Won-Jin Kwak

List of Publications by Year
in descending order

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56 papers	3,040 citations	172457 29 h-index	189892 50 g-index
57 all docs	57 docs citations	57 times ranked	3391 citing authors

#	Article	IF	Citations
1	Uniformly distributed reaction by 3D host-lithium composite anode for high rate capability and reversibility of Li-O2 batteries. Chemical Engineering Journal, 2022, 427, 130914.	12.7	10
2	Effects of Fluorinated Diluents in Localized Highâ€Concentration Electrolytes for Lithiumâ€“Oxygen Batteries. Advanced Functional Materials, 2021, 31, 2002927.	14.9	39
3	Rational Design of Electrolytes for Long-Term Cycling of Si Anodes over a Wide Temperature Range. ACS Energy Letters, 2021, 6, 387-394.	17.4	58
4	Evaluation of Redox Mediatorâ€™s Oxidation Stability in Lithium-Oxygen Batteries. ECS Meeting Abstracts, 2021, MA2021-01, 339-339.	0.0	0
5	A Stable Li Metal Anode with Electrochemically Treated Poly(ethylene oxide) Coating for Lithium Oxygen Batteries. ECS Meeting Abstracts, 2021, MA2021-01, 402-402.	0.0	0
6	(Invited) Rational Design of Localized High Concentration Electrolytes to Enable Long-Term Cycling of Si Anodes. ECS Meeting Abstracts, 2021, MA2021-01, 120-120.	0.0	0
7	Ambilaterality of Redox Mediators towards ¹O₂ in Liâ€O₂ Batteries: Trap and Quencher. Advanced Functional Materials, 2021, 31, 2102442.	14.9	11
8	Stable Solid Electrolyte Interphase Layer Formed by Electrochemical Pretreatment of Gel Polymer Coating on Li Metal Anode for Lithiumâ€“Oxygen Batteries. ACS Energy Letters, 2021, 6, 3321-3331.	17.4	17
9	Controllable and stable organometallic redox mediators for lithium oxygen batteries. Materials Horizons, 2020, 7, 214-222.	12.2	15
10	Lithium Dendrite Suppression with a Silica Nanoparticle-Dispersed Colloidal Electrolyte. ACS Applied Materials & Interfaces, 2020, 12, 37188-37196.	8.0	27
11	Potassiumâ€“Oxygen Batteries: Significance, Challenges, and Prospects. Journal of Physical Chemistry Letters, 2020, 11, 7849-7856.	4.6	18
12	Sustainable Encapsulation Strategy of Silicon Nanoparticles in Microcarbon Sphere for High-Performance Lithium-Ion Battery Anode. ACS Sustainable Chemistry and Engineering, 2020, 8, 14150-14158.	6.7	37
13	Initial investigation and evaluation of potassium metal as an anode for rechargeable potassium batteries. Journal of Materials Chemistry A, 2020, 8, 16718-16737.	10.3	44
14	Optimized Electrolyte with High Electrochemical Stability and Oxygen Solubility for Lithiumâ€“Oxygen and Lithiumâ€“Air Batteries. ACS Energy Letters, 2020, 5, 2182-2190.	17.4	45
15	Oxidation Stability of Organic Redox Mediators as Mobile Catalysts in Lithiumâ€“Oxygen Batteries. ACS Energy Letters, 2020, 5, 2122-2129.	17.4	31
16	Perpendicularly aligned TiC-coated carbon cloth cathode for high-performance Li-O2 batteries. Chemical Engineering Journal, 2020, 399, 125699.	12.7	18
17	Lithiumâ€“Oxygen Batteries and Related Systems: Potential, Status, and Future. Chemical Reviews, 2020, 120, 6626-6683.	47.7	593
18	Limited effects of a redox mediator in lithiumâ€“oxygen batteries: indecomposable by-products. Journal of Materials Chemistry A, 2020, 8, 5622-5628.	10.3	12

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19	Parasitic Reactions Due to Singlet Oxygen and Possible Approaches in Lithium-Oxygen Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 473-473.	0.0	0
20	Suppressing Lithium Dendrite Growth with Nanoparticle-Dispersed Colloidal Electrolytes. ECS Meeting Abstracts, 2020, MA2020-02, 737-737.	0.0	0
21	Mutual Conservation of Redox Mediator and Singlet Oxygen Quencher in Lithiumâ€“Oxygen Batteries. ACS Catalysis, 2019, 9, 9914-9922.	11.2	33
22	A dendrite- and oxygen-proof protective layer for lithium metal in lithiumâ€“oxygen batteries. Journal of Materials Chemistry A, 2019, 7, 3857-3862.	10.3	61
23	Deactivation of redox mediators in lithium-oxygen batteries by singlet oxygen. Nature Communications, 2019, 10, 1380.	12.8	72
24	Triple Hierarchical Porous Carbon Spheres as Effective Cathodes for Liâ€“O₂ Batteries. Journal of the Electrochemical Society, 2019, 166, A455-A463.	2.9	8
25	Verification for trihalide ions as redox mediators in Li-O2 batteries. Energy Storage Materials, 2019, 19, 148-153.	18.0	25
26	Shedding Light on the Oxygen Reduction Reaction Mechanism in Ether-Based Electrolyte Solutions: A Study Using Operando UVâ€“Vis Spectroscopy. ACS Applied Materials & Interfaces, 2018, 10, 10860-10869.	8.0	6
27	Optimized Concentration of Redox Mediator and Surface Protection of Li Metal for Maintenance of High Energy Efficiency in Liâ€“O₂ Batteries. Advanced Energy Materials, 2018, 8, 1702258.	19.5	87
28	Clarification of Solvent Effects on Discharge Products in Liâ€“O₂ Batteries through a Titration Method. ACS Applied Materials & Interfaces, 2018, 10, 526-533.	8.0	25
29	Revealing the Reaction Mechanism of Naâ€“O₂ Batteries using Environmental Transmission Electron Microscopy. ACS Energy Letters, 2018, 3, 393-399.	17.4	30
30	ICAC 2018: The First International Conference Focused on NCM & NCA Cathode Materials for Lithium Ion Batteries. ACS Energy Letters, 2018, 3, 2757-2760.	17.4	9
31	Reviewâ€”A Comparative Evaluation of Redox Mediators for Li-O₂Batteries: A Critical Review. Journal of the Electrochemical Society, 2018, 165, A2274-A2293.	2.9	63
32	Largeâ€Scale Liï¿O₂ Pouch Type Cells for Practical Evaluation and Applications. Advanced Functional Materials, 2017, 27, 1605500.	14.9	38
33	Liâ€O₂ Batteries: Largeâ€Scale Liï¿O₂ Pouch Type Cells for Practical Evaluation and Applications (Adv. Funct. Mater. 11/2017). Advanced Functional Materials, 2017, 27, .	14.9	0
34	Synergistic Integration of Soluble Catalysts with Carbon-Free Electrodes for Liâ€“O₂ Batteries. ACS Catalysis, 2017, 7, 8192-8199.	11.2	21
35	Sodium oxygen batteries: one step further with catalysis by ruthenium nanoparticles. Journal of Materials Chemistry A, 2017, 5, 20678-20686.	10.3	29
36	Optimized Bicompartment Two Solution Cells for Effective and Stable Operation of Liâ€“O₂ Batteries. Advanced Energy Materials, 2017, 7, 1701232.	19.5	61

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37	2,4-Dimethoxy-2,4-dimethylpentan-3-one: An Aprotic Solvent Designed for Stability in Liâ€“O2 Cells. Journal of the American Chemical Society, 2017, 139, 11690-11693.	13.7	34
38	Controversial Topics on Lithium Superoxide in Liâ€“O₂ Batteries. ACS Energy Letters, 2017, 2, 2756-2760.	17.4	46
39	Lithiumâ€Oxygen Batteries: Optimized Bicompartment Two Solution Cells for Effective and Stable Operation of Liâ€“O₂ Batteries (Adv. Energy Mater. 21/2017). Advanced Energy Materials, 2017, 7, .	19.5	1
40	A new perspective of the ruthenium ion: a bifunctional soluble catalyst for high efficiency Liâ€“O₂batteries. Journal of Materials Chemistry A, 2017, 5, 15512-15516.	10.3	21
41	Feasibility of Full (Li-Ion)â€“O₂ Cells Comprised of Hard Carbon Anodes. ACS Applied Materials & Interfaces, 2017, 9, 4352-4361.	8.0	31
42	Liâ€“O₂ cells with LiBr as an electrolyte and a redox mediator. Energy and Environmental Science, 2016, 9, 2334-2345.	30.8	229
43	Understanding problems of lithiated anodes in lithium oxygen full-cells. Journal of Materials Chemistry A, 2016, 4, 10467-10471.	10.3	23
44	Ironâ€“cobalt bimetal decorated carbon nanotubes as cost-effective cathode catalysts for Liâ€“O₂batteries. Journal of Materials Chemistry A, 2016, 4, 7020-7026.	10.3	43
45	Mechanistic Role of Li⁺ Dissociation Level in Aprotic Liâ€“O₂ Battery. ACS Applied Materials & Interfaces, 2016, 8, 5300-5307.	8.0	120
46	Silver nanowires as catalytic cathodes for stabilizing lithium-oxygen batteries. Journal of Power Sources, 2016, 311, 49-56.	7.8	29
47	Nanoconfinement of low-conductivity products in rechargeable sodiumâ€“air batteries. Nano Energy, 2015, 12, 123-130.	16.0	63
48	Fluorine-doped porous carbon-decorated Fe3O4-FeF2 composite versus LiNi0.5Mn1.5O4 towards a full battery with robust capability. Electrochimica Acta, 2015, 169, 291-299.	5.2	32
49	Understanding the behavior of Liâ€“oxygen cells containing LiI. Journal of Materials Chemistry A, 2015, 3, 8855-8864.	10.3	187
50	A Mo₂C/Carbon Nanotube Composite Cathode for Lithiumâ€“Oxygen Batteries with High Energy Efficiency and Long Cycle Life. ACS Nano, 2015, 9, 4129-4137.	14.6	207
51	Green Strategy to Single Crystalline Anatase TiO₂ Nanosheets with Dominant (001) Facets and Its Lithiation Study toward Sustainable Cobalt-Free Lithium Ion Full Battery. ACS Sustainable Chemistry and Engineering, 2015, 3, 3086-3095.	6.7	34
52	A sustainable iron-based sodium ion battery of porous carbonâ€“Fe₃O₄/Na₂FeP₂O₇ with high performance. RSC Advances, 2015, 5, 8793-8800.	3.6	74
53	Lithiation of an Iron Oxideâ€Based Anode for Stable, Highâ€Capacity Lithiumâ€Ion Batteries of Porous Carbonâ€“Fe₃O₄/Li[Ni_{0.59}Co_{0.16}Mn_{0.25}]O₂ Energy Technology, 2014, 2, 778-785.	3.8	44
54	An Advanced Lithiumâ€“Air Battery Exploiting an Ionic Liquid-Based Electrolyte. Nano Letters, 2014, 14, 6572-6577.	9.1	200

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55	The binder effect on an oxide-based anode in lithium and sodium-ion battery applications: the fastest way to ultrahigh performance. Chemical Communications, 2014, 50, 13307-13310.	4.1	69
56	A Physical Pulverization Strategy for Preparing a Highly Active Composite of CoO_x and Crushed Graphite for Lithiumâ€“Oxygen Batteries. ChemPhysChem, 2014, 15, 2070-2076.	2.1	10