batteries. <i>Journal of Materials Chemistry</i> , 2012, 22, 11964.	6.7	43
47	Ion-Exchange Mechanism of Layered Transition-Metal Oxides: Case Study of LiNi <sub>0.5</sub> Mn <sub>0.5</sub> O <sub>2</sub> . <i>Inorganic Chemistry</i> , 2014, 53, 8083-8087.	4.0	43
48	Electrochemical and ex-situ analysis on manganese oxide/graphene hybrid anode for lithium rechargeable batteries. <i>Journal of Materials Research</i> , 2011, 26, 2665-2671.	2.6	39
49	A new lithium diffusion model in layered oxides based on asymmetric but reversible transition metal migration. <i>Energy and Environmental Science</i> , 2020, 13, 1269-1278.	30.8	39
50	Polymorphism and phase transformations of Li <sub>2</sub> xFeSiO <sub>4</sub> (O <sub>1/2</sub> ) <sub>2</sub> from first principles. <i>Physical Review B</i> , 2011, 84, .	3.2	35
51	The role of substituents in determining the redox potential of organic electrode materials in Li and Na rechargeable batteries: electronic effects vs. substituent-Li/Na ionic interaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 11438-11443.	10.3	33
52	Real-time visualization of Zn metal plating/stripping in aqueous batteries with high areal capacities. <i>Journal of Power Sources</i> , 2020, 472, 228334.	7.8	27
53	Selective Anionic Redox and Suppressed Structural Disorder Enabling High-Energy and Long-Life Li-Rich Layered Oxide Cathode. <i>Advanced Energy Materials</i> , 2021, 11, 2102311.	19.5	25
54	Hydrogen storage behavior and microstructural feature of a TiFe-ZrCr <sub>2</sub> alloy. <i>Journal of Alloys and Compounds</i> , 2021, 853, 157099.	5.5	22

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55	Activation of Ti-Fe-Cr alloys containing identical AB <sub>2</sub> fractions. <i>Journal of Alloys and Compounds</i> , 2021, 864, 158876.	5.5	20
56	Molecularly Tailored Lithium-Arene Complex Enables Chemical Prelithiation of High-Capacity Lithium-Ion Battery Anodes. <i>Angewandte Chemie</i> , 2020, 132, 14581-14588.	2.0	20
57	Exceptionally increased reversible capacity of O <sub>3</sub> -type NaCrO <sub>2</sub> cathode by preventing irreversible phase transition. <i>Energy Storage Materials</i> , 2022, 46, 289-299.	18.0	17
58	Factors that Affect the Phase Behavior of Multi-Component Olivine (Li <sub>x</sub> Mn <sub>y</sub> Co <sub>1-x-y</sub> PO <sub>4</sub> ); Reaction. <i>Journal of the Electrochemical Society</i> , 2013, 160, A444-A448.	2.9	16
59	Na <sub>2</sub> Fe <sub>2</sub> F <sub>7</sub> : a fluoride-based cathode for high power and long life Na-ion batteries. <i>Energy and Environmental Science</i> , 2021, 14, 1469-1479.	30.8	16
60	Critical Role of Ti <sup>4+</sup> in Stabilizing High-Voltage Redox Reactions in Li-Rich Layered Material. <i>Small</i> , 2021, 17, e2100840.	10.0	13
61	Li-Rich Mn-Mg Layered Oxide as a Novel Ni-Co-Free Cathode. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	13
62	Exceptionally high-energy tunnel-type V <sub>1.5</sub> Cr <sub>0.5</sub> O <sub>4.5</sub> H nanocomposite as a novel cathode for Na-ion batteries. <i>Nano Energy</i> , 2020, 77, 105175.	16.0	10
63	Galvanostatic Intermittent Titration Technique Reinvented: Part II. Experiments. <i>Journal of the Electrochemical Society</i> , 2021, 168, 120503.	2.9	10
64	Invited paper: Preparation and electrochemical characterization of doped spinel LiMn <sub>1.88</sub> Ge <sub>0.1</sub> Li <sub>0.02</sub> O <sub>4</sub> cathode material. <i>Electronic Materials Letters</i> , 2011, 7, 105-108.	2.2	9
65	Effect of Cr Addition on Magnetic Properties and Corrosion Resistance of Optimized Co and Fe-Based Amorphous Alloys. <i>Metals</i> , 2021, 11, 304.	2.3	6
66	Thermal structural stability of a multi-component olivine electrode for lithium ion batteries. <i>CrystEngComm</i> , 2016, 18, 7463-7470.	2.6	5
67	Trackable galvanostatic history in phase separation based electrodes for lithium-ion batteries: a mosaic sub-grouping intercalation model. <i>Energy and Environmental Science</i> , 2017, 10, 2352-2364.	30.8	5
68	Energy Storage: Sodium Storage Behavior in Natural Graphite using Ether-based Electrolyte Systems (Adv. Funct. Mater. 4/2015). <i>Advanced Functional Materials</i> , 2015, 25, 652-652.	14.9	3
69	Understanding Chemomechanical Li-ion Cathode Degradation through Multi-Scale, Multi-Modal X-ray Spectromicroscopy. <i>Microscopy and Microanalysis</i> , 2018, 24, 426-427.	0.4	2
70	Titelbild: Redox Cofactor from Biological Energy Transduction as Molecularly Tunable Energy-Storage Compound (Angew. Chem. 32/2013). <i>Angewandte Chemie</i> , 2013, 125, 8329-8329.	2.0	1
71	Lithium-Ion Batteries: Organic Nanohybrids for Fast and Sustainable Energy Storage (Adv. Mater.)	21.0	0
72	Innentitelbild: Molecularly Tailored Lithium-Arene Complex Enables Chemical Prelithiation of High-Capacity Lithium-Ion Battery Anodes (Angew. Chem. 34/2020). <i>Angewandte Chemie</i> , 2020, 132, 14270-14270.	2.0	0