Jin Shang

List of Publications by Year
in descending order

95 papers	4,917 citations	61984 43 h-index	102487 66 g-index
99 all docs	99 docs citations	99 times ranked	5741 citing authors

#	Article	IF	Citations
1	Discriminative Separation of Gases by a â€œMolecular Trapdoorâ€•Mechanism in Chabazite Zeolites. Journal of the American Chemical Society, 2012, 134, 19246-19253.	13.7	321
2	Biorenewable hydrogen production through biomass gasification: A review and future prospects. Environmental Research, 2020, 186, 109547.	7.5	280
3	Aluminium-biochar composites as sustainable heterogeneous catalysts for glucose isomerisation in a biorefinery. Green Chemistry, 2019, 21, 1267-1281.	9.0	157
4	Gasification biochar from biowaste (food waste and wood waste) for effective CO2 adsorption. Journal of Hazardous Materials, 2020, 391, 121147.	12.4	132
5	Thermally treated zeolitic imidazolate framework-8 (ZIF-8) for visible light photocatalytic degradation of gaseous formaldehyde. Chemical Science, 2020, 11, 6670-6681.	7.4	130
6	Atomically Dispersed Iron Metal Site in a Porphyrin-Based Metalâ€“Organic Framework for Photocatalytic Nitrogen Fixation. ACS Nano, 2021, 15, 9670-9678.	14.6	127
7	Machine learning for the selection of carbon-based materials for tetracycline and sulfamethoxazole adsorption. Chemical Engineering Journal, 2021, 406, 126782.	12.7	119
8	Amino-functionalized Zr-MOF nanoparticles for adsorption of CO₂and CH₄. International Journal of Smart and Nano Materials, 2013, 4, 72-82.	4.2	114
9	Determination of Composition Range for â€œMolecular Trapdoorâ€•Effect in Chabazite Zeolite. Journal of Physical Chemistry C, 2013, 117, 12841-12847.	3.1	104
10	A review on functional polymer-clay based nanocomposite membranes for treatment of water. Journal of Hazardous Materials, 2019, 379, 120584.	12.4	104
11	Effects of amino functionality on uptake of CO2, CH4 and selectivity of CO2/CH4 on titanium based MOFs. Fuel, 2015, 160, 318-327.	6.4	99
12	SupraCells: Living Mammalian Cells Protected within Functional Modular Nanoparticleâ€Based Exoskeletons. Advanced Materials, 2019, 31, e1900545.	21.0	96
13	Machine learning exploration of the critical factors for CO2 adsorption capacity on porous carbon materials at different pressures. Journal of Cleaner Production, 2020, 273, 122915.	9.3	94
14	Carbon Dots in Porous Materials: Hostâ€“Guest Synergy for Enhanced Performance. Angewandte Chemie - International Edition, 2020, 59, 19390-19402.	13.8	94
15	Synthesis, characterization, and CO2 adsorption of three metal-organic frameworks (MOFs): MIL-53, MIL-96, and amino-MIL-53. Polyhedron, 2016, 120, 103-111.	2.2	92
16	Carbon dioxide capture in biochar produced from pine sawdust and paper mill sludge: Effect of porous structure and surface chemistry. Science of the Total Environment, 2020, 739, 139845.	8.0	91
17	Versatile Surface Functionalization of Metalâ€“Organic Frameworks through Direct Metal Coordination with a Phenolic Lipid Enables Diverse Applications. Advanced Functional Materials, 2018, 28, 1705274.	14.9	90
18	Role of Structural Defects in the Adsorption and Separation of C3 Hydrocarbons in Zr-Fumarate-MOF (MOF-801). Chemistry of Materials, 2019, 31, 8413-8423.	6.7	87

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19	Propylene carbonate and Î³-valerolactone as green solvents enhance Sn(<scp>iv</scp>)-catalysed hydroxymethylfurfural (HMF) production from bread waste. Green Chemistry, 2018, 20, 2064-2074.	9.0	85
20	Facile synthesis of CuBTC and its graphene oxide composites as efficient adsorbents for CO2 capture. Chemical Engineering Journal, 2020, 393, 124666.	12.7	85
21	Metalâ€“Organic Framework Nanoparticle-Assisted Cryopreservation of Red Blood Cells. Journal of the American Chemical Society, 2019, 141, 7789-7796.	13.7	82
22	Effects of -NO2 and -NH2 functional groups in mixed-linker Zr-based MOFs on gas adsorption of CO2 and CH4. Progress in Natural Science: Materials International, 2018, 28, 160-167.	4.4	72
23	Transition metal cation-exchanged SSZ-13 zeolites for CO2 capture and separation from N2. Chemical Engineering Journal, 2019, 370, 1450-1458.	12.7	70
24	Photocatalytic Bacterial Inactivation by a Rape Pollen-MoS₂ Biohybrid Catalyst: Synergetic Effects and Inactivation Mechanisms. Environmental Science & Technology, 2020, 54, 537-549.	10.0	69
25	Amine-Functionalized Metalâ€“Organic Frameworks and Covalent Organic Polymers as Potential Sorbents for Removal of Formaldehyde in Aqueous Phase: Experimental Versus Theoretical Study. ACS Applied Materials & Interfaces, 2019, 11, 1426-1439.	8.0	65
26	Effective Dispersion of MgO Nanostructure on Biochar Support as a Basic Catalyst for Glucose Isomerization. ACS Sustainable Chemistry and Engineering, 2020, 8, 6990-7001.	6.7	63
27	N-doped porous carbon derived from polypyrrole for CO2 capture from humid flue gases. Chemical Engineering Journal, 2020, 396, 125376.	12.7	62
28	Functionalized UiO-66 by Single and Binary (OH)₂ and NO₂ Groups for Uptake of CO₂ and CH₄. Industrial & Engineering Chemistry Research, 2016, 55, 7924-7932.	3.7	61
29	Fabricating Mechanically Robust Binderâ€Free Structured Zeolites by 3D Printing Coupled with Zeolite Soldering: A Superior Configuration for CO₂ Capture. Advanced Science, 2019, 6, 1901317.	11.2	61
30	Temperature-regulated guest admission and release in microporous materials. Nature Communications, 2017, 8, 15777.	12.8	60
31	Thio-groups decorated covalent triazine frameworks for selective mercury removal. Journal of Hazardous Materials, 2021, 403, 123702.	12.4	60
32	Tin-Functionalized Wood Biochar as a Sustainable Solid Catalyst for Glucose Isomerization in Biorefinery. ACS Sustainable Chemistry and Engineering, 2019, 7, 4851-4860.	6.7	59
33	Piezoelectric properties of graphene oxide: A first-principles computational study. Applied Physics Letters, 2014, 105, .	3.3	58
34	Metalâ€“Organic Polyhedra-Coated Si Nanowires for the Sensitive Detection of Trace Explosives. Nano Letters, 2017, 17, 1-7.	9.1	56
35	Design and fabrication of exfoliated Mg/Al layered double hydroxides on biochar support. Journal of Cleaner Production, 2021, 289, 125142.	9.3	56
36	Exfoliated Ni-Al LDH 2D nanosheets for intermediate temperature CO2 capture. Journal of Hazardous Materials, 2019, 374, 365-371.	12.4	55

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37	Complete Degradation of Gaseous Methanol over Pt/FeO_x Catalysts by Normal Temperature Catalytic Ozonation. Environmental Science & Technology, 2020, 54, 1938-1945.	10.0	51
38	PAA@ZIF-8 incorporated nanofibrous membrane for high-efficiency PM2.5 capture. Chemical Engineering Journal, 2021, 405, 126584.	12.7	50
39	Transitionâ€Metalâ€Containing Porphyrin Metalâ€“Organic Frameworks as Ï€â€Backbonding Adsorbents for NO₂ Removal. Angewandte Chemie - International Edition, 2020, 59, 19680-19683.	13.8	49
40	Modular Metalâ€“Organic Polyhedra Superassembly: From Molecularâ€Level Design to Targeted Drug Delivery. Advanced Materials, 2019, 31, e1806774.	21.0	48
41	Metalâ€“Organic Polyhedra Cages Immobilized on a Plasmonic Substrate for Sensitive Detection of Trace Explosives. Advanced Functional Materials, 2015, 25, 6009-6017.	14.9	47
42	Potassium Chabazite: A Potential Nanocontainer for Gas Encapsulation. Journal of Physical Chemistry C, 2010, 114, 22025-22031.	3.1	45
43	Converting 3D rigid metalâ€“organic frameworks (MOFs) to 2D flexible networks via ligand exchange for enhanced CO₂/N₂ and CH₄/N₂ separation. Chemical Communications, 2015, 51, 14716-14719.	4.1	45
44	Separation of CO₂ and CH₄ by Pressure Swing Adsorption Using a Molecular Trapdoor Chabazite Adsorbent for Natural Gas Purification. Industrial & Engineering Chemistry Research, 2020, 59, 7857-7865.	3.7	44
45	Adsorption of CO2, N2, and CH4 in Cs-exchanged chabazite: A combination of van der Waals density functional theory calculations and experiment study. Journal of Chemical Physics, 2014, 140, 084705.	3.0	43
46	An optimal trapdoor zeolite for exclusive admission of CO₂ at industrial carbon capture operating temperatures. Chemical Communications, 2018, 54, 3134-3137.	4.1	42
47	One-step fabrication of ZIF-8/polymer composite spheres by a phase inversion method for gas adsorption. Colloid and Polymer Science, 2013, 291, 2711-2717.	2.1	40
48	Grafting Free Carboxylic Acid Groups onto the Pore Surface of 3D Porous Coordination Polymers for High Proton Conductivity. Chemistry of Materials, 2019, 31, 8494-8503.	6.7	40
49	Novel M (Mg/Ni/Cu)-Al-CO3 layered double hydroxides synthesized by aqueous miscible organic solvent treatment (AMOST) method for CO2 capture. Journal of Hazardous Materials, 2019, 373, 285-293.	12.4	38
50	Metal-organic framework for sorptive/catalytic removal and sensing applications against nitroaromatic compounds. Journal of Industrial and Engineering Chemistry, 2020, 84, 87-95.	5.8	37
51	Biogas upgrading through kinetic separation of carbon dioxide and methane over Rb- and Cs-ZK-5 zeolites. RSC Advances, 2014, 4, 62511-62524.	3.6	36
52	Temperature controlled invertible selectivity for adsorption of N2 and CH4 by molecular trapdoor chabazites. Chemical Communications, 2014, 50, 4544.	4.1	33
53	Adsorption and visible-light photocatalytic degradation of organic pollutants by functionalized biochar: Role of iodine doping and reactive species. Environmental Research, 2021, 197, 111026.	7.5	31
54	Novel low energy hydrogenâ€“deuterium isotope breakthrough separation using a trapdoor zeolite. Chemical Engineering Journal, 2016, 288, 161-168.	12.7	30

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55	Intensified Biobutanol Recovery by using Zeolites with Complementary Selectivity. ChemSusChem, 2017, 10, 2968-2977.	6.8	30
56	Synthesis and modification of moisture-stable coordination pillared-layer metal-organic framework (CPL-MOF) CPL-2 for ethylene/ethane separation. Microporous and Mesoporous Materials, 2020, 293, 109784.	4.4	30
57	Recent Advances on Porous Materials for Synergetic Adsorption and Photocatalysis. Energy and Environmental Materials, 2022, 5, 711-730.	12.8	30
58	Contrasting Roles of Maleic Acid in Controlling Kinetics and Selectivity of Sn(IV)- and Cr(III)-Catalyzed Hydroxymethylfurfural Synthesis. ACS Sustainable Chemistry and Engineering, 2018, 6, 14264-14274.	6.7	28
59	Efficient Z-scheme visible-light-driven photocatalytic bacterial inactivation by hierarchical MoS2-encapsulated hydrothermal carbonation carbon core-shell nanospheres. Applied Surface Science, 2019, 464, 43-52.	6.1	28
60	Tuneable functionalities in layered double hydroxide catalysts for thermochemical conversion of biomass-derived glucose to fructose. Chemical Engineering Journal, 2020, 383, 122914.	12.7	28
61	A density functional theory study for the adsorption of various gases on a caesium-exchanged trapdoor chabazite. Computational Materials Science, 2016, 122, 307-313.	3.0	25
62	Ambient NO2 adsorption removal by Mgâ€“Al layered double hydroxides and derived mixed metal oxides. Journal of Cleaner Production, 2021, 313, 127956.	9.3	25
63	Performance Recovery in Degraded Carbon-Based Electrodes for Capacitive Deionization. Environmental Science & Technology, 2020, 54, 1848-1856.	10.0	24
64	Customizing high-performance molten salt biochar from wood waste for CO2/N2 separation. Fuel Processing Technology, 2022, 234, 107319.	7.2	23
65	NO₂ Removal by Adsorption on Transition-Metal-Based Layered Double Hydroxides. ACS ES&T Engineering, 2021, 1, 375-384.	7.6	22
66	A comparative study on conversion of porous and non-porous metalâ€“organic frameworks (MOFs) into carbon-based composites for carbon dioxide capture. Polyhedron, 2016, 120, 30-35.	2.2	21
67	A modified flower pollen-based photothermocatalytic process for enhanced solar water disinfection: Photoelectric effect and bactericidal mechanisms. Water Research, 2022, 217, 118423.	11.3	21
68	Nanomaterial-enabled photothermal-based solar water disinfection processes: Fundamentals, recent advances, and mechanisms. Journal of Hazardous Materials, 2022, 437, 129373.	12.4	21
69	Enhanced photoelectrochemical charge transfer on Mn-doped CdS/TiO2 nanotube arrays: The roles of organic substrates. Catalysis Today, 2019, 335, 468-476.	4.4	20
70	Chrysanthemum flower like silica with highly dispersed Cu nanoparticles as a high-performance NO2 adsorbent. Journal of Hazardous Materials, 2021, 418, 126400.	12.4	20
71	Toxicity assessment and underlying mechanisms of multiple metal organic frameworks using the green algae Chlamydomonas reinhardtii model. Environmental Pollution, 2021, 291, 118199.	7.5	20
72	Effective Gas Separation Performance Enhancement Obtained by Constructing Polymorphous Coreâ€“Shell Metalâ€“Organic Frameworks. ACS Applied Materials & Interfaces, 2019, 11, 30234-30239.	8.0	19

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73	Silica Supported MgO as An Adsorbent for Precombustion CO₂ Capture. ACS Applied Nano Materials, 2019, 2, 6565-6574.	5.0	17
74	Generation and extraction of hydrogen from low-temperature water-gas-shift reaction by a ZIF-8-based membrane reactor. Microporous and Mesoporous Materials, 2019, 280, 347-356.	4.4	17
75	The low-temperature NO2 removal by tailoring metal node in porphyrin-based metal-organic frameworks. Science of the Total Environment, 2021, 801, 149710.	8.0	17
76	Synthesis of Nanocontainer Chabazites from Fly Ash with a Template- and Fluoride-Free Process for Cesium Ion Adsorption. Energy & Fuels, 2017, 31, 4301-4307.	5.1	14
77	Pd(0) loaded Zn₂(azoBDC)₂(dabco) as a heterogeneous catalyst. CrystEngComm, 2017, 19, 4182-4186.	2.6	13
78	Evidence of inter-species swing adsorption between aromatic hydrocarbons. Environmental Research, 2020, 181, 108814.	7.5	13
79	Tailoring acidity and porosity of alumina catalysts via transition metal doping for glucose conversion in biorefinery. Science of the Total Environment, 2020, 704, 135414.	8.0	13
80	Modulated anodization synthesis of Sn-doped iron oxide with enhanced solar water splitting performance. Materials Today Chemistry, 2019, 12, 7-15.	3.5	12
81	Carbon Dots in Porous Materials: Hostâ€“Guest Synergy for Enhanced Performance. Angewandte Chemie, 2020, 132, 19558-19570.	2.0	12
82	Methyllithiumâ€Doped Naphthylâ€Containing Conjugated Microporous Polymer with Enhanced Hydrogen Storage Performance. Chemistry - A European Journal, 2016, 22, 7944-7949.	3.3	11
83	Liquid Marbles in Liquid. Small, 2020, 16, e2002802.	10.0	11
84	Facilitated Dissociation of Water in the Presence of Lithium Metal at Ambient Temperature as a Requisite for Lithiumâ€“Gas Reactions. Journal of Physical Chemistry C, 2018, 122, 16016-16022.	3.1	10
85	Tuning the oxygen functional groups in reduced graphene oxide papers to enhance the electromechanical actuation. RSC Advances, 2015, 5, 68052-68060.	3.6	9
86	Contaminant uptake by polymeric passive samplers: A modeling study with experimental validation. Chemical Engineering Research and Design, 2018, 129, 231-236.	5.6	9
87	Direct identification of HMX via guest-induced fluorescence turn-on of molecular cage. Chinese Chemical Letters, 2021, 32, 4006-4010.	9.0	9
88	Density Functional Theory Computational Study of Alkali Cation-Exchanged Sodalite-like Zeolitelike Metalâ€“Organic Framework for CO2, N2, and CH4 Adsorption. Journal of Physical Chemistry C, 2015, 119, 27449-27456.	3.1	7
89	Exchange Method Using Acidâ€Solvent Synergy for Metalâ€“Organic Framework Synthesis (EASYâ€MOFs) Based on a Typical Pillarâ€Layered Parent Structure. European Journal of Inorganic Chemistry, 2016, 2016, 1466-1469.	2.0	6
90	The rational design of Li-doped nitrogen adsorbents for natural gas purification. Physical Chemistry Chemical Physics, 2021, 23, 971-981.	2.8	6

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91	Enhanced visible-light-driven heterogeneous photocatalytic CO2 methanation using a Cu2O@Cu-MOF-74 thin film. ChemPhysMater, 2023, 2, 126-133.	2.8	4
92	Regulating the spin state of single-atom doped covalent triazine frameworks for efficient nitrogen fixation. Journal of Colloid and Interface Science, 2022, 627, 931-941.	9.4	4
93	Theoretical Study of Moisture-Pretreated Lithium as Potential Material for Natural Gas Upgrading. Industrial & Engineering Chemistry Research, 2018, , .	3.7	3
94	Transitionâ€Metalâ€Containing Porphyrin Metalâ€“Organic Frameworks as Ï€â€Backbonding Adsorbents for NO 2 Removal. Angewandte Chemie, 2020, 132, 19848-19851.	2.0	2
95	Engineered biochar as a potential adsorbent for carbon dioxide capture. , 2022, , 345-359.		1