

Allen Y Pei

List of Publications by Year in descending order

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Version: 2024-02-01

56
papers

13,943
citations

31976

53
h-index

149698

56
g-index

56
all docs

56
docs citations

56
times ranked

11794
citing authors

#	ARTICLE	IF	CITATIONS
1	Underpotential lithium plating on graphite anodes caused by temperature heterogeneity. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29453-29461.	7.1	94
2	Electrochemical generation of liquid and solid sulfur on two-dimensional layered materials with distinct areal capacities. Nature Nanotechnology, 2020, 15, 231-237.	31.5	65
3	Electrotunable liquid sulfur microdroplets. Nature Communications, 2020, 11, 606.	12.8	22
4	Transient Voltammetry with Ultramicroelectrodes Reveals the Electron Transfer Kinetics of Lithium Metal Anodes. ACS Energy Letters, 2020, 5, 701-709.	17.4	91
5	Tortuosity Effects in Lithium-Metal Host Anodes. Joule, 2020, 4, 938-952.	24.0	150
6	Supercooled liquid sulfur maintained in three-dimensional current collector for high-performance Li-S batteries. Science Advances, 2020, 6, eaay5098.	10.3	95
7	Improving cyclability of Li metal batteries at elevated temperatures and its origin revealed by cryo-electron microscopy. Nature Energy, 2019, 4, 664-670.	39.5	336
8	A Dynamic, Electrolyte-Blocking, and Single-Ion-Conductive Network for Stable Lithium-Metal Anodes. Joule, 2019, 3, 2761-2776.	24.0	176
9	Fast galvanic lithium corrosion involving a Kirkendall-type mechanism. Nature Chemistry, 2019, 11, 382-389.	13.6	180
10	Wrinkled Graphene Cages as Hosts for High-Capacity Li Metal Anodes Shown by Cryogenic Electron Microscopy. Nano Letters, 2019, 19, 1326-1335.	9.1	193
11	Ultrathin, flexible, solid polymer composite electrolyte enabled with aligned nanoporous host for lithium batteries. Nature Nanotechnology, 2019, 14, 705-711.	31.5	773
12	Fast lithium growth and short circuit induced by localized-temperature hotspots in lithium batteries. Nature Communications, 2019, 10, 2067.	12.8	177
13	Uniform High Ionic Conducting Lithium Sulfide Protection Layer for Stable Lithium Metal Anode. Advanced Energy Materials, 2019, 9, 1900858.	19.5	333
14	Amidoxime-Functionalized Macroporous Carbon Self-Refreshed Electrode Materials for Rapid and High-Capacity Removal of Heavy Metal from Water. ACS Central Science, 2019, 5, 719-726.	11.3	76
15	Composite lithium electrode with mesoscale skeleton via simple mechanical deformation. Science Advances, 2019, 5, eaau5655.	10.3	79
16	An ultrathin ionomer interphase for high efficiency lithium anode in carbonate based electrolyte. Nature Communications, 2019, 10, 5824.	12.8	62
17	An Interconnected Channel-Like Framework as Host for Lithium Metal Composite Anodes. Advanced Energy Materials, 2019, 9, 1802720.	19.5	83
18	Breathing-Mimicking Electrocatalysis for Oxygen Evolution and Reduction. Joule, 2019, 3, 557-569.	24.0	132

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19	Nanostructural and Electrochemical Evolution of the Solid-Electrolyte Interphase on CuO Nanowires Revealed by Cryogenic-Electron Microscopy and Impedance Spectroscopy. ACS Nano, 2019, 13, 737-744.	14.6	78
20	In Situ Investigation on the Nanoscale Capture and Evolution of Aerosols on Nanofibers. Nano Letters, 2018, 18, 1130-1138.	9.1	65
21	Vertically Aligned and Continuous Nanoscale Ceramic-Polymer Interfaces in Composite Solid Polymer Electrolytes for Enhanced Ionic Conductivity. Nano Letters, 2018, 18, 3829-3838.	9.1	268
22	A manganese-hydrogen battery with potential for grid-scale energy storage. Nature Energy, 2018, 3, 428-435.	39.5	325
23	A general prelithiation approach for group IV elements and corresponding oxides. Energy Storage Materials, 2018, 10, 275-281.	18.0	94
24	Robust Pinhole-free Li ₃ N Solid Electrolyte Grown from Molten Lithium. ACS Central Science, 2018, 4, 97-104.	11.3	197
25	Correlating Structure and Function of Battery Interphases at Atomic Resolution Using Cryoelectron Microscopy. Joule, 2018, 2, 2167-2177.	24.0	284
26	Shell-Protective Secondary Silicon Nanostructures as Pressure-Resistant High-Volumetric-Capacity Anodes for Lithium-Ion Batteries. Nano Letters, 2018, 18, 7060-7065.	9.1	121
27	Solubility-mediated sustained release enabling nitrate additive in carbonate electrolytes for stable lithium metal anode. Nature Communications, 2018, 9, 3656.	12.8	371
28	Fundamental study on the wetting property of liquid lithium. Energy Storage Materials, 2018, 14, 345-350.	18.0	161
29	Stretchable Lithium Metal Anode with Improved Mechanical and Electrochemical Cycling Stability. Joule, 2018, 2, 1857-1865.	24.0	132
30	Materials for lithium-ion battery safety. Science Advances, 2018, 4, eaas9820.	10.3	958
31	Lithium metal stripping beneath the solid electrolyte interphase. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8529-8534.	7.1	150
32	Efficient electrocatalytic CO ₂ reduction on a three-phase interface. Nature Catalysis, 2018, 1, 592-600.	34.4	336
33	Engineering stable interfaces for three-dimensional lithium metal anodes. Science Advances, 2018, 4, eaat5168.	10.3	153
34	Effects of Polymer Coatings on Electrodeposited Lithium Metal. Journal of the American Chemical Society, 2018, 140, 11735-11744.	13.7	307
35	An Ultrastrong Double-Layer Nanodiamond Interface for Stable Lithium Metal Anodes. Joule, 2018, 2, 1595-1609.	24.0	155
36	Nanoscale Nucleation and Growth of Electrodeposited Lithium Metal. Nano Letters, 2017, 17, 1132-1139.	9.1	1,081

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37	Nanoscale perspective: Materials designs and understandings in lithium metal anodes. Nano Research, 2017, 10, 4003-4026.	10.4	130
38	Lithium Metal Anodes with an Adaptive “Solid-Liquid” Interfacial Protective Layer. Journal of the American Chemical Society, 2017, 139, 4815-4820.	13.7	460
39	Atomic structure of sensitive battery materials and interfaces revealed by cryo-electron microscopy. Science, 2017, 358, 506-510.	12.6	1,039
40	Strong texturing of lithium metal in batteries. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12138-12143.	7.1	188
41	Surface Fluorination of Reactive Battery Anode Materials for Enhanced Stability. Journal of the American Chemical Society, 2017, 139, 11550-11558.	13.7	398
42	ZnO-based microrockets with light-enhanced propulsion. Nanoscale, 2017, 9, 15027-15032.	5.6	53
43	Stitching h-BN by atomic layer deposition of LiF as a stable interface for lithium metal anode. Science Advances, 2017, 3, eaao3170.	10.3	252
44	Revealing Nanoscale Passivation and Corrosion Mechanisms of Reactive Battery Materials in Gas Environments. Nano Letters, 2017, 17, 5171-5178.	9.1	88
45	Stabilized Li ₃ N for efficient battery cathode prelithiation. Energy Storage Materials, 2017, 6, 119-124.	18.0	143
46	High-Performance Lithium Metal Negative Electrode with a Soft and Flowable Polymer Coating. ACS Energy Letters, 2016, 1, 1247-1255.	17.4	281
47	Stabilizing Lithium Metal Anodes by Uniform Li-Ion Flux Distribution in Nanochannel Confinement. Journal of the American Chemical Society, 2016, 138, 15443-15450.	13.7	386
48	Highly Efficient Light-Driven TiO ₂ “Au Janus Micromotors. ACS Nano, 2016, 10, 839-844.	14.6	392
49	Motion-based threat detection using microrods: experiments and numerical simulations. Nanoscale, 2015, 7, 7833-7840.	5.6	26
50	Bioinspired Helical Microswimmers Based on Vascular Plants. Nano Letters, 2014, 14, 305-310.	9.1	315
51	Catalytic Iridium-Based Janus Micromotors Powered by Ultralow Levels of Chemical Fuels. Journal of the American Chemical Society, 2014, 136, 2276-2279.	13.7	300
52	Nanomotor lithography. Nature Communications, 2014, 5, 5026.	12.8	141
53	Organized Self-Assembly of Janus Micromotors with Hydrophobic Hemispheres. Journal of the American Chemical Society, 2013, 135, 998-1001.	13.7	189
54	Seawater-driven magnesium based Janus micromotors for environmental remediation. Nanoscale, 2013, 5, 4696.	5.6	333

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55	Water-Driven Micromotors. ACS Nano, 2012, 6, 8432-8438.	14.6	326
56	Polymer-based tubular microbots: role of composition and preparation. Nanoscale, 2012, 4, 2447.	5.6	150