Sheng-Heng Chung

List of Publications by Year
in descending order

73 papers	11,841 citations	66234 42 h-index	91712 69 g-index
75 all docs	75 docs citations	75 times ranked	8753 citing authors

#	Article	IF	Citations
1	Rechargeable Lithiumâ€“Sulfur Batteries. Chemical Reviews, 2014, 114, 11751-11787.	23.0	3,842
2	Lithiumâ€“Sulfur Batteries: Progress and Prospects. Advanced Materials, 2015, 27, 1980-2006.	11.1	1,288
3	Bifunctional Separator with a Lightâ€Weight Carbonâ€Coating for Dynamically and Statically Stable Lithiumâ€Sulfur Batteries. Advanced Functional Materials, 2014, 24, 5299-5306.	7.8	457
4	Current Status and Future Prospects of Metalâ€“Sulfur Batteries. Advanced Materials, 2019, 31, e1901125.	11.1	422
5	Progress on the Critical Parameters for Lithiumâ€“Sulfur Batteries to be Practically Viable. Advanced Functional Materials, 2018, 28, 1801188.	7.8	368
6	Carbonized Eggshell Membrane as a Natural Polysulfide Reservoir for Highly Reversible Liâ€S Batteries. Advanced Materials, 2014, 26, 1360-1365.	11.1	351
7	High-Performance Liâ€“S Batteries with an Ultra-lightweight MWCNT-Coated Separator. Journal of Physical Chemistry Letters, 2014, 5, 1978-1983.	2.1	340
8	A Polyethylene Glycolâ€Supported Microporous Carbon Coating as a Polysulfide Trap for Utilizing Pure Sulfur Cathodes in Lithiumâ€“Sulfur Batteries. Advanced Materials, 2014, 26, 7352-7357.	11.1	325
9	A free-standing carbon nanofiber interlayer for high-performance lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2015, 3, 4530-4538.	5.2	317
10	Electrochemically Stable Rechargeable Lithiumâ€“Sulfur Batteries with a Microporous Carbon Nanofiber Filter for Polysulfide. Advanced Energy Materials, 2015, 5, 1500738.	10.2	255
11	A Carbon-Cotton Cathode with Ultrahigh-Loading Capability for Statically and Dynamically Stable Lithiumâ€“Sulfur Batteries. ACS Nano, 2016, 10, 10462-10470.	7.3	252
12	Nanostructured Host Materials for Trapping Sulfur in Rechargeable Liâ€“S Batteries: Structure Design and Interfacial Chemistry. Small Methods, 2018, 2, 1700279.	4.6	201
13	Effective Stabilization of a High-Loading Sulfur Cathode and a Lithium-Metal Anode in Li-S Batteries Utilizing SWCNT-Modulated Separators. Small, 2016, 12, 174-179.	5.2	175
14	A hierarchical carbonized paper with controllable thickness as a modulable interlayer system for high performance Liâ€“S batteries. Chemical Communications, 2014, 50, 4184.	2.2	169
15	Rational Design of Statically and Dynamically Stable Lithiumâ€“Sulfur Batteries with High Sulfur Loading and Low Electrolyte/Sulfur Ratio. Advanced Materials, 2018, 30, 1705951.	11.1	167
16	Designing Lithium-Sulfur Cells with Practically Necessary Parameters. Joule, 2018, 2, 710-724.	11.7	148
17	Ultra-lightweight PANiNF/MWCNT-functionalized separators with synergistic suppression of polysulfide migration for Liâ€“S batteries with pure sulfur cathodes. Journal of Materials Chemistry A, 2015, 3, 18829-18834.	5.2	147
18	TiS₂â€“Polysulfide Hybrid Cathode with High Sulfur Loading and Low Electrolyte Consumption for Lithiumâ€“Sulfur Batteries. ACS Energy Letters, 2018, 3, 568-573.	8.8	138

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19	Lithiumâ€“sulfur batteries with superior cycle stability by employing porous current collectors. Electrochimica Acta, 2013, 107, 569-576.	2.6	134
20	A Natural Carbonized Leaf as Polysulfide Diffusion Inhibitor for Highâ€Performance Lithiumâ€“Sulfur Battery Cells. ChemSusChem, 2014, 7, 1655-1661.	3.6	129
21	A coreâ€“shell electrode for dynamically and statically stable Liâ€“S battery chemistry. Energy and Environmental Science, 2016, 9, 3188-3200.	15.6	124
22	Longâ€Life Lithiumâ€“Sulfur Batteries with a Bifunctional Cathode Substrate Configured with Boron Carbide Nanowires. Advanced Materials, 2018, 30, e1804149.	11.1	120
23	Rational Design of a Dualâ€Function Hybrid Cathode Substrate for Lithiumâ€“Sulfur Batteries. Advanced Energy Materials, 2018, 8, 1801014.	10.2	103
24	A three-dimensional self-assembled SnS₂-nano-dots@graphene hybrid aerogel as an efficient polysulfide reservoir for high-performance lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2018, 6, 7659-7667.	5.2	95
25	Dendriteâ€Free Lithium Anode via a Homogenous Liâ€Ion Distribution Enabled by a Kimwipe Paper. Advanced Sustainable Systems, 2017, 1, 1600034.	2.7	82
26	Highly flexible, freestanding tandem sulfur cathodes for foldable Liâ€“S batteries with a high areal capacity. Materials Horizons, 2017, 4, 249-258.	6.4	78
27	Nano-cellular carbon current collectors with stable cyclability for Liâ€“S batteries. Journal of Materials Chemistry A, 2013, 1, 9590.	5.2	73
28	Low-cost, porous carbon current collector with high sulfur loading for lithiumâ€“sulfur batteries. Electrochemistry Communications, 2014, 38, 91-95.	2.3	73
29	A trifunctional multi-walled carbon nanotubes/polyethylene glycol (MWCNT/PEG)-coated separator through a layer-by-layer coating strategy for high-energy Liâ€“S batteries. Journal of Materials Chemistry A, 2016, 4, 16805-16811.	5.2	72
30	Three-Dimensional Grapheneâ€“Carbon Nanotubeâ€“Ni Hierarchical Architecture as a Polysulfide Trap for Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2018, 10, 20627-20634.	4.0	72
31	A Polysulfide-Trapping Interface for Electrochemically Stable Sulfur Cathode Development. ACS Applied Materials & Interfaces, 2016, 8, 4709-4717.	4.0	64
32	Designing a high-loading sulfur cathode with a mixed ionic-electronic conducting polymer for electrochemically stable lithium-sulfur batteries. Energy Storage Materials, 2019, 17, 317-324.	9.5	63
33	Porous Carbon Mat as an Electrochemical Testing Platform for Investigating the Polysulfide Retention of Various Cathode Configurations in Liâ€“S Cells. Journal of Physical Chemistry Letters, 2015, 6, 2163-2169.	2.1	61
34	A design of the cathode substrate for high-loading polysulfide cathodes in lean-electrolyte lithium-sulfur cells. Chemical Engineering Journal, 2021, 422, 130363.	6.6	61
35	Nickel-plated sulfur nanocomposites for electrochemically stable high-loading sulfur cathodes in a lean-electrolyte lithium-sulfur cell. Chemical Engineering Journal, 2022, 429, 132257.	6.6	61
36	Lithiumâ€“Sulfur Batteries with the Lowest Self-Discharge and the Longest Shelf life. ACS Energy Letters, 2017, 2, 1056-1061.	8.8	60

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37	Robust, Ultra-Tough Flexible Cathodes for High-Energy Li-S Batteries. Small, 2016, 12, 939-950.	5.2	59
38	Lean-electrolyte lithiumâ€"sulfur electrochemical cells with high-loading carbon nanotube/nanofiberâ€"polysulfide cathodes. Chemical Communications, 2021, 57, 2009-2012.	2.2	56
39	Eggshell Membrane-Derived Polysulfide Absorbents for Highly Stable and Reversible Lithiumâ€"Sulfur Cells. ACS Sustainable Chemistry and Engineering, 2014, 2, 2248-2252.	3.2	49
40	Hierarchical sulfur electrodes as a testing platform for understanding the high-loading capability of Li-S batteries. Journal of Power Sources, 2016, 334, 179-190.	4.0	46
41	A nickel-foam@carbon-shell with a pie-like architecture as an efficient polysulfide trap for high-energy Liâ€"S batteries. Journal of Materials Chemistry A, 2017, 5, 15002-15007.	5.2	44
42	Carbonized Eggshell Membranes as a Natural and Abundant Counter Electrode for Efficient Dyeâ€Sensitized Solar Cells. Advanced Energy Materials, 2015, 5, 1401524.	10.2	43
43	A Li₂Sâ€TiS₂â€Electrolyte Composite for Stable Li₂Sâ€Based Lithiumâ€"Sulfur Batteries. Advanced Energy Materials, 2019, 9, 1901397.	10.2	41
44	A Shellâ€Shaped Carbon Architecture with Highâ€Loading Capability for Lithium Sulfide Cathodes. Advanced Energy Materials, 2017, 7, 1700537.	10.2	40
45	Materials and electrode designs of high-performance NiCo2S4/Reduced graphene oxide for supercapacitors. Ceramics International, 2021, 47, 25942-25950.	2.3	40
46	Thin-Layered Molybdenum Disulfide Nanoparticles as an Effective Polysulfide Mediator in Lithiumâ€"Sulfur Batteries. ACS Applied Materials & Interfaces, 2018, 10, 23122-23130.	4.0	39
47	A Facile, Lowâ€Cost Hotâ€Pressing Process for Fabricating Lithiumâ€"Sulfur Cells with Stable Dynamic and Static Electrochemistry. Advanced Materials, 2018, 30, e1805571.	11.1	38
48	Pyrrolicâ€Type Nitrogenâ€Doped Hierarchical Macro/Mesoporous Carbon as a Bifunctional Host for Highâ€Performance Thick Cathodes for Lithiumâ€Sulfur Batteries. Small, 2019, 15, e1900690.	5.2	37
49	Binder-free, freestanding cathodes fabricated with an ultra-rapid diffusion of sulfur into carbon nanofiber mat for lithium sulfur batteries. Materials Today Energy, 2018, 9, 336-344.	2.5	34
50	Composite gel-polymer electrolyte for high-loading polysulfide cathodes. Journal of Materials Chemistry A, 2022, 10, 13719-13726.	5.2	28
51	Quantitative Analysis of Electrochemical and Electrode Stability with Low Self-Discharge Lithium-Sulfur Batteries. ACS Applied Materials & Interfaces, 2017, 9, 20318-20323.	4.0	27
52	Designing Lithiumâ€"Sulfur Batteries with High-Loading Cathodes at a Lean Electrolyte Condition. ACS Applied Materials & Interfaces, 2018, 10, 43749-43759.	4.0	27
53	Transforming waste newspapers into nitrogen-doped conducting interlayers for advanced Liâ€"S batteries. Sustainable Energy and Fuels, 2017, 1, 444-449.	2.5	26
54	A rationally designed polysulfide-trapping interface on the polymeric separator for high-energy Liâ€"S batteries. Materials Today Energy, 2017, 6, 72-78.	2.5	26

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55	A Poly(ethylene oxide)/Lithium bis(trifluoromethanesulfonyl)imide-Coated Polypropylene Membrane for a High-Loading Lithiumâ€“Sulfur Battery. Polymers, 2021, 13, 535.	2.0	25
56	Oligoanilines as a suppressor of polysulfide shuttling in lithiumâ€“sulfur batteries. Materials Horizons, 2017, 4, 908-914.	6.4	24
57	Bifunctional Binder with Nucleophilic Lithium Polysulfide Immobilization Ability for High-Loading, High-Thickness Cathodes in Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2019, 11, 17393-17399.	4.0	24
58	A Li₂S-Based Catholyte/Solid-State-Electrolyte Composite for Electrochemically Stable Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2021, 13, 58712-58722.	4.0	23
59	Rational Design of Highâ€Performance Nickelâ€Sulfur Nanocomposites by the Electroless Plating Method for Electrochemical Lithiumâ€Sulfur Battery Cathodes. Batteries and Supercaps, 2022, 5, .	2.4	22
60	A coreâ€“shell cathode substrate for developing high-loading, high-performance lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2018, 6, 24841-24847.	5.2	20
61	Investigation and Design of High-Loading Sulfur Cathodes with a High-Performance Polysulfide Adsorbent for Electrochemically Stable Lithiumâ€“Sulfur Batteries. ACS Sustainable Chemistry and Engineering, 2022, 10, 9254-9264.	3.2	20
62	Preparation and Electrical Properties of LaFeO3Compacts Using Chemically Synthesized Powders. Japanese Journal of Applied Physics, 2008, 47, 8498-8501.	0.8	16
63	An ant-nest-like cathode substrate for lithium-sulfur batteries with practical cell fabrication parameters. Energy Storage Materials, 2019, 18, 491-499.	9.5	16
64	Module-Designed Carbon-Coated Separators for High-Loading, High-Sulfur-Utilization Cathodes in Lithiumâ€“Sulfur Batteries. Molecules, 2022, 27, 228.	1.7	16
65	Nanoporosity of Carbonâ€“Sulfur Nanocomposites toward the Lithiumâ€“Sulfur Battery Electrochemistry. Nanomaterials, 2021, 11, 1518.	1.9	15
66	Effects of B2O3 addition on the microstructure and microwave dielectric properties of La4Ba2Ti5O18. Journal of Alloys and Compounds, 2008, 465, 356-360.	2.8	13
67	Advanced Current Collectors with Carbon Nanofoams for Electrochemically Stable Lithiumâ€"Sulfur Cells. Nanomaterials, 2021, 11, 2083.	1.9	10
68	Structural and Surfacial Modification of Carbon Nanofoam as an Interlayer for Electrochemically Stable Lithium-Sulfur Cells. Nanomaterials, 2021, 11, 3342.	1.9	9
69	Lithium-Sulfur Batteries: Electrochemically Stable Rechargeable Lithium-Sulfur Batteries with a Microporous Carbon Nanofiber Filter for Polysulfide (Adv. Energy Mater. 18/2015). Advanced Energy Materials, 2015, 5, n/a-n/a.	10.2	1
70	Design and Development of High-Loading Carbon-Sulfur Nanocomposite Cathodes with Drop-Casting Method. ECS Meeting Abstracts, 2021, MA2021-01, 347-347.	0.0	0
71	A Functional PEO/LiTFSI-Coated Coated Separator for Electrochemical Lithium-Sulfur Battery. ECS Meeting Abstracts, 2021, MA2021-01, 348-348.	0.0	0
72	Electrode Design for Lithium-Sulfur Batteries Featuring High Sulfur Loading and Low Electrolyte. ECS Meeting Abstracts, 2020, MA2020-02, 360-360.	0.0	0

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73	A Design of Lean-Electrolyte Lithium-Sulfur Cells. ECS Meeting Abstracts, 2021, MA2021-02, 138-138.	0.0	0