Hye Ryung Byon

List of Publications by Year in Descending Order

43 papers	1,955 citations	19 h-index	44 g-index
49 ext. papers	2,399 ext. citations	13.1 avg, IF	5.21 L-index

#	Paper	IF	Citations
43	Machine learning assisted synthesis of lithium-ion batteries cathode materials. *Nano Energy*, **2022**, 98, 107214	17.1	2
42	Nanometer-Scale Surface Roughness of a 3-D Cu Substrate Promoting Li Nucleation in Li-Metal Batteries. *ACS Applied Energy Materials*, **2021**, 4, 2644-2651	6.1	5
41	Thiazole-Linked Covalent Organic Framework Promoting Fast Two-Electron Transfer for Lithium-Organic Batteries. *Advanced Energy Materials*, **2021**, 11, 2003735	21.8	17
40	Tubular MoSSe/carbon nanotube electrodes for hybrid-ion capacitors. *Electrochimica Acta*, **2021**, 374, 137971	6.7	1
39	Singlet Oxygen in Lithium□Oxygen Batteries. *Batteries and Supercaps*, **2021**, 4, 286-293	5.6	6
38	Reducing Time to Discovery: Materials and Molecular Modeling, Imaging, Informatics, and Integration. *ACS Nano*, **2021**, 15, 3971-3995	16.7	11
37	Sodium fluoride-rich solid electrolyte interphase for sodium□metal and sodium□oxygen batteries. *Bulletin of the Korean Chemical Society*, **2021**, 42, 1519	1.2	3
36	Systematic Designs of Dicationic Heteroarylpyridiniums as Negolytes for Nonaqueous Redox Flow Batteries. *ACS Energy Letters*, **2021**, 6, 3390-3397	20.1	3
35	Coverage of capping ligands determining the selectivity of multi-carbon products and morphological evolution of Cu nanocatalysts in electrochemical reduction of CO2. *Journal of Materials Chemistry A*, **2021**, 9, 11210-11218	13	2
34	Understanding the interfacial reactions of LiCoO2 positive electrodes in aqueous lithium-ion batteries. *Materials Chemistry Frontiers*, **2021**, 5, 3657-3663	7.8	4
33	Nanostructured LiMnO with LiPO Integrated at the Atomic Scale for High-Energy Electrode Materials with Reversible Anionic Redox. *ACS Central Science*, **2020**, 6, 2326-2338	16.8	12
32	Lithium-Air Batteries: Air-Breathing Challenges and Perspective. *ACS Nano*, **2020**, 14, 14549-14578	16.7	41
31	Naphthalene diimide as a two-electron anolyte for aqueous and neutral pH redox flow batteries. *Journal of Materials Chemistry A*, **2020**, 8, 11218-11223	13	14
30	Oxidation Stability of Organic Redox Mediators as Mobile Catalysts in Lithium□Oxygen Batteries. *ACS Energy Letters*, **2020**, 5, 2122-2129	20.1	18
29	Promoting lithium electrodeposition towards the bottom of 3-D copper meshes in lithium-based batteries. *Journal of Power Sources*, **2020**, 472, 228495	8.9	5
28	Mechanistic Study Revealing the Role of the Br3□/Br2 Redox Couple in CO2-Assisted Li□O2 Batteries. *Advanced Energy Materials*, **2020**, 10, 1903486	21.8	19
27	Synthesis of Redox-Active Phenanthrene-Fused Heteroarenes by Palladium-Catalyzed C-H Annulation. *Organic Letters*, **2020**, 22, 1280-1285	6.2	15

26	Unveiling the Underlying Mechanism of CO2-Assisted Li□O2 Batteries in the Presence of a Br3 /Br2 Redox Couple. *ECS Meeting Abstracts*, **2020**, MA2020-01, 442-442	0	
25	Charge Compensation Mechanism of Lithium-Excess Metal Oxides with Different Covalent and Ionic Characters Revealed by Operando Soft and Hard X-ray Absorption Spectroscopy. *Chemistry of Materials*, **2020**, 32, 139-147	9.6	21
24	Effects of Zn2+ and H+ Association with Naphthalene Diimide Electrodes for Aqueous Zn-Ion Batteries. *Chemistry of Materials*, **2020**, 32, 6990-6997	9.6	27
23	One-pot production of ceria nanosheet-supported PtNi alloy nanodendrites with high catalytic performance toward methanol oxidation and oxygen reduction. *Journal of Materials Chemistry A*, **2020**, 8, 25842-25849	13	13
22	Solid Electrolyte Interphase Revealing Interfacial Electrochemistry on Highly Oriented Pyrolytic Graphite in a Water-in-Salt Electrolyte. *Journal of Physical Chemistry C*, **2020**, 124, 20135-20142	3.8	7
21	A dendrite- and oxygen-proof protective layer for lithium metal in lithium□oxygen batteries. *Journal of Materials Chemistry A*, **2019**, 7, 3857-3862	13	48
20	Trapping of Stable [4n+1] □Electron Species from Peripherally Substituted, Conformationally Rigid, Antiaromatic Hexaphyrins. *Chemistry - A European Journal*, **2019**, 25, 3525-3531	4.8	8
19	Aqueous organic redox flow batteries. *Nano Research*, **2019**, 12, 1988-2001	10	66
18	Lithium Oxygen Battery **2019**, 1-23		
17	Triple Hierarchical Porous Carbon Spheres as Effective Cathodes for Li□O2 Batteries. *Journal of the Electrochemical Society*, **2019**, 166, A455-A463	3.9	5
16	Mutual Conservation of Redox Mediator and Singlet Oxygen Quencher in Lithium□Oxygen Batteries. *ACS Catalysis*, **2019**, 9, 9914-9922	13.1	28
15	Nanostructuring one-dimensional and amorphous lithium peroxide for high round-trip efficiency in lithium-oxygen batteries. *Nature Communications*, **2018**, 9, 680	17.4	50
14	Designing Redox-Stable Cobalt□Polypyridyl Complexes for Redox Flow Batteries: Spin-Crossover Delocalizes Excess Charge. *Advanced Energy Materials*, **2018**, 8, 1702897	21.8	26
13	Critically Examining the Role of Nanocatalysts in Li□O2 Batteries: Viability toward Suppression of Recharge Overpotential, Rechargeability, and Cyclability. *ACS Energy Letters*, **2018**, 3, 592-597	20.1	65
12	Instability of a Noncrystalline NaO2 Film in Na□O2 Batteries: The Controversial Effect of the RuO2 Catalyst. *Journal of Physical Chemistry C*, **2018**, 122, 19678-19686	3.8	6
11	Determining the Facile Routes for Oxygen Evolution Reaction by In Situ Probing of Li-O Cells with Conformal LiO Films. *Journal of the American Chemical Society*, **2018**, 140, 6190-6193	16.4	48
10	Brush-Like Cobalt Nitride Anchored Carbon Nanofiber Membrane: Current Collector-Catalyst Integrated Cathode for Long Cycle Li-O Batteries. *ACS Nano*, **2018**, 12, 128-139	16.7	175
9	Structurally Tuning Li2O2 by Controlling the Surface Properties of Carbon Electrodes: Implications for Li□O2 Batteries. *Chemistry of Materials*, **2016**, 28, 8006-8015	9.6	65

8	Unexpected Li2O2 Film Growth on Carbon Nanotube Electrodes with CeO2 Nanoparticles in Li-O2 Batteries. *Nano Letters*, **2016**, 16, 2969-74	11.5	121
7	High Energy Efficiency and Stability for Photoassisted Aqueous Lithium–Iodine Redox Batteries. *ACS Energy Letters*, **2016**, 1, 806-813	20.1	35
6	Nanoporous NiO Plates with a Unique Role for Promoted Oxidation of Carbonate and Carboxylate Species in the Li–O2 Battery. *Chemistry of Materials*, **2015**, 27, 2234-2241	9.6	88
5	A chemistry and material perspective on lithium redox flow batteries towards high-density electrical energy storage. *Chemical Society Reviews*, **2015**, 44, 7968-96	58.5	322
4	A structured three-dimensional polymer electrolyte with enlarged active reaction zone for Li-O2 batteries. *Scientific Reports*, **2014**, 4, 7127	4.9	52
3	In situ AFM imaging of Li-O2 electrochemical reaction on highly oriented pyrolytic graphite with ether-based electrolyte. *Journal of the American Chemical Society*, **2013**, 135, 10870-6	16.4	93
2	Promoting formation of noncrystalline Li2O2 in the Li-O2 battery with RuO2 nanoparticles. *Nano Letters*, **2013**, 13, 4679-84	11.5	392
1	Advances in electrochemical energy storage with covalent organic frameworks. *Materials Advances*,	3.3	12