

Jian Liu

List of Publications by Year in descending order

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66
papers

8,287
citations

87723

38
h-index

114278

63
g-index

73
all docs

73
docs citations

73
times ranked

10339
citing authors

#	ARTICLE	IF	CITATIONS
1	Progress in adsorption-based CO ₂ capture by metal-organic frameworks. <i>Chemical Society Reviews</i> , 2012, 41, 2308-2322.	18.7	1,205
2	Screening of Metal-Organic Frameworks for Carbon Dioxide Capture from Flue Gas Using a Combined Experimental and Modeling Approach. <i>Journal of the American Chemical Society</i> , 2009, 131, 18198-18199.	6.6	816
3	Tailoring grain boundary structures and chemistry of Ni-rich layered cathodes for enhanced cycle stability of lithium-ion batteries. <i>Nature Energy</i> , 2018, 3, 600-605.	19.8	613
4	Separation of rare gases and chiral molecules by selective binding in porous organic cages. <i>Nature Materials</i> , 2014, 13, 954-960.	13.3	532
5	CO ₂ /H ₂ O Adsorption Equilibrium and Rates on Metal-Organic Frameworks: HKUST-1 and Ni/DOBDC. <i>Langmuir</i> , 2010, 26, 14301-14307.	1.6	390
6	Introduction of π -Complexation into Porous Aromatic Framework for Highly Selective Adsorption of Ethylene over Ethane. <i>Journal of the American Chemical Society</i> , 2014, 136, 8654-8660.	6.6	383
7	Atomic layer deposition of solid-state electrolyte coated cathode materials with superior high-voltage cycling behavior for lithium ion battery application. <i>Energy and Environmental Science</i> , 2014, 7, 768-778.	15.6	363
8	Potential of Metal-Organic Frameworks for Separation of Xenon and Krypton. <i>Accounts of Chemical Research</i> , 2015, 48, 211-219.	7.6	330
9	Metal-organic framework with optimally selective xenon adsorption and separation. <i>Nature Communications</i> , 2016, 7, ncomms11831.	5.8	325
10	Significant impact on cathode performance of lithium-ion batteries by precisely controlled metal oxide nanocoatings via atomic layer deposition. <i>Journal of Power Sources</i> , 2014, 247, 57-69.	4.0	212
11	Controlling Porosity in Lignin-Derived Nanoporous Carbon for Supercapacitor Applications. <i>ChemSusChem</i> , 2015, 8, 428-432.	3.6	196
12	Selective CO ₂ Capture from Flue Gas Using Metal-Organic Frameworks—A Fixed Bed Study. <i>Journal of Physical Chemistry C</i> , 2012, 116, 9575-9581.	1.5	176
13	Metal-Organic Frameworks for Removal of Xe and Kr from Nuclear Fuel Reprocessing Plants. <i>Langmuir</i> , 2012, 28, 11584-11589.	1.6	172
14	Stability Effects on CO ₂ Adsorption for the DOBDC Series of Metal-Organic Frameworks. <i>Langmuir</i> , 2011, 27, 11451-11456.	1.6	171
15	Switching Kr/Xe Selectivity with Temperature in a Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2012, 134, 9046-9049.	6.6	160
16	Enhanced noble gas adsorption in Ag@MOF-74Ni. <i>Chemical Communications</i> , 2014, 50, 466-468.	2.2	153
17	A porous covalent porphyrin framework with exceptional uptake capacity of saturated hydrocarbons for oil spill cleanup. <i>Chemical Communications</i> , 2013, 49, 1533.	2.2	136
18	Mechanism of Preferential Adsorption of SO ₂ into Two Microporous Paddle Wheel Frameworks M(bdc)(ted) _{0.5} . <i>Chemistry of Materials</i> , 2013, 25, 4653-4662.	3.2	127

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19	Elegant design of electrode and electrode/electrolyte interface in lithium-ion batteries by atomic layer deposition. <i>Nanotechnology</i> , 2015, 26, 024001.	1.3	123
20	Nanoscale Manipulation of Spinel Lithium Nickel Manganese Oxide Surface by Multisite Ti Occupation as High-Performance Cathode. <i>Advanced Materials</i> , 2017, 29, 1703764.	11.1	119
21	Atomic/molecular layer deposition for energy storage and conversion. <i>Chemical Society Reviews</i> , 2021, 50, 3889-3956.	18.7	109
22	Unravelling the Role of Electrochemically Active FePO ₄ Coating by Atomic Layer Deposition for Increased High-Voltage Stability of LiNi _{0.5} Mn _{1.5} O ₄ Cathode Material. <i>Advanced Science</i> , 2015, 2, 1500022.	5.6	108
23	Mesoporous silica-metal organic composite: synthesis, characterization, and ammonia adsorption. <i>Journal of Materials Chemistry</i> , 2011, 21, 6698.	6.7	88
24	Metal-Organic Frameworks as Highly Active Electrocatalysts for High-Energy Density, Aqueous Zinc-Polyiodide Redox Flow Batteries. <i>Nano Letters</i> , 2016, 16, 4335-4340.	4.5	79
25	Atomic layer deposited coatings to significantly stabilize anodes for Li ion batteries: effects of coating thickness and the size of anode particles. <i>Journal of Materials Chemistry A</i> , 2014, 2, 2306.	5.2	78
26	Lignin-derived electrochemical energy materials and systems. <i>Biofuels, Bioproducts and Biorefining</i> , 2020, 14, 650-672.	1.9	73
27	Enabling High-Energy-Density Cathode for Lithium-Sulfur Batteries. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 23094-23102.	4.0	67
28	Size-dependent surface phase change of lithium iron phosphate during carbon coating. <i>Nature Communications</i> , 2014, 5, 3415.	5.8	66
29	A Two-Column Method for the Separation of Kr and Xe from Process Off-Gases. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 12893-12899.	1.8	65
30	Electrospun metal-organic framework polymer composites for the catalytic degradation of methyl paraoxon. <i>New Journal of Chemistry</i> , 2017, 41, 8748-8753.	1.4	64
31	Hollow Carbon Spheres with Abundant Micropores for Enhanced CO ₂ Adsorption. <i>Langmuir</i> , 2017, 33, 1248-1255.	1.6	60
32	Redox-Active Metal-Organic Composites for Highly Selective Oxygen Separation Applications. <i>Advanced Materials</i> , 2016, 28, 3572-3577.	11.1	55
33	Calcination Effects on the Properties of Gallium-Doped Zinc Oxide Powders. <i>Journal of the American Ceramic Society</i> , 2006, 89, 2440-2443.	1.9	52
34	The effect of pyridine modification of Ni-DOBDC on CO ₂ capture under humid conditions. <i>Chemical Communications</i> , 2014, 50, 3296-3298.	2.2	52
35	Formation of size-dependent and conductive phase on lithium iron phosphate during carbon coating. <i>Nature Communications</i> , 2018, 9, 929.	5.8	45
36	Improving LiNi _{0.9} Co _{0.08} Mn _{0.02} O ₂ 's cyclic stability via abating mechanical damages. <i>Energy Storage Materials</i> , 2020, 28, 1-9.	9.5	44

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37	Hyper-Cross-linked Porous Organic Frameworks with Ultramicropores for Selective Xenon Capture. ACS Applied Materials & Interfaces, 2019, 11, 13279-13284.	4.0	43
38	Separation of polar compounds using a flexible metal-organic framework. Chemical Communications, 2015, 51, 8421-8424.	2.2	41
39	A Tunable Bimetallic MOF-74 for Adsorption Chiller Applications. European Journal of Inorganic Chemistry, 2018, 2018, 885-889.	1.0	41
40	Template-free synthesis of NiO hollow microspheres covered with nanoflakes. Materials Letters, 2006, 60, 3601-3604.	1.3	36
41	Identification of solid-state forms of cucurbit[6]uril for carbon dioxide capture. CrystEngComm, 2013, 15, 1528.	1.3	32
42	Preparation and Characterization of a Hydrophobic Metal-Organic Framework Membrane Supported on a Thin Porous Metal Sheet. Industrial & Engineering Chemistry Research, 2016, 55, 3823-3832.	1.8	27
43	Toward Design Rules of Metal-Organic Frameworks for Adsorption Cooling: Effect of Topology on the Ethanol Working Capacity. Chemistry of Materials, 2019, 31, 2702-2706.	3.2	27
44	Origin of phase inhomogeneity in lithium iron phosphate during carbon coating. Nano Energy, 2018, 45, 52-60.	8.2	26
45	Increased Thermal Conductivity in Metal-Organic Heat Carrier Nanofluids. Scientific Reports, 2016, 6, 27805.	1.6	20
46	Isosteric heats of adsorption in the Henry's law region for carbon single wall cylindrical nanopores and spherical nanocavities. Carbon, 2009, 47, 3415-3423.	5.4	19
47	Minimizing Polysulfide Shuttle Effect in Lithium-Ion Sulfur Batteries by Anode Surface Passivation. ACS Applied Materials & Interfaces, 2018, 10, 21965-21972.	4.0	18
48	MoS ₂ -modified graphite felt as a high performance electrode material for zinc-polyiodide redox flow batteries. Inorganic Chemistry Frontiers, 2019, 6, 731-735.	3.0	17
49	Extracting energy from ocean thermal and salinity gradients to power unmanned underwater vehicles: State of the art, current limitations, and future outlook. Renewable and Sustainable Energy Reviews, 2022, 160, 112283.	8.2	17
50	Henry's law constants and isosteric heats of adsorption at zero loading for multi-wall carbon surfaces with different geometries. Carbon, 2010, 48, 3454-3462.	5.4	16
51	Rare-earth element extraction from geothermal brine using magnetic core-shell nanoparticles-techno-economic analysis. Geothermics, 2021, 89, 101938.	1.5	15
52	Anomalous water expulsion from carbon-based rods at high humidity. Nature Nanotechnology, 2016, 11, 791-797.	15.6	11
53	Selective adsorption removal of carbonyl molecular foulants from real fast pyrolysis bio-oils. Biomass and Bioenergy, 2020, 136, 105522.	2.9	10
54	Techno-Economic Analysis of Magnesium Extraction from Seawater via a Catalyzed Organo-Metathetical Process. Jom, 2018, 70, 431-435.	0.9	9

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55	Characteristics of interface between solid electrolyte and electrode in all-solid-state batteries prepared by spark plasma sintering. <i>Journal of Power Sources</i> , 2022, 521, 230964.	4.0	9
56	Large-scale preparation of needle-like zinc oxide with high electrical conductivity. <i>Materials Letters</i> , 2006, 60, 3133-3136.	1.3	8
57	Controlling Porosity in Lignin-Derived Nanoporous Carbon for Supercapacitor Applications. <i>ChemSusChem</i> , 2015, 8, 411-411.	3.6	7
58	Novel highly dispersible, thermally stable core/shell proppants for geothermal applications. <i>Geothermics</i> , 2017, 70, 98-109.	1.5	7
59	METAL ORGANIC FRAMEWORKS—SYNTHESIS AND APPLICATIONS. , 2014, , 61-103.		6
60	Accessible Volumes for Adsorption in Carbon Nanopores of Different Geometries and Wall Thicknesses. <i>Journal of Physical Chemistry C</i> , 2011, 115, 12077-12081.	1.5	4
61	Understanding H ₂ Evolution from the Decomposition of Dibutylmagnesium Isomers Using in-Situ X-ray Diffraction Coupled with Mass Spectroscopy. <i>ACS Applied Energy Materials</i> , 2019, 2, 5272-5278.	2.5	4
62	New Hybrid Organic-Inorganic Thin Films by Molecular Layer Deposition for Rechargeable Batteries. <i>Frontiers in Energy Research</i> , 2021, 9, .	1.2	4
63	Improvement of Cyclic Stability of Na _{0.67} Mn _{0.8} Ni _{0.1} Co _{0.1} O ₂ via Suppressing Lattice Variation. <i>Chinese Physics Letters</i> , 2021, 38, 076102.	1.3	1
64	The cell utilized partitioning model as a predictive tool for optimizing counter-current chromatography processes. <i>Separation and Purification Technology</i> , 2022, 285, 120330.	3.9	1
65	Carbon capture using nanoporous adsorbents. , 2020, , 265-303.		0
66	Understanding the Adsorption of Noble Gases in Metal-Organic Frameworks Using Diffuse Reflectance Infrared Fourier Transform Spectroscopy. <i>Industrial & Engineering Chemistry Research</i> , 0, , .	1.8	0