Myung-Hyun Ryou

List of Publications by Year
in descending order

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111 papers	6,370 citations	81900 39 h-index	69250 77 g-index
117 all docs	117 docs citations	117 times ranked	7050 citing authors

#	Article	IF	Citations
1	Highly improved thermal stability of the ceramic coating layer on the polyethylene separator via chemical crosslinking between ceramic particles and polymeric binders. Chemical Engineering Journal, 2022, 433, 134501.	12.7	18
2	Upgrading the Properties of Ceramic-Coated Separators for Lithium Secondary Batteries by Changing the Mixing Order of the Water-Based Ceramic Slurry Components. Batteries, 2022, 8, 64.	4.5	5
3	Submicron interlayer for stabilizing thin Li metal powder electrode. Chemical Engineering Journal, 2021, 406, 126834.	12.7	12
4	Hybrid gel polymer electrolyte based on 1-methyl-1-Propylpyrrolidinium Bis(Trifluoromethanesulfonyl) imide for flexible and shape-variant lithium secondary batteries. Journal of Membrane Science, 2021, 621, 119018.	8.2	39
5	Robust Cycling of Ultrathin Li Metal Enabled by Nitrateâ€Preplanted Li Powder Composite. Advanced Energy Materials, 2021, 11, 2003769.	19.5	48
6	Li Metal Batteries: Robust Cycling of Ultrathin Li Metal Enabled by Nitrateâ€Preplanted Li Powder Composite (Adv. Energy Mater. 18/2021). Advanced Energy Materials, 2021, 11, 2170072.	19.5	2
7	Synergistic Effect of a Dual-Salt Liquid Electrolyte with a LiNO₃ Functional Additive toward Stabilizing Thin-Film Li Metal Electrodes for Li Secondary Batteries. ACS Applied Materials & Interfaces, 2021, 13, 31605-31613.	8.0	14
8	Large-area surface-patterned Li metal anodes fabricated using large, flexible patterning stamps for Li metal secondary batteries. Journal of Power Sources, 2021, 514, 230553.	7.8	6
9	Eco-Friendly Water-Processable Polyimide Binders with High Adhesion to Silicon Anodes for Lithium-Ion Batteries. Nanomaterials, 2021, 11, 3164.	4.1	13
10	Mechanical robustness of composite electrode for lithium ion battery: Insight into entanglement & crystallinity of polymeric binder. Electrochimica Acta, 2020, 332, 135471.	5.2	23
11	Highly Stable Porous Polyimide Sponge as a Separator for Lithium-Metal Secondary Batteries. Nanomaterials, 2020, 10, 1976.	4.1	6
12	Microalgae-Templated Spray Drying for Hierarchical and Porous Fe3O4/C Composite Microspheres as Li-ion Battery Anode Materials. Nanomaterials, 2020, 10, 2074.	4.1	8
13	Scaffold-structured polymer binders for long-term cycle performance of stabilized lithium-powder electrodes. Electrochimica Acta, 2020, 364, 136878.	5.2	14
14	Toward understanding the real mechanical robustness of composite electrode impregnated with a liquid electrolyte. Applied Materials Today, 2020, 21, 100809.	4.3	7
15	Sensitivity of power of lithium-ion batteries to temperature: A case study using cylindrical- and pouch-type cells. Journal of Power Sources, 2020, 465, 228238.	7.8	9
16	Design of Thin-Film Interlayer between Silicon Electrode and Current Collector Using a Chemo-Mechanical Degradation Model. Journal of the Electrochemical Society, 2020, 167, 080542.	2.9	5
17	Hybrid Effect of Micropatterned Lithium Metal and Three Dimensionally Ordered Macroporous Polyimide Separator on the Cycle Performance of Lithium Metal Batteries. ACS Applied Energy Materials, 2020, 3, 3721-3727.	5.1	14
18	Structureâ€Controlled Li Metal Electrodes for Postâ€Liâ€Ion Batteries: Recent Progress and Perspectives. Advanced Materials Interfaces, 2020, 7, 1902113.	3.7	33

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19	High-Rate Cycling of Lithium-Metal Batteries Enabled by Dual-Salt Electrolyte-Assisted Micropatterned Interfaces. ACS Applied Materials & Interfaces, 2019, 11, 31777-31785.	8.0	20
20	Tuning sodium nucleation and stripping by the mixed surface of carbon nanotube-sodium composite electrodes for improved reversibility. Journal of Power Sources, 2019, 438, 227005.	7.8	15
21	Effect of the Quantity of Liquid Electrolyte on Self-Healing Electrostatic Shield Mechanism of CsPF₆ Additive for Li Metal Anodes. ACS Omega, 2019, 4, 11724-11727.	3.5	16
22	Surface Reinforcing Balloon Trick-Inspired Separator/Li Metal Integrated Assembly To Improve the Electrochemical Performance of Li Metal Batteries. ACS Applied Materials & Interfaces, 2019, 11, 43122-43129.	8.0	9
23	Thin and porous polymer membrane-based electrochromic devices. Journal of Materials Chemistry C, 2019, 7, 1042-1047.	5.5	14
24	Timeâ€Effective Accelerated Cyclic Aging Analysis of Lithiumâ€Ion Batteries. ChemElectroChem, 2019, 6, 3714-3725.	3.4	4
25	Polydopamine-treated three-dimensional carbon fiber-coated separator for achieving high-performance lithium metal batteries. Journal of Power Sources, 2019, 430, 130-136.	7.8	35
26	Direct Fabrication of Nanodomesâ€Combined Surface Relief Gratings on Azobenzene Polymer Films with Controlled Shapes and Sizes. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 731-737.	2.1	5
27	Effect of Varying the Ratio of Carbon Black to Vapor-Grown Carbon Fibers in the Separator on the Performance of Liâ€“S Batteries. Nanomaterials, 2019, 9, 436.	4.1	6
28	Electrode design methodology for all-solid-state batteries: 3D structural analysis and performance prediction. Energy Storage Materials, 2019, 19, 124-129.	18.0	26
29	Understanding the Effect of Polydopamine Interlayer on the Longâ€Term Cycling Performance of Silicon Anodes: A Multiphysicsâ€Based Model Study. Batteries and Supercaps, 2019, 2, 541-550.	4.7	4
30	Suppression of dendrites and granules in surface-patterned Li metal anodes using CsPF6. Journal of Power Sources, 2019, 413, 344-350.	7.8	14
31	A crosslinked nonwoven separator based on an organosoluble polyimide for high-performance lithium-ion batteries. Journal of Industrial and Engineering Chemistry, 2019, 72, 390-399.	5.8	36
32	Crosslinkable polyhedral silsesquioxane-based ceramic-coated separators for Li-ion batteries. Journal of Industrial and Engineering Chemistry, 2019, 71, 277-283.	5.8	15
33	A Physics-Based Model Capacity Fade Analysis of LiMn₂O₄/Graphite Cell at Different Temperatures. Journal of the Electrochemical Society, 2019, 166, A5109-A5116.	2.9	14
34	Study on dead-Li suppression mechanism of Li-hosting vapor-grown-carbon-nanofiber-based protective layer for Li metal anodes. Journal of Power Sources, 2019, 409, 132-138.	7.8	14
35	Elucidating the Polymeric Binder Distribution within Lithiumâ€Ion Battery Electrodes Using SAICAS. ChemPhysChem, 2018, 19, 1627-1634.	2.1	18
36	Effect of Al2O3 ceramic fillers in LiNi1/3Co1/3Mn1/3O2 cathodes for improving high-voltage cycling and rate capability performance. Electrochimica Acta, 2018, 259, 578-586.	5.2	27

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37	A facile method to enhance the uniformity and adhesion properties of water-based ceramic coating layers on hydrophobic polyethylene separators. Applied Surface Science, 2018, 427, 139-146.	6.1	50
38	Size effects of micro-pattern on lithium metal surface on the electrochemical performance of lithium metal secondary batteries. Journal of Power Sources, 2018, 408, 136-142.	7.8	20
39	Composite protection layers for dendrite-suppressing non-granular micro-patterned lithium metal anodes. Electrochimica Acta, 2018, 282, 343-350.	5.2	29
40	A coupled chemo-mechanical model to study the effects of adhesive strength on the electrochemical performance of silicon electrodes for advanced lithium ion batteries. Journal of Power Sources, 2018, 407, 153-161.	7.8	14
41	Guided Lithium Deposition by Surface Microâ€Patterning of Lithiumâ€Metal Electrodes. ChemElectroChem, 2018, 5, 3169-3175.	3.4	22
42	Self-Healing Wide and Thin Li Metal Anodes Prepared Using Calendared Li Metal Powder for Improving Cycle Life and Rate Capability. ACS Applied Materials & Interfaces, 2018, 10, 16521-16530.	8.0	29
43	Enhancing the Cycling Stability of Sodium Metal Electrodes by Building an Inorganicâ€“Organic Composite Protective Layer. ACS Applied Materials & Interfaces, 2017, 9, 6000-6006.	8.0	124
44	The effects of humidity on the self-discharge properties of Li(Ni_{1/3}Co_{1/3}Mn_{1/3})O₂/graphite and LiCoO₂/graphite lithium-ion batteries during storage. RSC Advances, 2017, 7, 10915-10921.	3.6	22
45	Effects of an Integrated Separator/Electrode Assembly on Enhanced Thermal Stability and Rate Capability of Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 17814-17821.	8.0	26
46	A Flame-Retardant Composite Polymer Electrolyte for Lithium-Ion Polymer Batteries. Electrochimica Acta, 2017, 241, 553-559.	5.2	60
47	Comparative Study of the Adhesion Properties of Ceramic Composite Separators Using a Surface and Interfacial Cutting Analysis System for Lithium-Ion Batteries. ACS Omega, 2017, 2, 2159-2164.	3.5	17
48	Effect of Calcination Temperature on a P-type Na_{0.6}Mn_{0.65}Ni_{0.25}Co_{0.10}O₂Cathode Material for Sodium-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A6308-A6314.	2.9	32
49	Suppressing Lithium Dendrite Growth by Metallic Coating on a Separator. Advanced Functional Materials, 2017, 27, 1704391.	14.9	141
50	Highly rough copper current collector: improving adhesion property between a silicon electrode and current collector for flexible lithium-ion batteries. RSC Advances, 2017, 7, 35681-35686.	3.6	39
51	Recycling oil-extracted microalgal biomass residues into nano/micro hierarchical Sn/C composite anode materials for lithium-ion batteries. Electrochimica Acta, 2017, 250, 59-67.	5.2	35
52	Improving the Cycling Performance of Lithium-Ion Battery Si/Graphite Anodes Using a Soluble Polyimide Binder. ACS Omega, 2017, 2, 8438-8444.	3.5	35
53	Semi-empirical long-term cycle life model coupled with an electrolyte depletion function for large-format graphite/LiFePO 4 lithium-ion batteries. Journal of Power Sources, 2017, 365, 257-265.	7.8	52
54	Plasma-assisted water-based Al2O3 ceramic coating for polyethylene-based microporous separators for lithium metal secondary batteries. Electrochimica Acta, 2016, 212, 649-656.	5.2	76

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55	Sprayable Ultrafast Polydopamine Surface Modifications. Advanced Materials Interfaces, 2016, 3, 1500857.	3.7	99
56	Effect of liquid oil additive on lithium-ion battery ceramic composite separator prepared with an aqueous coating solution. Journal of Alloys and Compounds, 2016, 675, 341-347.	5.5	15
57	Design optimization of LiNi0.6Co0.2Mn0.2O2/graphite lithium-ion cells based on simulation and experimental data. Journal of Power Sources, 2016, 319, 147-158.	7.8	62
58	A Mathematical Model for Cyclic Aging of Spinel LiMn₂O₄/Graphite Lithium-Ion Cells. Journal of the Electrochemical Society, 2016, 163, A2757-A2767.	2.9	31
59	Dopamine as a Novel Electrolyte Additive for High-Voltage Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 21366-21372.	8.0	69
60	Three-Dimensional Adhesion Map Based on Surface and Interfacial Cutting Analysis System for Predicting Adhesion Properties of Composite Electrodes. ACS Applied Materials & Interfaces, 2016, 8, 23688-23695.	8.0	19
61	Musselâ€Inspired Polydopamineâ€Functionalized Superâ€P as a Conductive Additive for Highâ€Performance Silicon Anodes. Advanced Materials Interfaces, 2016, 3, 1600270.	3.7	14
62	Mussel-inspired Polydopamine-treated Copper Foil as a Current Collector for High-performance Silicon Anodes. Scientific Reports, 2016, 6, 30945.	3.3	26
63	In-depth correlation of separator pore structure and electrochemical performance in lithium-ion batteries. Journal of Power Sources, 2016, 325, 732-738.	7.8	36
64	Microâ€Patterned Lithium Metal Anodes with Suppressed Dendrite Formation for Post Lithiumâ€Ion Batteries. Advanced Materials Interfaces, 2016, 3, 1600140.	3.7	149
65	A water-based Al2O3 ceramic coating for polyethylene-based microporous separators for lithium-ion batteries. Journal of Power Sources, 2016, 315, 161-168.	7.8	123
66	Comparative study on experiments and simulation of blended cathode active materials for lithium ion batteries. Electrochimica Acta, 2016, 187, 422-432.	5.2	48
67	New flame-retardant composite separators based on metal hydroxides for lithium-ion batteries. Electrochimica Acta, 2015, 157, 282-289.	5.2	87
68	Effect of back-side-coated electrodes on electrochemical performances of lithium-ion batteries. Journal of Power Sources, 2015, 275, 712-719.	7.8	12
69	Stabilizing effect of 2-(triphenylphosphoranylidene) succinic anhydride as electrolyte additive on the lithium metal of lithium metal secondary batteries. Electrochimica Acta, 2015, 170, 353-359.	5.2	39
70	Synergistic thermal stabilization of ceramic/co-polyimide coated polypropylene separators for lithium-ion batteries. Journal of Power Sources, 2015, 294, 537-544.	7.8	108
71	Highly Adhesive and Soluble Copolyimide Binder: Improving the Long-Term Cycle Life of Silicon Anodes in Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2015, 7, 14851-14858.	8.0	96
72	A facile approach to prepare biomimetic composite separators toward safety-enhanced lithium secondary batteries. RSC Advances, 2015, 5, 39392-39398.	3.6	23

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73	A comparative investigation of carbon black (Super-P) and vapor-grown carbon fibers (VGCFs) as conductive additives for lithium-ion battery cathodes. RSC Advances, 2015, 5, 95073-95078.	3.6	57
74	Effect of LiFePO4 cathode density and thickness on electrochemical performance of lithium metal polymer batteries prepared by in situ thermal polymerization. Electrochimica Acta, 2015, 154, 149-156.	5.2	17
75	Mechanical Surface Modification of Lithium Metal: Towards Improved Li Metal Anode Performance by Directed Li Plating. Advanced Functional Materials, 2015, 25, 834-841.	14.9	343
76	Soluble Polyimide Binder for Silicon Electrodes in Lithium Secondary Batteries. Applied Chemistry for Engineering, 2015, 26, 674-680.	0.2	3
77	Computational Simulation on Power Prediction of Lithium Secondary Batteries by using Pulse-based Measurement Methods. KEPCO Journal on Electric Power and Energy, 2015, 1, 33-38.	0.1	3
78	Effect of Al2O3 coatings prepared by RF sputtering on polyethylene separators for high-power lithium ion batteries. Macromolecular Research, 2014, 22, 1190-1195.	2.4	58
79	Enhanced cycling performance of lithium metal secondary batteries with succinic anhydride as an electrolyte additive. Electrochimica Acta, 2014, 115, 525-530.	5.2	31
80	Composite protective layer for Li metal anode in high-performance lithiumâ€“oxygen batteries. Electrochemistry Communications, 2014, 40, 45-48.	4.7	120
81	Graphite/Silicon Hybrid Electrodes using a 3D Current Collector for Flexible Batteries. Advanced Materials, 2014, 26, 2977-2982.	21.0	53
82	Binder-free metal fibril-supported Fe2O3 anodes for high-performance lithium-ion batteries. Journal of Materials Chemistry A, 2014, 2, 2906.	10.3	15
83	Large area multi-stacked lithium-ion batteries for flexible and rollable applications. Journal of Materials Chemistry A, 2014, 2, 10862-10868.	10.3	48
84	Measurement and Analysis of Adhesion Property of Lithium-Ion Battery Electrodes with SAICAS. ACS Applied Materials & Interfaces, 2014, 6, 526-531.	8.0	88
85	Chemical aspect of oxygen dissolved in a dimethyl sulfoxide-based electrolyte on lithium metal. Electrochimica Acta, 2014, 123, 419-425.	5.2	61
86	Improved high-temperature performance of lithium-ion batteries through use of a thermally stable co-polyimide-based cathode binder. Journal of Power Sources, 2014, 252, 138-143.	7.8	38
87	2-(triphenylphosphoranylidene) succinic anhydride as a new electrolyte additive to improve high temperature cycle performance of LiMn2O4/graphite Li-ion batteries. Electrochimica Acta, 2013, 102, 97-103.	5.2	20
88	Nitrogen-doped carbon coating for a high-performance SiO anode in lithium-ion batteries. Electrochemistry Communications, 2013, 34, 98-101.	4.7	84
89	Effect of polydopamine surface coating on polyethylene separators as a function of their porosity for high-power Li-ion batteries. Electrochimica Acta, 2013, 113, 433-438.	5.2	76
90	Fabrication of polyacrylonitrile/lignin-based carbon nanofibers for high-power lithium ion battery anodes. Journal of Solid State Electrochemistry, 2013, 17, 2471-2475.	2.5	84

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91	Lithium-Ion Batteries: Mussel-Inspired Adhesive Binders for High-Performance Silicon Nanoparticle Anodes in Lithium-Ion Batteries (Adv. Mater. 11/2013). Advanced Materials, 2013, 25, 1570-1570.	21.0	8
92	Improved cycle lives of LiMn2O4 cathodes in lithium ion batteries by an alginate biopolymer from seaweed. Journal of Materials Chemistry A, 2013, 1, 15224.	10.3	67
93	Musselâ€Inspired Adhesive Binders for Highâ€Performance Silicon Nanoparticle Anodes in Lithiumâ€Ion Batteries. Advanced Materials, 2013, 25, 1571-1576.	21.0	532
94	Effect of cathode/anode area ratio on electrochemical performance ofÂlithium-ion batteries. Journal of Power Sources, 2013, 243, 641-647.	7.8	51
95	Recycling rice husks for high-capacity lithium battery anodes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12229-12234.	7.1	256
96	Effect of LiCoO2 Cathode Density and Thickness on Electrochemical Performance of Lithium-Ion Batteries. Journal of Electrochemical Science and Technology, 2013, 4, 27-33.	2.2	21
97	Effect of LiCoO₂Cathode Density and Thickness on Electrochemical Performance of Lithium-Ion Batteries. Journal of Electrochemical Science and Technology, 2013, 4, 27-33.	2.2	21
98	Mussel- and Diatom-Inspired Silica Coating on Separators Yields Improved Power and Safety in Li-Ion Batteries. Chemistry of Materials, 2012, 24, 3481-3485.	6.7	185
99	Co-polyimide-coated polyethylene separators for enhanced thermal stability of lithium ion batteries. Electrochimica Acta, 2012, 85, 524-530.	5.2	148
100	Effects of lithium salts on thermal stabilities of lithium alkyl carbonates in SEI layer. Electrochimica Acta, 2012, 83, 259-263.	5.2	68
101	Excellent Cycle Life of Lithiumâ€Metal Anodes in Lithiumâ€Ion Batteries with Musselâ€Inspired Polydopamineâ€Coated Separators. Advanced Energy Materials, 2012, 2, 645-650.	19.5	410
102	Lithium-Ion Batteries: Excellent Cycle Life of Lithium-Metal Anodes in Lithium-Ion Batteries with Mussel-Inspired Polydopamine-Coated Separators (Adv. Energy Mater. 6/2012). Advanced Energy Materials, 2012, 2, 610-610.	19.5	4
103	A gel polymer electrolyte based on initiator-free photopolymerization for lithium secondary batteries. Electrochimica Acta, 2012, 60, 23-30.	5.2	71
104	Anion receptor-coated separator for lithium-ion polymer battery. Journal of Solid State Electrochemistry, 2011, 15, 753-757.	2.5	10
105	Musselâ€Inspired Polydopamineâ€Treated Polyethylene Separators for Highâ€Power Liâ€Ion Batteries. Advanced Materials, 2011, 23, 3066-3070.	21.0	635
106	N-(triphenylphosphoranylidene) aniline as a novel electrolyte additive for high voltage LiCoO2 operations in lithium ion batteries. Electrochimica Acta, 2011, 56, 5195-5200.	5.2	66
107	Cross-linkable Polymer Matrix for Enhanced Thermal Stability of Succinonitrile-based Polymer Electrolyte in Lithium Rechargeable Batteries. Journal of Electrochemical Science and Technology, 2011, 2, 198-203.	2.2	4
108	Cross-linkable Polymer Matrix for Enhanced Thermal Stability of Succinonitrile-based Polymer Electrolyte in Lithium Rechargeable Batteries. Journal of Electrochemical Science and Technology, 2011, 2, 198-203.	2.2	3

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109	Effect of fluoroethylene carbonate on high temperature capacity retention of LiMn2O4/graphite Li-ion cells. Electrochimica Acta, 2010, 55, 2073-2077.	5.2	153
110	Enhancement of Cycle Performance of Lithium Secondary Batteries Based on Nano-Composite Coated PVdF Membrane. Journal of the Korean Electrochemical Society, 2008, 11, 190-196.	0.1	2
111	A New Perspective on the Advanced Microblade Cutting Method for Reliable Adhesion Measurement of Composite Electrodes. Journal of Electrochemical Science and Technology, 0, , .	2.2	0