

Won-Hee Ryu

List of Publications by Year in descending order

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papers

4,051
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101496

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docs citations

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times ranked

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#	ARTICLE	IF	CITATIONS
1	Bifunctional Composite Catalysts Using Co ₃ O ₄ Nanofibers Immobilized on Nonoxidized Graphene Nanoflakes for High-Capacity and Long-Cycle Li ⁺ O ₂ Batteries. Nano Letters, 2013, 13, 4190-4197.	4.5	329
2	Selective Diagnosis of Diabetes Using Pt-Functionalized WO ₃ Hemitube Networks As a Sensing Layer of Acetone in Exhaled Breath. Analytical Chemistry, 2013, 85, 1792-1796.	3.2	276
3	Solution-processed titanium carbide MXene films examined as highly transparent conductors. Nanoscale, 2016, 8, 16371-16378.	2.8	227
4	Development of Omniphobic Desalination Membranes Using a Charged Electrospun Nanofiber Scaffold. ACS Applied Materials & Interfaces, 2016, 8, 11154-11161.	4.0	218
5	Structural enhancement of Na ₃ V ₂ (PO ₄) ₃ /C composite cathode materials by pillar ion doping for high power and long cycle life sodium-ion batteries. Journal of Materials Chemistry A, 2014, 2, 19623-19632.	5.2	156
6	Vine-like MoS ₂ anode materials self-assembled from 1-D nanofibers for high capacity sodium rechargeable batteries. Nanoscale, 2014, 6, 10975-10981.	2.8	144
7	Lithium ⁺ Air Batteries: Air-Breathing Challenges and Perspective. ACS Nano, 2020, 14, 14549-14578.	7.3	126
8	Raman Spectroscopy in Lithium ⁺ Oxygen Battery Systems. ChemElectroChem, 2015, 2, 1446-1457.	1.7	123
9	Heme biomolecule as redox mediator and oxygen shuttle for efficient charging of lithium-oxygen batteries. Nature Communications, 2016, 7, 12925.	5.8	122
10	Heterogeneous WS ₂ /WO ₃ Thorn-Bush Nanofiber Electrodes for Sodium-Ion Batteries. ACS Nano, 2016, 10, 3257-3266.	7.3	121
11	Al ₂ O ₃ coating on LiMn ₂ O ₄ by electrostatic attraction forces and its effects on the high temperature cyclic performance. Electrochimica Acta, 2012, 71, 17-21.	2.6	108
12	3-D dumbbell-like LiNi _{1/3} Mn _{1/3} Co _{1/3} O ₂ cathode materials assembled with nano-building blocks for lithium-ion batteries. Journal of Power Sources, 2014, 257, 186-191.	4.0	102
13	Electrochemical performance of a smooth and highly ordered TiO ₂ nanotube electrode for Li-ion batteries. Electrochimica Acta, 2012, 61, 19-24.	2.6	97
14	A Mesoporous Catalytic Membrane Architecture for Lithium ⁺ Oxygen Battery Systems. Nano Letters, 2015, 15, 434-441.	4.5	78
15	Black titanium oxide nanoarray electrodes for high rate Li-ion microbatteries. Journal of Materials Chemistry A, 2015, 3, 11183-11188.	5.2	77
16	Guided Evolution of Bulk Metallic Glass Nanostructures: A Platform for Designing 3D Electrocatalytic Surfaces. Advanced Materials, 2016, 28, 1940-1949.	11.1	71
17	Synergistic effects of various morphologies and Al doping of spinel LiMn ₂ O ₄ nanostructures on the electrochemical performance of lithium-rechargeable batteries. Journal of Materials Chemistry, 2011, 21, 15337.	6.7	70
18	Bi-functional co-sensitization of graphene oxide sheets and Ir nanoparticles on p-type Co ₃ O ₄ nanofibers for selective acetone detection. Journal of Materials Chemistry B, 2014, 2, 7160-7167.	2.9	70

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19	Operando Observation of the Gold–Electrolyte Interface in LiO_2 Batteries. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 19017-19025.	4.0	70
20	Fabrication of Graphene Embedded LiFePO_4 Using a Catalyst Assisted Self Assembly Method as a Cathode Material for High Power Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 4731-4736.	4.0	70
21	Cobalt(ii) monoxide nanoparticles embedded in porous carbon nanofibers as a highly reversible conversion reaction anode for Li-ion batteries. <i>Journal of Materials Chemistry A</i> , 2013, 1, 3239.	5.2	68
22	Effects of Cl doping on the structural and electrochemical properties of high voltage $\text{LiMn}_{1.5}\text{Ni}_{0.5}\text{O}_4$ cathode materials for Li-ion batteries. <i>Journal of Alloys and Compounds</i> , 2014, 592, 48-52.	2.8	62
23	Dimensional Effects of MoS_2 Nanoplates Embedded in Carbon Nanofibers for Bifunctional Li and Na Insertion and Conversion Reactions. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 26758-26768.	4.0	62
24	Morphological Evolution of Carbon Nanofibers Encapsulating SnCo Alloys and Its Effect on Growth of the Solid Electrolyte Interphase Layer. <i>ACS Nano</i> , 2013, 7, 7330-7341.	7.3	58
25	Glassy Metal Alloy Nanofiber Anodes Employing Graphene Wrapping Layer: Toward Ultralong-Cycle-Life Lithium-Ion Batteries. <i>ACS Nano</i> , 2015, 9, 6717-6727.	7.3	55
26	Ultrathin Nanotube/Nanowire Electrodes by Spin–Spray Layer-by-Layer Assembly: A Concept for Transparent Energy Storage. <i>ACS Nano</i> , 2015, 9, 10005-10017.	7.3	55
27	$\text{LaNi}_x\text{Co}_{1-x}\text{O}_{3-\delta}$ Perovskites as Catalyst Material for Non-Aqueous Lithium-Oxygen Batteries. <i>Journal of the Electrochemical Society</i> , 2014, 161, A880-A889.	1.3	53
28	Multi-layer electrode with nano- $\text{Li}_4\text{Ti}_5\text{O}_{12}$ aggregates sandwiched between carbon nanotube and graphene networks for high power Li-ion batteries. <i>Scientific Reports</i> , 2014, 4, 7334.	1.6	49
29	Graphene wrapping as a protective clamping layer anchored to carbon nanofibers encapsulating Si nanoparticles for a Li-ion battery anode. <i>Nanoscale</i> , 2014, 6, 12718-12726.	2.8	47
30	Toward Microcapsule-Embedded Self-Healing Membranes. <i>Environmental Science and Technology Letters</i> , 2016, 3, 216-221.	3.9	47
31	Conceptual Design of Superconducting Linear Synchronous Motor for 600-km/h Wheel-Type Railway. <i>IEEE Transactions on Applied Superconductivity</i> , 2014, 24, 1-4.	1.1	45
32	Pt and Pd catalyzed oxidation of Li_2O_2 and DMSO during LiO_2 battery charging. <i>Chemical Communications</i> , 2016, 52, 6605-6608.	2.2	45
33	Simple synthesis of highly catalytic carbon-free $\text{MnCo}_2\text{O}_4@$ Ni as an oxygen electrode for rechargeable LiO_2 batteries with long-term stability. <i>Scientific Reports</i> , 2015, 5, 13266.	1.6	44
34	Effects of Li and Cl Codoping on the Electrochemical Performance and Structural Stability of LiMn_2O_4 Cathode Materials for Hybrid Electric Vehicle Applications. <i>Journal of Physical Chemistry C</i> , 2013, 117, 4913-4919.	1.5	42
35	Tailored Combination of Low Dimensional Catalysts for Efficient Oxygen Reduction and Evolution in LiO_2 Batteries. <i>ChemSusChem</i> , 2016, 9, 2080-2088.	3.6	39
36	Alloy design employing high Cr concentrations for Mo-free stainless steels with enhanced corrosion resistance. <i>Corrosion Science</i> , 2018, 140, 61-72.	3.0	38

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37	Polyoxometalate as a Nature-Inspired Bifunctional Catalyst for Lithium-Oxygen Batteries. ACS Catalysis, 2018, 8, 7213-7221.	5.5	35
38	Crystalline IrO ₂ -decorated TiO ₂ nanofiber scaffolds for robust and sustainable solar water oxidation. Journal of Materials Chemistry A, 2014, 2, 5610.	5.2	34
39	Bi-functional RuO ₂ -Co ₃ O ₄ core-shell nanofibers as a multi-component one-dimensional water oxidation catalyst. Chemical Communications, 2013, 49, 9725.	2.2	33
40	Highly Conductive Off-Stoichiometric Zirconium Oxide Nanofibers with Controllable Crystalline Structures and Bandgaps and Improved Electrochemical Activities. ACS Applied Energy Materials, 2019, 2, 3513-3522.	2.5	28
41	Electrochemical properties of nanosized Li-rich layered oxide as positive electrode materials for Li-ion batteries. RSC Advances, 2013, 3, 8527.	1.7	27
42	Facile and fast Na-ion intercalation employing amorphous black TiO ₂ -x/C composite nanofiber anodes. Electrochimica Acta, 2018, 263, 417-425.	2.6	27
43	Rational design and in-situ formation of nickel-cobalt nitride multi-core/hollow N-doped carbon shell anode for Li-ion batteries. Chemical Engineering Journal, 2021, 420, 129630.	6.6	27
44	A New Design Strategy for Observing Lithium Oxide Growth-Evolution Interactions Using Geometric Catalyst Positioning. Nano Letters, 2016, 16, 4799-4806.	4.5	25
45	Selective Anionic Redox and Suppressed Structural Disorder Enabling High-Energy and Long-Life Li-Rich Layered Oxide Cathode. Advanced Energy Materials, 2021, 11, 2102311.	10.2	25
46	Controllable Insertion Mechanism of Expanded Graphite Anodes Employing Conversion Reaction Pillars for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 24070-24080.	4.0	24
47	Simple, robust metal fluoride coating on layered Li _{1.23} Ni _{0.13} Co _{0.14} Mn _{0.56} O ₂ and its effects on enhanced electrochemical properties. Electrochimica Acta, 2013, 100, 10-17.	2.6	23
48	Atomically miniaturized bi-phase IrO _x /Ir catalysts loaded on N-doped carbon nanotubes for high-performance Li-CO ₂ batteries. Journal of Materials Chemistry A, 2022, 10, 19710-19721.	5.2	21
49	Black Tungsten Oxide Nanofiber as a Robust Support for Metal Catalysts: High Catalyst Loading for Electrochemical Oxygen Reduction. Small, 2021, 17, e2103755.	5.2	20
50	Capillary-Driven Formation of Iron Nanoparticles Embedded in Nanotubes for Catalyzed Lithium-Carbon Dioxide Reaction. , 2021, 3, 815-825.		19
51	Tailoring Crystal Structure and Morphology of LiFePO ₄ /C Cathode Materials Synthesized by Heterogeneous Growth on Nanostructured LiFePO ₄ Seed Crystals. ACS Applied Materials & Interfaces, 2013, 5, 1342-1347.	4.0	18
52	Iron/carbon composite microfiber catalyst derived from hemoglobin blood protein for lithium-oxygen batteries. Applied Surface Science, 2019, 466, 562-567.	3.1	17
53	Facile route to control the surface morphologies of 3D hierarchical MnO ₂ and its Al self-doping phenomenon. Journal of Nanoparticle Research, 2011, 13, 4777-4784.	0.8	16
54	Super-Expansion of Assembled Reduced Graphene Oxide Interlayers by Segregation of Al Nanoparticle Pillars for High-Capacity Na-Ion Battery Anodes. ACS Applied Materials & Interfaces, 2020, 12, 23781-23788.	4.0	16

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55	Blood Protein as a Sustainable Bifunctional Catalyst for Reversible Li-CO ₂ Batteries. ACS Sustainable Chemistry and Engineering, 2019, 7, 16151-16159.	3.2	15
56	Low-temperature synthesis of tetragonal phase of hafnium oxide using polymer-blended nanofiber precursor. Applied Surface Science, 2020, 533, 147496.	3.1	15
57	Auto-Oxygenated Porphyrin-Derived Redox Mediators for High-Performance Lithium Air-Breathing Batteries. Advanced Energy Materials, 2022, 12, 2103527.	10.2	15
58	Group VI metallic pillars for assembly of expanded graphite anodes for high-capacity Na-ion batteries. Carbon, 2021, 175, 585-593.	5.4	14
59	Morphological control of highly aligned manganese dioxide nanostructure formed by electrodeposition. Materials Letters, 2012, 79, 184-187.	1.3	13
60	Zirconium disulfides as an electrode material alternative for Li-ion batteries. Applied Surface Science, 2021, 547, 149029.	3.1	12
61	Highly conductive ZrO ₂ spheres as bifunctional framework stabilizers and gas evolution relievers in nickel-rich layered cathodes for lithium-ion batteries. Composites Part B: Engineering, 2022, 238, 109911.	5.9	11
62	Synthesis of Highly Ordered TiO ₂ Nanotube in Malonic Acid Solution by Anodization. Journal of Nanoscience and Nanotechnology, 2008, 8, 5467-5470.	0.9	9
63	Multi-stacked electrodes employing aluminum coated tissue papers and non-oxidized graphene nanoflakes for high performance lithium-sulfur batteries. RSC Advances, 2016, 6, 60537-60545.	1.7	8
64	Self-Oxygenated Blood Protein-Embedded Nanotube Catalysts for Longer Cyclable Lithium Oxygen-Breathing Batteries. ACS Sustainable Chemistry and Engineering, 2022, 10, 4198-4205.	3.2	8
65	Rhenium oxide/sulfide binary phase flakes decorated on nanofiber support for enhanced activation of electrochemical conversion reactions. Chemical Engineering Journal, 2022, 446, 136951.	6.6	8
66	Effects of Highly Ordered TiO ₂ Nanotube Substrates on the Nucleation of Cu Electrodeposits. Journal of Nanoscience and Nanotechnology, 2010, 10, 3671-3675.	0.9	5
67	Fabrication and Characterization of Nanoscale Ferroelectric Honeycombs. Journal of the American Ceramic Society, 2013, 96, 1355-1358.	1.9	5
68	Electrospun Functional Nanofibers and Their Applications in Chemical Sensors and Li-Ion Batteries. , 2014, , 793-838.		4
69	Titanium Carbide MXene Flakes as Novel 2D Metallic Solution-Processed Films. ECS Meeting Abstracts, 2016, MA2016-02, 2311-2311.	0.0	3
70	Titanium Carbide MXene Flakes as Novel 2D Metallic Solution-Processed Films. ECS Transactions, 2016, 75, 37-41.	0.3	2
71	Tailored Combination of Low Dimensional Catalysts for Efficient Oxygen Reduction and Evolution in Li-O ₂ Batteries. ChemSusChem, 2016, 9, 2007-2007.	3.6	2
72	Enhanced durability of gold-coated current collectors for high power electrochemical devices. RSC Advances, 2015, 5, 43956-43960.	1.7	1

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73	Electrocatalysts: Guided Evolution of Bulk Metallic Glass Nanostructures: A Platform for Designing 3D Electrocatalytic Surfaces (Adv. Mater. 10/2016). Advanced Materials, 2016, 28, 1902-1902.	11.1	0
74	Metal Sulfide Nanofiber Anodes for High Capacity Sodium Rechargeable Batteries. ECS Meeting Abstracts, 2016, , .	0.0	0
75	A New Architecture Design for Observing Lithium Oxide Growth-Evolution Employing Geometric Catalyst Positioning. ECS Meeting Abstracts, 2016, , .	0.0	0
76	A Nature-Inspired Molecular Catalyst for Sustainable and Efficient Lithium-Oxygen Batteries. ECS Meeting Abstracts, 2018, , .	0.0	0
77	Super-Expanded Graphite Anodes Achieved By Employing Metallic Pillars for High Capacity Sodium-Ion Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 296-296.	0.0	0
78	Iron Nanoparticles Embedded in Carbon Nanotubes for Reversible Li-CO ₂ Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 293-293.	0.0	0
79	Highly Durable and Conductive Tungsten Oxide Nanofiber Supports for Improved Oxygen Reduction Reactions. ECS Meeting Abstracts, 2020, MA2020-02, 2335-2335.	0.0	0
80	Active MoS _x Nanoparticle Pillars Embedded in Reduced Graphene Oxide As Anode Materials for High Performance Na-Ion Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 297-297.	0.0	0