Yayuan Liu

List of Publications by Year
in descending order

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101 papers	27,098 citations	14614 66 h-index	31759 101 g-index
104 all docs	104 docs citations	104 times ranked	24389 citing authors

#	Article	IF	Citations
1	Reviving the lithium metal anode for high-energy batteries. Nature Nanotechnology, 2017, 12, 194-206.	15.6	4,804
2	Layered reduced graphene oxide with nanoscale interlayer gaps as a stable host for lithium metal anodes. Nature Nanotechnology, 2016, 11, 626-632.	15.6	1,557
3	High-efficiency oxygen reduction to hydrogen peroxide catalysed by oxidized carbon materials. Nature Catalysis, 2018, 1, 156-162.	16.1	1,120
4	Challenges and opportunities towards fast-charging battery materials. Nature Energy, 2019, 4, 540-550.	19.8	1,053
5	Catalytic oxidation of Li ₂ S on the surface of metal sulfides for Liâ€'S batteries. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 840-845.	3.3	1,030
6	Bifunctional non-noble metal oxide nanoparticle electrocatalysts through lithium-induced conversion for overall water splitting. Nature Communications, 2015, 6, 7261.	5.8	1,006
7	Materials for lithium-ion battery safety. Science Advances, 2018, 4, eaas9820.	4.7	958
8	High Ionic Conductivity of Composite Solid Polymer Electrolyte via In Situ Synthesis of Monodispersed SiO₂ Nanospheres in Poly(ethylene oxide). Nano Letters, 2016, 16, 459-465.	4.5	791
9	Composite lithium metal anode by melt infusion of lithium into a 3D conducting scaffold with lithiophilic coating. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2862-2867.	3.3	755
10	An Artificial Solid Electrolyte Interphase with High Liâ€Ion Conductivity, Mechanical Strength, and Flexibility for Stable Lithium Metal Anodes. Advanced Materials, 2017, 29, 1605531.	11.1	747
11	Lithium-coated polymeric matrix as a minimum volume-change and dendrite-free lithium metal anode. Nature Communications, 2016, 7, 10992.	5.8	745
12	Rapid water disinfection using vertically aligned MoS2 nanofilms and visible light. Nature Nanotechnology, 2016, 11, 1098-1104.	15.6	681
13	Direct and continuous strain control of catalysts with tunable battery electrode materials. Science, 2016, 354, 1031-1036.	6.0	512
14	Lithium Metal Anodes with an Adaptive â€œSolid-Liquidâ€•Interfacial Protective Layer. Journal of the American Chemical Society, 2017, 139, 4815-4820.	6.6	460
15	A Family of Metalâ€Organic Frameworks Exhibiting Sizeâ€Selective Catalysis with Encapsulated Nobleâ€Metal Nanoparticles. Advanced Materials, 2014, 26, 4056-4060.	11.1	396
16	A Silicaâ€Aerogelâ€Reinforced Composite Polymer Electrolyte with High Ionic Conductivity and High Modulus. Advanced Materials, 2018, 30, e1802661.	11.1	392
17	Solid-State Lithiumâ€“Sulfur Batteries Operated at 37 Â°C with Composites of Nanostructured Li₇La₃Zr₂O₁₂/Carbon Foam and Polymer. Nano Letters, 2017, 17, 2967-2972.	4.5	384
18	Conformal Lithium Fluoride Protection Layer on Three-Dimensional Lithium by Nonhazardous Gaseous Reagent Freon. Nano Letters, 2017, 17, 3731-3737.	4.5	377

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19	In Situ Electrochemical Oxidation Tuning of Transition Metal Disulfides to Oxides for Enhanced Water Oxidation. ACS Central Science, 2015, 1, 244-251.	5.3	373
20	Solubility-mediated sustained release enabling nitrate additive in carbonate electrolytes for stable lithium metal anode. Nature Communications, 2018, 9, 3656.	5.8	371
21	Spectrally Selective Nanocomposite Textile for Outdoor Personal Cooling. Advanced Materials, 2018, 30, e1802152.	11.1	362
22	Dual-Phase Spinel MnCo₂O₄and Spinel MnCo₂O₄/Nanocarbon Hybrids for Electrocatalytic Oxygen Reduction and Evolution. ACS Applied Materials & Interfaces, 2014, 6, 12684-12691.	4.0	322
23	Roll-to-Roll Transfer of Electrospun Nanofiber Film for High-Efficiency Transparent Air Filter. Nano Letters, 2016, 16, 1270-1275.	4.5	289
24	Three-dimensional stable lithium metal anode with nanoscale lithium islands embedded in ionically conductive solid matrix. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4613-4618.	3.3	285
25	Warming up human body by nanoporous metallized polyethylene textile. Nature Communications, 2017, 8, 496.	5.8	280
26	Vertically Aligned and Continuous Nanoscale Ceramicâ€“Polymer Interfaces in Composite Solid Polymer Electrolytes for Enhanced Ionic Conductivity. Nano Letters, 2018, 18, 3829-3838.	4.5	268
27	Design of Complex Nanomaterials for Energy Storage: Past Success and Future Opportunity. Accounts of Chemical Research, 2017, 50, 2895-2905.	7.6	258
28	Mesoporous Metalâ€“Organic Frameworks with Sizeâ€Shapeâ€and Spaceâ€Distributionâ€Controlled Pore Structure. Advanced Materials, 2015, 27, 2923-2929.	11.1	217
29	Paclitaxel loaded liposomes decorated with a multifunctional tandem peptide for glioma targeting. Biomaterials, 2014, 35, 4835-4847.	5.7	210
30	Designable Yolkâ€“Shell Nanoparticle@MOF Petalous Heterostructures. Chemistry of Materials, 2014, 26, 1119-1125.	3.2	207
31	An Autotransferable gâ€C₃N₄ Li⁺â€Modulating Layer toward Stable Lithium Anodes. Advanced Materials, 2019, 31, e1900342.	11.1	205
32	Ultrahighâ€“current density anodes with interconnected Li metal reservoir through overlithiation of mesoporous AlF ₃ framework. Science Advances, 2017, 3, e1701301.	4.7	199
33	Wrinkled Graphene Cages as Hosts for High-Capacity Li Metal Anodes Shown by Cryogenic Electron Microscopy. Nano Letters, 2019, 19, 1326-1335.	4.5	193
34	In Situ Electrochemically Derived Nanoporous Oxides from Transition Metal Dichalcogenides for Active Oxygen Evolution Catalysts. Nano Letters, 2016, 16, 7588-7596.	4.5	186
35	Fast galvanic lithium corrosion involving a Kirkendall-type mechanism. Nature Chemistry, 2019, 11, 382-389.	6.6	180
36	All-Integrated Bifunctional Separator for Li Dendrite Detection via Novel Solution Synthesis of a Thermostable Polyimide Separator. Journal of the American Chemical Society, 2016, 138, 11044-11050.	6.6	170

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37	Synergistic enhancement of electrocatalytic CO2 reduction to C2 oxygenates at nitrogen-doped nanodiamonds/Cu interface. Nature Nanotechnology, 2020, 15, 131-137.	15.6	169
38	Ultralight and fire-extinguishing current collectors for high-energy and high-safety lithium-ion batteries. Nature Energy, 2020, 5, 786-793.	19.8	168
39	Electrochemical tuning of olivine-type lithium transition-metal phosphates as efficient water oxidation catalysts. Energy and Environmental Science, 2015, 8, 1719-1724.	15.6	167
40	Fundamental study on the wetting property of liquid lithium. Energy Storage Materials, 2018, 14, 345-350.	9.5	161
41	A pH-responsive Î±-helical cell penetrating peptide-mediated liposomal delivery system. Biomaterials, 2013, 34, 7980-7993.	5.7	158
42	Lithium Metal Anode Materials Design: Interphase and Host. Electrochemical Energy Reviews, 2019, 2, 509-517.	13.1	156
43	An Ultrastrong Double-Layer Nanodiamond Interface for Stable Lithium Metal Anodes. Joule, 2018, 2, 1595-1609.	11.7	155
44	An Aqueous Inorganic Polymer Binder for High Performance Lithiumâ€“Sulfur Batteries with Flame-Retardant Properties. ACS Central Science, 2018, 4, 260-267.	5.3	147
45	Metallurgically lithiated SiO _x anode with high capacity and ambient air compatibility. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7408-7413.	3.3	145
46	Identifying the Active Surfaces of Electrochemically Tuned LiCoO₂for Oxygen Evolution Reaction. Journal of the American Chemical Society, 2017, 139, 6270-6276.	6.6	143
47	Sulfiphilic Nickel Phosphosulfide Enabled Li₂S Impregnation in 3D Graphene Cages for Liâ€“S Batteries. Advanced Materials, 2017, 29, 1603366.	11.1	139
48	Quantitative investigation of polysulfide adsorption capability of candidate materials for Li-S batteries. Energy Storage Materials, 2018, 13, 241-246.	9.5	134
49	Stretchable Lithium Metal Anode with Improved Mechanical and Electrochemical Cycling Stability. Joule, 2018, 2, 1857-1865.	11.7	132
50	Transforming from planar to three-dimensional lithium with flowable interphase for solid lithium metal batteries. Science Advances, 2017, 3, eaao0713.	4.7	131
51	Nanoscale perspective: Materials designs and understandings in lithium metal anodes. Nano Research, 2017, 10, 4003-4026.	5.8	130
52	Synthesis and Selfâ€Assembly of Monodispersed Metalâ€Organic Framework Microcrystals. Chemistry - an Asian Journal, 2013, 8, 69-72.	1.7	121
53	High Tumor Penetration of Paclitaxel Loaded pH Sensitive Cleavable Liposomes by Depletion of Tumor Collagen I in Breast Cancer. ACS Applied Materials & Interfaces, 2015, 7, 9691-9701.	4.0	98
54	A pH-responsive cell-penetrating peptide-modified liposomes with active recognizing of integrin Î±vÎ²3 for the treatment of melanoma. Journal of Controlled Release, 2015, 217, 138-150.	4.8	95

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55	A general prelithiation approach for group IV elements and corresponding oxides. Energy Storage Materials, 2018, 10, 275-281.	9.5	94
56	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.	3.3	94
57	Increased tumor targeted delivery using a multistage liposome system functionalized with RGD, TAT and cleavable PEG. International Journal of Pharmaceutics, 2014, 468, 26-38.	2.6	91
58	Dual Receptor Recognizing Cell Penetrating Peptide for Selective Targeting, Efficient Intratumoral Diffusion and Synthesized Anti-Glioma Therapy. Theranostics, 2016, 6, 177-191.	4.6	91
59	An Interconnected Channelâ€Like Framework as Host for Lithium Metal Composite Anodes. Advanced Energy Materials, 2019, 9, 1802720.	10.2	83
60	Composite lithium electrode with mesoscale skeleton via simple mechanical deformation. Science Advances, 2019, 5, eaau5655.	4.7	79
61	Engineering the surface of LiCoO2 electrodes using atomic layer deposition for stable high-voltage lithium ion batteries. Nano Research, 2017, 10, 3754-3764.	5.8	78
62	Selfâ€Assembled Metalâ€Organic Frameworks Crystals for Chemical Vapor Sensing. Small, 2014, 10, 3672-3676.	5.2	77
63	A Prussian blue route to nitrogen-doped graphene aerogels as efficient electrocatalysts for oxygen reduction with enhanced active site accessibility. Nano Research, 2017, 10, 1213-1222.	5.8	73
64	Electrochemically mediated carbon dioxide separation with quinone chemistry in salt-concentrated aqueous media. Nature Communications, 2020, 11, 2278.	5.8	71
65	Wellâ€Dispersed and Sizeâ€Controlled Supported Metal Oxide Nanoparticles Derived from MOF Composites and Further Application in Catalysis. Small, 2015, 11, 3130-3134.	5.2	70
66	Simultaneous delivery of therapeutic antagomirs with paclitaxel for the management of metastatic tumors by a pH-responsive anti-microbial peptide-mediated liposomal delivery system. Journal of Controlled Release, 2015, 197, 208-218.	4.8	67
67	Antitumor and Antimetastasis Activities of Heparin-based Micelle Served As Both Carrier and Drug. ACS Applied Materials & Interfaces, 2016, 8, 9577-9589.	4.0	66
68	Co-delivery of doxorubicin and P-gp inhibitor by a reduction-sensitive liposome to overcome multidrug resistance, enhance anti-tumor efficiency and reduce toxicity. Drug Delivery, 2016, 23, 1130-1143.	2.5	66
69	In Situ Investigation on the Nanoscale Capture and Evolution of Aerosols on Nanofibers. Nano Letters, 2018, 18, 1130-1138.	4.5	65
70	Multifunctional Tandem Peptide Modified Paclitaxel-Loaded Liposomes for the Treatment of Vasculogenic Mimicry and Cancer Stem Cells in Malignant Glioma. ACS Applied Materials & Interfaces, 2015, 7, 16792-16801.	4.0	64
71	Improving Lithium Metal Composite Anodes with Seeding and Pillaring Effects of Silicon Nanoparticles. ACS Nano, 2020, 14, 4601-4608.	7.3	61
72	Liposomes Combined an Integrin Î±vÎ²3-Specific Vector with pH-Responsible Cell-Penetrating Property for Highly Effective Antiglioma Therapy through the Bloodâ€“Brain Barrier. ACS Applied Materials & Interfaces, 2015, 7, 21442-21454.	4.0	58

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73	Nanoscale ion intermixing induced activation of Fe₂O₃/MnO₂ composites for application in lithium ion batteries. Journal of Materials Chemistry A, 2017, 5, 8510-8518.	5.2	57
74	Enhanced gene delivery efficiency of cationic liposomes coated with PEGylated hyaluronic acid for anti P-glycoprotein siRNA: A potential candidate for overcoming multi-drug resistance. International Journal of Pharmaceutics, 2014, 477, 590-600.	2.6	55
75	Reactivation of dead sulfide species in lithium polysulfide flow battery for grid scale energy storage. Nature Communications, 2017, 8, 462.	5.8	48
76	Lithium Metal Anodes: A Recipe for Protection. Joule, 2017, 1, 649-650.	11.7	46
77	Dual-functionalized liposomal delivery system for solid tumors based on RGD and a pH-responsive antimicrobial peptide. Scientific Reports, 2016, 6, 19800.	1.6	45
78	Effective treatment of the primary tumor and lymph node metastasis by polymeric micelles with variable particle sizes. Journal of Controlled Release, 2018, 292, 67-77.	4.8	45
79	Enhanced antitumor and anti-metastasis efficiency via combined treatment with CXCR4 antagonist and liposomal doxorubicin. Journal of Controlled Release, 2014, 196, 324-331.	4.8	42
80	In situ synthesis of large-area single sub-10 nm nanoparticle arrays by polymer pen lithography. Nanoscale, 2014, 6, 749-752.	2.8	39
81	Controlled incorporation of nanoparticles in metalâ€“organic framework hybrid thin films. Chemical Communications, 2014, 50, 4296.	2.2	38
82	Enhanced Tumor Retention Effect by Click Chemistry for Improved Cancer Immunochemotherapy. ACS Applied Materials & Interfaces, 2018, 10, 17582-17593.	4.0	37
83	Toward solvent-free continuous-flow electrochemically mediated carbon capture with high-concentration liquid quinone chemistry. Joule, 2022, 6, 221-239.	11.7	36
84	Polymerâ€“Drug Nanoparticles Combine Doxorubicin Carrier and Heparin Bioactivity Functionalities for Primary and Metastatic Cancer Treatment. Molecular Pharmaceutics, 2017, 14, 513-522.	2.3	35
85	Targeting delivery and deep penetration using multistage nanoparticles for triple-negative breast cancer. RSC Advances, 2015, 5, 64303-64317.	1.7	33
86	Enhanced glioma therapy by synergistic inhibition of autophagy and tyrosine kinase activity. International Journal of Pharmaceutics, 2018, 536, 1-10.	2.6	32
87	Efficient siRNA transfer to knockdown a placenta specific lncRNA using RGD-modified nano-liposome: A new preeclampsia-like mouse model. International Journal of Pharmaceutics, 2018, 546, 115-124.	2.6	32
88	A novel antitumour strategy using bidirectional autophagic vesicles accumulation via initiative induction and the terminal restraint of autophagic flux. Journal of Controlled Release, 2015, 199, 17-28.	4.8	28
89	Chemotherapy priming of the Pancreatic Tumor Microenvironment Promotes Delivery and Anti-Metastasis Efficacy of Intravenous Low-Molecular-Weight Heparin-Coated Lipid-siRNA Complex. Theranostics, 2019, 9, 355-368.	4.6	28
90	Electrochemical and Molecular Assessment of Quinones as CO₂-Binding Redox Molecules for Carbon Capture. Journal of Physical Chemistry C, 2022, 126, 1389-1399.	1.5	27

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91	Parallel Near-Field Photolithography with Metal-Coated Elastomeric Masks. Langmuir, 2015, 31, 1210-1217.	1.6	21
92	Tandem Peptide Based on Structural Modification of Poly-Arginine for Enhancing Tumor Targeting Efficiency and Therapeutic Effect. ACS Applied Materials & Interfaces, 2017, 9, 2083-2092.	4.0	20
93	Dual Receptor Targeting Cell Penetrating Peptide Modified Liposome for Glioma and Breast Cancer Postoperative Recurrence Therapy. Pharmaceutical Research, 2018, 35, 130.	1.7	19
94	Development of an anti-microbial peptide-mediated liposomal delivery system: a novel approach towards pH-responsive anti-microbial peptides. Drug Delivery, 2016, 23, 1163-1170.	2.5	18
95	Electrochemically mediated gating membrane with dynamically controllable gas transport. Science Advances, 2020, 6, .	4.7	16
96	Integrin Î±vÎ²3 targeting activity study of different retro-inverso sequences of RGD and their potentiality in the designing of tumor targeting peptides. Amino Acids, 2015, 47, 2533-2539.	1.2	14
97	Microencapsulation of Dyeâ€•and Drugâ€Loaded Particles for Imaging and Controlled Release of Multiple Drugs. Advanced Healthcare Materials, 2012, 1, 159-163.	3.9	12
98	Cabazitaxel and indocyanine green co-delivery tumor-targeting nanoparticle for improved antitumor efficacy and minimized drug toxicity. Journal of Drug Targeting, 2017, 25, 179-187.	2.1	12
99	Centimeter-Scale Subwavelength Photolithography Using Metal-Coated Elastomeric Photomasks with Modulated Light Intensity at the Oblique Sidewalls. Langmuir, 2015, 31, 5005-5013.	1.6	9
100	Macrophage-mediated multi-mode drug release system for photothermal combined with anti-inflammatory therapy against postoperative recurrence of triple negative breast cancer. International Journal of Pharmaceutics, 2021, 607, 120975.	2.6	9
101	Cell-penetrating peptides induce apoptosis and necrosis through specific mechanism and cause impairment of Na+â€“K+-ATPase and mitochondria. Amino Acids, 2017, 49, 75-88.	1.2	5