

# Jihyun Hong

## List of Publications by Citations

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72  
papers

7,951  
citations

40  
h-index

79  
g-index

79  
ext. papers

9,228  
ext. citations

17.1  
avg, IF

6.03  
L-index

#	Paper	IF	Citations
72	Aqueous rechargeable Li and Na ion batteries. <i>Chemical Reviews</i> , <b>2014</b> , 114, 11788-827	68.1	929
71	Understanding the Degradation Mechanisms of LiNi <sub>0.5</sub> Co <sub>0.2</sub> Mn <sub>0.3</sub> O <sub>2</sub> Cathode Material in Lithium Ion Batteries. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1300787	21.8	709
70	Sodium Storage Behavior in Natural Graphite using Ether-based Electrolyte Systems. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 534-541	15.6	502
69	Noncovalent functionalization of graphene with end-functional polymers. <i>Journal of Materials Chemistry</i> , <b>2010</b> , 20, 1907		491
68	Superior rechargeability and efficiency of lithium-oxygen batteries: hierarchical air electrode architecture combined with a soluble catalyst. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 3926-3931	16.4	360
67	Coupling between oxygen redox and cation migration explains unusual electrochemistry in lithium-rich layered oxides. <i>Nature Communications</i> , <b>2017</b> , 8, 2091	17.4	322
66	Recent progress on flexible lithium rechargeable batteries. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 538-551	35.4	314
65	Sodium intercalation chemistry in graphite. <i>Energy and Environmental Science</i> , <b>2015</b> , 8, 2963-2969	35.4	287
64	High-performance sodium-organic battery by realizing four-sodium storage in disodium rhodizonate. <i>Nature Energy</i> , <b>2017</b> , 2, 861-868	62.3	272
63	Rational design of redox mediators for advanced LiO <sub>2</sub> batteries. <i>Nature Energy</i> , <b>2016</b> , 1,	62.3	263
62	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> , <b>2013</b> , 135, 9733-42	16.4	262
61	Critical Role of Oxygen Evolved from Layered Li <sub>1-x</sub> Excess Metal Oxides in Lithium Rechargeable Batteries. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 2692-2697	9.6	213
60	Biologically inspired pteridine redox centres for rechargeable batteries. <i>Nature Communications</i> , <b>2014</b> , 5, 5335	17.4	188
59	Structural evolution of layered Li <sub>1.2</sub> Ni <sub>0.2</sub> Mn <sub>0.6</sub> O <sub>2</sub> upon electrochemical cycling in a Li rechargeable battery. <i>Journal of Materials Chemistry</i> , <b>2010</b> , 20, 10179		184
58	Metal-oxygen decoordination stabilizes anion redox in Li-rich oxides. <i>Nature Materials</i> , <b>2019</b> , 18, 256-265	27	178
57	Organic nanohybrids for fast and sustainable energy storage. <i>Advanced Materials</i> , <b>2014</b> , 26, 2558-65	24	174
56	All-graphene-battery: bridging the gap between supercapacitors and lithium ion batteries. <i>Scientific Reports</i> , <b>2014</b> , 4, 5278	4.9	153

55	High-Performance Hybrid Supercapacitor Based on Graphene-Wrapped Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> and Activated Carbon. <i>ChemElectroChem</i> , <b>2014</b> , 1, 125-130	4.3	127
54	High Energy Organic Cathode for Sodium Rechargeable Batteries. <i>Chemistry of Materials</i> , <b>2015</b> , 27, 7258-7264	9.6	122
53	Multicomponent Effects on the Crystal Structures and Electrochemical Properties of Spinel-Structured M <sub>3</sub> O <sub>4</sub> (M = Fe, Mn, Co) Anodes in Lithium Rechargeable Batteries. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 720-725	9.6	122
52	Review Lithium-Excess Layered Cathodes for Lithium Rechargeable Batteries. <i>Journal of the Electrochemical Society</i> , <b>2015</b> , 162, A2447-A2467	3.9	121
51	Redox cofactor from biological energy transduction as molecularly tunable energy-storage compound. <i>Angewandte Chemie - International Edition</i> , <b>2013</b> , 52, 8322-8	16.4	113
50	The potential for long-term operation of a lithium-oxygen battery using a non-carbonate-based electrolyte. <i>Chemical Communications</i> , <b>2012</b> , 48, 8374-6	5.8	96
49	Multi-electron redox phenazine for ready-to-charge organic batteries. <i>Green Chemistry</i> , <b>2017</b> , 19, 2980-2985	21.8	84
48	Multi-redox Molecule for High-Energy Redox Flow Batteries. <i>Joule</i> , <b>2018</b> , 2, 1771-1782	27.8	81
47	Superior Rechargeability and Efficiency of Lithium-Oxygen Batteries: Hierarchical Air Electrode Architecture Combined with a Soluble Catalyst. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 4007-4012	3.6	80
46	Scalable functionalized graphene nano-platelets as tunable cathodes for high-performance lithium rechargeable batteries. <i>Scientific Reports</i> , <b>2013</b> , 3, 1506	4.9	79
45	Redox-Active Organic Compounds for Future Sustainable Energy Storage System. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 2001445	21.8	73
44	Lithium-free transition metal monoxides for positive electrodes in lithium-ion batteries. <i>Nature Energy</i> , <b>2017</b> , 2,	62.3	72
43	Fluid-enhanced surface diffusion controls intraparticle phase transformations. <i>Nature Materials</i> , <b>2018</b> , 17, 915-922	27	71
42	Extremely High Yield Conversion from Low-Cost Sand to High-Capacity Si Electrodes for Li-Ion Batteries. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1400622	21.8	66
41	Novel transition-metal-free cathode for high energy and power sodium rechargeable batteries. <i>Nano Energy</i> , <b>2014</b> , 4, 97-104	17.1	57
40	Suppression of Voltage Decay through Manganese Deactivation and Nickel Redox Buffering in High-Energy Layered Lithium-Rich Electrodes. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1800606	21.8	54
39	Synthesis of graphene-wrapped CuO hybrid materials by CO <sub>2</sub> mineralization. <i>Green Chemistry</i> , <b>2012</b> , 14, 2391	10	47
38	High-Voltage-Driven Surface Structuring and Electrochemical Stabilization of Ni-Rich Layered Cathode Materials for Li Rechargeable Batteries. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 2000521	21.8	43

37	Graphene-Based Hybrid Electrode Material for High-Power Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , <b>2011</b> , 158, A930	3.9	43
36	Highly Stable Iron- and Manganese-Based Cathodes for Long-Lasting Sodium Rechargeable Batteries. <i>Chemistry of Materials</i> , <b>2016</b> , 28, 7241-7249	9.6	43
35	Charge-transfer complexes for high-power organic rechargeable batteries. <i>Energy Storage Materials</i> , <b>2019</b> , 20, 462-469	19.4	42
34	Thermal stability of FeMn binary olivine cathodes for Li rechargeable batteries. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 11964		42
33	Molecularly Tailored Lithium-Arene Complex Enables Chemical Prelithiation of High-Capacity Lithium-Ion Battery Anodes. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 14473-14480	16.4	40
32	Energy storage in composites of a redox couple host and a lithium ion host. <i>Nano Today</i> , <b>2012</b> , 7, 168-173	7.9	38
31	Anti-Site Reordering in LiFePO <sub>4</sub> : Defect Annihilation on Charge Carrier Injection. <i>Chemistry of Materials</i> , <b>2014</b> , 26, 5345-5351	9.6	36
30	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> , <b>2014</b> , 53, 8083-7	5.1	34
29	Polymorphism and phase transformations of Li <sub>2</sub> FeSiO <sub>4</sub> (0<math>x</math>2) from first principles. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	34
28	Electrochemical and ex-situ analysis on manganese oxide/graphene hybrid anode for lithium rechargeable batteries. <i>Journal of Materials Research</i> , <b>2011</b> , 26, 2665-2671	2.5	31
27	Fictitious phase separation in Li layered oxides driven by electro-autocatalysis. <i>Nature Materials</i> , <b>2021</b> , 20, 991-999	27	27
26	Weakly Solvating Solution Enables Chemical Prelithiation of Graphite-SiO Anodes for High-Energy Li-Ion Batteries. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 9169-9176	16.4	24
25	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> , <b>2019</b> , 7, 11438-11443	13	23
24	Utilizing Latent Multi-Redox Activity of p-Type Organic Cathode Materials toward High Energy Density Lithium-Organic Batteries. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 2001635	21.8	22
23	Redox Cofactor from Biological Energy Transduction as Molecularly Tunable Energy-Storage Compound. <i>Angewandte Chemie</i> , <b>2013</b> , 125, 8480-8486	3.6	22
22	A new lithium diffusion model in layered oxides based on asymmetric but reversible transition metal migration. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 1269-1278	35.4	20
21	Factors that Affect the Phase Behavior of Multi-Component Olivine (LiFexMnyCo <sub>1-x-y</sub> PO <sub>4</sub> ; 0 . <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A444-A448	3.9	15
20	Activation of TiBeCr alloys containing identical AB <sub>2</sub> fractions. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 864, 158876	5.7	12

19	Hydrogen storage behavior and microstructural feature of a TiFe <sub>2</sub> Cr <sub>2</sub> alloy. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 853, 157099	5.7	11
18	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> , <b>2011</b> , 7, 105-108	2.9	9
17	Real-time visualization of Zn metal plating/stripping in aqueous batteries with high areal capacities. <i>Journal of Power Sources</i> , <b>2020</b> , 472, 228334	8.9	9
16	Molecularly Tailored Lithium-Arene Complex Enables Chemical Prelithiation of High-Capacity Lithium-Ion Battery Anodes. <i>Angewandte Chemie</i> , <b>2020</b> , 132, 14581-14588	3.6	9
15	Selective Anionic Redox and Suppressed Structural Disorder Enabling High-Energy and Long-Life Li-Rich Layered-Oxide Cathode. <i>Advanced Energy Materials</i> , <b>2021</b> , 2102311	21.8	7
14	BiO/BiO Nanoheterojunction for Highly Efficient Electrocatalytic CO Reduction to Formate.. <i>Nano Letters</i> , <b>2022</b> ,	11.5	6
13	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> , <b>2020</b> , 77, 105175	17.1	6
12	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> , <b>2021</b> , 14, 1469-1479	35.4	6
11	Thermal structural stability of a multi-component olivine electrode for lithium ion batteries. <i>CrystEngComm</i> , <b>2016</b> , 18, 7463-7470	3.3	5
10	Trackable galvanostatic history in phase separation based electrodes for lithium-ion batteries: a mosaic sub-grouping intercalation model. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 2352-2364	35.4	5
9	Energy Storage: Sodium Storage Behavior in Natural Graphite using Ether-based Electrolyte Systems (Adv. Funct. Mater. 4/2015). <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 652-652	15.6	3
8	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> , <b>2022</b> , 46, 289-299	19.4	2
7	Critical Role of Ti in Stabilizing High-Voltage Redox Reactions in Li-Rich Layered Material. <i>Small</i> , <b>2021</b> , 17, e2100840	11	2
6	Effect of Cr Addition on Magnetic Properties and Corrosion Resistance of Optimized Co and Fe-Based Amorphous Alloys. <i>Metals</i> , <b>2021</b> , 11, 304	2.3	2
5	Galvanostatic Intermittent Titration Technique Reinvented: Part II. Experiments. <i>Journal of the Electrochemical Society</i> , <b>2021</b> , 168, 120503	3.9	2
4	Understanding Chemomechanical Li-ion Cathode Degradation through Multi-Scale, Multi-Modal X-ray Spectromicroscopy. <i>Microscopy and Microanalysis</i> , <b>2018</b> , 24, 426-427	0.5	1
3	Titelbild: Redox Cofactor from Biological Energy Transduction as Molecularly Tunable Energy-Storage Compound (Angew. Chem. 32/2013). <i>Angewandte Chemie</i> , <b>2013</b> , 125, 8329-8329	3.6	1
2	Lithium-Ion Batteries: Organic Nanohybrids for Fast and Sustainable Energy Storage (Adv. Mater. 16/2014). <i>Advanced Materials</i> , <b>2014</b> , 26, 2608-2608	24	

- 1      Innentitelbild: Molecularly Tailored Lithium-Arene Complex Enables Chemical Prelithiation of High-Capacity Lithium-Ion Battery Anodes (Angew. Chem. 34/2020). *Angewandte Chemie*, **2020**, 132, 14270-14270      3.6