Jihyun Hong

List of Publications by Year
in descending order

72 papers	10,532 citations	57631 44 h-index	71532 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. Chemical Reviews, 2014, 114, 11788-11827.	23.0	1,183
2	Understanding the Degradation Mechanisms of LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂ Cathode Material in Lithium Ion Batteries. Advanced Energy Materials, 2014, 4, 1300787.	10.2	893
3	Sodium Storage Behavior in Natural Graphite using Etherâ€based Electrolyte Systems. Advanced Functional Materials, 2015, 25, 534-541.	7.8	625
4	Noncovalent functionalization of graphene with end-functional polymers. Journal of Materials Chemistry, 2010, 20, 1907.	6.7	553
5	Coupling between oxygen redox and cation migration explains unusual electrochemistry in lithium-rich layered oxides. Nature Communications, 2017, 8, 2091.	5.8	469
6	Superior Rechargeability and Efficiency of Lithiumâ€“Oxygen Batteries: Hierarchical Air Electrode Architecture Combined with a Soluble Catalyst. Angewandte Chemie - International Edition, 2014, 53, 3926-3931.	7.2	407
7	High-performance sodiumâ€“organic battery by realizing four-sodium storage in disodium rhodizonate. Nature Energy, 2017, 2, 861-868.	19.8	372
8	Sodium intercalation chemistry in graphite. Energy and Environmental Science, 2015, 8, 2963-2969.	15.6	369
9	Recent progress on flexible lithium rechargeable batteries. Energy and Environmental Science, 2014, 7, 538-551.	15.6	355
10	Rational design of redox mediators for advanced Liâ€“O2 batteries. Nature Energy, 2016, 1, .	19.8	321
11	Toward a Lithiumâ€“â€œAirâ€•Battery: The Effect of CO₂ on the Chemistry of a Lithiumâ€“Oxygen Cell. Journal of the American Chemical Society, 2013, 135, 9733-9742.	6.6	307
12	Metalâ€“oxygen decoordination stabilizes anion redox in Li-rich oxides. Nature Materials, 2019, 18, 256-265.	13.3	280
13	Critical Role of Oxygen Evolved from Layered Liâ€“Excess Metal Oxides in Lithium Rechargeable Batteries. Chemistry of Materials, 2012, 24, 2692-2697.	3.2	255
14	Biologically inspired pteridine redox centres for rechargeable batteries. Nature Communications, 2014, 5, 5335.	5.8	254
15	Structural evolution of layered Li1.2Ni0.2Mn0.6O2 upon electrochemical cycling in a Li rechargeable battery. Journal of Materials Chemistry, 2010, 20, 10179.	6.7	211
16	Organic Nanohybrids for Fast and Sustainable Energy Storage. Advanced Materials, 2014, 26, 2558-2565.	11.1	210
17	All-graphene-battery: bridging the gap between supercapacitors and lithium ion batteries. Scientific Reports, 2014, 4, 5278.	1.6	185
18	High Energy Organic Cathode for Sodium Rechargeable Batteries. Chemistry of Materials, 2015, 27, 7258-7264.	3.2	160

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19	Redox Cofactor from Biological Energy Transduction as Molecularly Tunable Energyâ€Storage Compound. Angewandte Chemie - International Edition, 2013, 52, 8322-8328.	7.2	147
20	Reviewâ€"Lithium-Excess Layered Cathodes for Lithium Rechargeable Batteries. Journal of the Electrochemical Society, 2015, 162, A2447-A2467.	1.3	141
21	Multi-electron redox phenazine for ready-to-charge organic batteries. Green Chemistry, 2017, 19, 2980-2985.	4.6	139
22	Redoxâ€Active Organic Compounds for Future Sustainable Energy Storage System. Advanced Energy Materials, 2020, 10, 2001445.	10.2	139
23	Multicomponent Effects on the Crystal Structures and Electrochemical Properties of Spinel-Structured M₃O₄ (M = Fe, Mn, Co) Anodes in Lithium Rechargeable Batteries. Chemistry of Materials, 2012, 24, 720-725.	3.2	138
24	Highâ€Performance Hybrid Supercapacitor Based on Grapheneâ€Wrapped Li₄Ti₅O₁₂ and Activated Carbon. ChemElectroChem, 2014, 1, 125-130.	1.7	137
25	Molecularly Tailored Lithiumâ€"Arene Complex Enables Chemical Prelithiation of Highâ€Capacity Lithiumâ€Ion Battery Anodes. Angewandte Chemie - International Edition, 2020, 59, 14473-14480.	7.2	127
26	Multi-redox Molecule for High-Energy Redox Flow Batteries. Joule, 2018, 2, 1771-1782.	11.7	123
27	Weakly Solvating Solution Enables Chemical Prelithiation of Graphiteâ€"SiO_{<i>x</i>} Anodes for High-Energy Li-Ion Batteries. Journal of the American Chemical Society, 2021, 143, 9169-9176.	6.6	106
28	Fluid-enhanced surface diffusion controls intraparticle phase transformations. Nature Materials, 2018, 17, 915-922.	13.3	104
29	Fictitious phase separation in Li layered oxides driven by electro-autocatalysis. Nature Materials, 2021, 20, 991-999.	13.3	101
30	The potential for long-term operation of a lithiumâ€"oxygen battery using a non-carbonate-based electrolyte. Chemical Communications, 2012, 48, 8374.	2.2	100
31	Suppression of Voltage Decay through Manganese Deactivation and Nickel Redox Buffering in Highâ€Energy Layered Lithiumâ€Rich Electrodes. Advanced Energy Materials, 2018, 8, 1800606.	10.2	97
32	Lithium-free transition metal monoxides for positive electrodes in lithium-ion batteries. Nature Energy, 2017, 2, .	19.8	94
33	Highâ€Voltageâ€Driven Surface Structuring and Electrochemical Stabilization of Niâ€Rich Layered Cathode Materials for Li Rechargeable Batteries. Advanced Energy Materials, 2020, 10, 2000521.	10.2	90
34	Scalable Functionalized Graphene Nano-platelets as Tunable Cathodes for High-performance Lithium Rechargeable Batteries. Scientific Reports, 2013, 3, 1506.	1.6	84
35	Extremely High Yield Conversion from Lowâ€Cost Sand to Highâ€Capacity Si Electrodes for Liâ€Ion Batteries. Advanced Energy Materials, 2014, 4, 1400622.	10.2	75
36	Bi₂O₃/BiO₂ Nanoheterojunction for Highly Efficient Electrocatalytic CO₂ Reduction to Formate. Nano Letters, 2022, 22, 1656-1664.	4.5	72

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37	Novel transition-metal-free cathode for high energy and power sodium rechargeable batteries. Nano Energy, 2014, 4, 97-104.	8.2	71
38	Charge-transfer complexes for high-power organic rechargeable batteries. Energy Storage Materials, 2019, 20, 462-469.	9.5	70
39	Highly Stable Iron- and Manganese-Based Cathodes for Long-Lasting Sodium Rechargeable Batteries. Chemistry of Materials, 2016, 28, 7241-7249.	3.2	66
40	Stimulating Cuâ€"Zn alloying for compact Zn metal growth towards high energy aqueous batteries and hybrid supercapacitors. Energy and Environmental Science, 2022, 15, 2889-2899.	15.6	63
41	Synthesis of graphene-wrapped CuO hybrid materials by CO2 mineralization. Green Chemistry, 2012, 14, 2391.	4.6	53
42	Anti-Site Reordering in LiFePO₄: Defect Annihilation on Charge Carrier Injection. Chemistry of Materials, 2014, 26, 5345-5351.	3.2	52
43	Utilizing Latent Multiâ€Redox Activity of pâ€Type Organic Cathode Materials toward High Energy Density Lithiumâ€Organic Batteries. Advanced Energy Materials, 2020, 10, 2001635.	10.2	47
44	Graphene-Based Hybrid Electrode Material for High-Power Lithium-Ion Batteries. Journal of the Electrochemical Society, 2011, 158, A930.	1.3	44
45	Energy storage in composites of a redox couple host and a lithium ion host. Nano Today, 2012, 7, 168-173.	6.2	44
46	Thermal stability of Feâ€"Mn binary olivine cathodes for Li rechargeable batteries. Journal of Materials Chemistry, 2012, 22, 11964.	6.7	43
47	Ion-Exchange Mechanism of Layered Transition-Metal Oxides: Case Study of LiNi_{0.5}Mn_{0.5}O₂. Inorganic Chemistry, 2014, 53, 8083-8087.	1.9	43
48	Electrochemical and ex-situ analysis on manganese oxide/graphene hybrid anode for lithium rechargeable batteries. Journal of Materials Research, 2011, 26, 2665-2671.	1.2	39
49	A new lithium diffusion model in layered oxides based on asymmetric but reversible transition metal migration. Energy and Environmental Science, 2020, 13, 1269-1278.	15.6	39
50	Polymorphism and phase transformations of Li2âˆ’xFeSiO4(0â©½xâ©½2) from first principles. Physical Review B, 2011, 84, .	1.1	35
51	The role of substituents in determining the redox potential of organic electrode materials in Li and Na rechargeable batteries: electronic effects <i>vs.</i> substituent-Li/Na ionic interaction. Journal of Materials Chemistry A, 2019, 7, 11438-11443.	5.2	33
52	Real-time visualization of Zn metal plating/stripping in aqueous batteries with high areal capacities. Journal of Power Sources, 2020, 472, 228334.	4.0	27
53	Selective Anionic Redox and Suppressed Structural Disordering Enabling Highâ€Energy and Longâ€Life Liâ€Rich Layeredâ€Oxide Cathode. Advanced Energy Materials, 2021, 11, 2102311.	10.2	25
54	Hydrogen storage behavior and microstructural feature of a TiFeâ€"ZrCr2 alloy. Journal of Alloys and Compounds, 2021, 853, 157099.	2.8	22

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55	Activation of Tiâ€“Feâ€“Cr alloys containing identical AB2 fractions. Journal of Alloys and Compounds, 2021, 864, 158876.	2.8	20
56	Molecularly Tailored Lithiumâ€“Arene Complex Enables Chemical Prelithiation of Highâ€Capacity Lithiumâ€Ion Battery Anodes. Angewandte Chemie, 2020, 132, 14581-14588.	1.6	20
57	Exceptionally increased reversible capacity of O3-type NaCrO2 cathode by preventing irreversible phase transition. Energy Storage Materials, 2022, 46, 289-299.	9.5	17
58	Factors that Affect the Phase Behavior of Multi-Component Olivine (LiFe<i>_x</i>Mn<i>_y</i>Co_{1-<i>x</i>-<i>y</i>}PO₄; 0) Tj ETQq0 0 0 rgBT /Overlock Reaction. Journal of the Electrochemical Society, 2013, 160, A444-A448.	1.3	16
59	Na₂Fe₂F₇: a fluoride-based cathode for high power and long life Na-ion batteries. Energy and Environmental Science, 2021, 14, 1469-1479.	15.6	16
60	Critical Role of Ti⁴⁺ in Stabilizing Highâ€Voltage Redox Reactions in Liâ€Rich Layered Material. Small, 2021, 17, e2100840.	5.2	13
61	Liâ€Rich Mnâ€“Mg Layered Oxide as a Novel Niâ€/Coâ€Free Cathode. Advanced Functional Materials, 2022, 32, .	7.8	13
62	Exceptionally high-energy tunnel-type V1.5Cr0.5O4.5H nanocomposite as a novel cathode for Na-ion batteries. Nano Energy, 2020, 77, 105175.	8.2	10
63	Galvanostatic Intermittent Titration Technique Reinvented: Part II. Experiments. Journal of the Electrochemical Society, 2021, 168, 120503.	1.3	10
64	Invited paper: Preparation and electrochemical characterization of doped spinel LiMn1.88Ge0.1Li0.02O4 cathode material. Electronic Materials Letters, 2011, 7, 105-108.	1.0	9
65	Effect of Cr Addition on Magnetic Properties and Corrosion Resistance of Optimized Co and Fe-Based Amorphous Alloys. Metals, 2021, 11, 304.	1.0	6
66	Thermal structural stability of a multi-component olivine electrode for lithium ion batteries. CrystEngComm, 2016, 18, 7463-7470.	1.3	5
67	Trackable galvanostatic history in phase separation based electrodes for lithium-ion batteries: a mosaic sub-grouping intercalation model. Energy and Environmental Science, 2017, 10, 2352-2364.	15.6	5
68	Energy Storage: Sodium Storage Behavior in Natural Graphite using Ether-based Electrolyte Systems (Adv. Funct. Mater. 4/2015). Advanced Functional Materials, 2015, 25, 652-652.	7.8	3
69	Understanding Chemomechanical Li-ion Cathode Degradation through Multi-Scale, Multi-Modal X-ray Spectromicroscopy. Microscopy and Microanalysis, 2018, 24, 426-427.	0.2	2
70	Titelbild: Redox Cofactor from Biological Energy Transduction as Molecularly Tunable Energy-Storage Compound (Angew. Chem. 32/2013). Angewandte Chemie, 2013, 125, 8329-8329.	1.6	1
71	Lithiumâ€Ion Batteries: Organic Nanohybrids for Fast and Sustainable Energy Storage (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overlock	11.1	0
72	Innentitelbild: Molecularly Tailored Lithiumâ€“Arene Complex Enables Chemical Prelithiation of Highâ€Capacity Lithiumâ€Ion Battery Anodes (Angew. Chem. 34/2020). Angewandte Chemie, 2020, 132, 14270-14270.	1.6	0