Shu-Dong Wang

List of Publications by Year
in descending order

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112 papers	3,622 citations	117625 34 h-index	161849 54 g-index
113 all docs	113 docs citations	113 times ranked	4179 citing authors

#	Article	IF	Citations
1	Composites of metalâ€“organic frameworks and carbon-based materials: preparations, functionalities and applications. Journal of Materials Chemistry A, 2016, 4, 3584-3616.	10.3	301
2	In situ FTIR spectroscopic study of the CO₂methanation mechanism on Ni/Ce_{0.5}Zr_{0.5}O₂. Catalysis Science and Technology, 2014, 4, 502-509.	4.1	187
3	Performance and characterization of supported metal catalysts for complete oxidation of formaldehyde at low temperatures. Applied Catalysis B: Environmental, 2007, 73, 282-291.	20.2	168
4	Targeted classification of metalâ€“organic frameworks in the Cambridge structural database (CSD). Chemical Science, 2020, 11, 8373-8387.	7.4	119
5	CO2 methanation on Ni/Ce0.5Zr0.5O2 catalysts for the production of synthetic natural gas. Fuel Processing Technology, 2014, 123, 166-171.	7.2	95
6	CeO2â€“ZrO2-promoted CuO/ZnO catalyst for methanol steam reforming. International Journal of Hydrogen Energy, 2013, 38, 4397-4406.	7.1	92
7	Laâ€“Ceâ€“Niâ€“O monolithic perovskite catalysts potential for gasoline autothermal reforming system. Applied Catalysis A: General, 2005, 281, 233-246.	4.3	83
8	Catalytic activity of Pd/Al2O3 toward the combustion of methane. Catalysis Communications, 2008, 9, 2583-2587.	3.3	76
9	A comparison of Ni/SiC and Ni/Al2O3 catalyzed total methanation for production of synthetic natural gas. Applied Catalysis A: General, 2013, 462-463, 75-81.	4.3	74
10	Methanol steam reforming in a compact plate-fin reformer for fuel-cell systems. International Journal of Hydrogen Energy, 2005, 30, 973-979.	7.1	69
11	Water gas shift reaction over Cuâ€“Mn mixed oxides catalysts: Effects of the third metal. Fuel Processing Technology, 2008, 89, 131-138.	7.2	63
12	Influence of metal oxides on the performance of Pd/Al2O3 catalysts for methane combustion under lean-fuel conditions. Fuel Processing Technology, 2013, 111, 55-61.	7.2	63
13	Highly enhanced selectivity for the separation of CH4 over N2 on two ultra-microporous frameworks with multiple coordination modes. Microporous and Mesoporous Materials, 2014, 186, 137-145.	4.4	63
14	Selective CO oxidation with real methanol reformate over monolithic Pt group catalysts: PEMFC applications. International Journal of Hydrogen Energy, 2006, 31, 924-933.	7.1	61
15	Hydrodynamics of Taylor flow in noncircular capillaries. Chemical Engineering and Processing: Process Intensification, 2008, 47, 2098-2106.	3.6	61
16	Scalable solvent-free preparation of [Ni 3 (HCOO) 6] frameworks for highly efficient separation of CH 4 from N 2. Chemical Engineering Journal, 2017, 327, 564-572.	12.7	61
17	Separation of CH₄/N₂mixtures in metalâ€“organic frameworks with 1D micro-channels. RSC Advances, 2016, 6, 64039-64046.	3.6	58
18	A MEMS resonant accelerometer for low-frequency vibration detection. Sensors and Actuators A: Physical, 2018, 283, 151-158.	4.1	58

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19	Mass transfer characteristics of H2S absorption from gaseous mixture into methyldiethanolamine solution in a T-junction microchannel. Separation and Purification Technology, 2010, 72, 326-334.	7.9	56
20	Flow Pattern, Pressure Drop, and Mass Transfer in a Gasâ˜'Liquid Concurrent Two-Phase Flow Microchannel Reactor. Industrial & Engineering Chemistry Research, 2009, 48, 1621-1628.	3.7	54
21	Modeling of a compact plate-fin reformer for methanol steam reforming in fuel cell systems. Chemical Engineering Journal, 2005, 108, 51-58.	12.7	50
22	Gasâ€“liquid flow in circular microchannel. Part I: Influence of liquid physical properties and channel diameter on flow patterns. Chemical Engineering Science, 2011, 66, 5791-5803.	3.8	49
23	Crystalâ€Planeâ€Dependent Activity of Spinel Co₃O₄ Towards Water Splitting and the Oxygen Reduction Reaction. ChemElectroChem, 2018, 5, 1080-1086.	3.4	47
24	Water Resistant and Flexible MOF Materials for Highly Efficient Separation of Methane from Nitrogen. Industrial & Engineering Chemistry Research, 2019, 58, 20392-20400.	3.7	46
25	Correlation between Microstructure and Performance of Pt/TiO2Catalysts for Formaldehyde Catalytic Oxidation at Ambient Temperature:â€‰ Effects of Hydrogen Pretreatment. Journal of Physical Chemistry C, 2007, 111, 9897-9904.	3.1	44
26	Identifying the descriptor governing NO oxidation on mullite Sm(Y, Tb, Gd,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 467 Td (Lu)Mn<sub>2 2016, 6, 3971-3975.	4.1	44
27	Rationally tuning the separation performances of [M3(HCOO)6] frameworks for CH4/N2 mixtures via metal substitution. Microporous and Mesoporous Materials, 2016, 225, 456-464.	4.4	40
28	Selective Hydrogenation of Benzene to Cyclohexene on a Ru/Al₂O₃/Cordierite Monolithic Catalyst: Effect of Mass Transfer on the Catalytic Performance. Industrial & Engineering Chemistry Research, 2008, 47, 4641-4647.	3.7	38
29	Autothermal reforming of methane over Rh/Ce0.5Zr0.5O2 catalyst: Effects of the crystal structure of the supports. Fuel Processing Technology, 2010, 91, 306-312.	7.2	38
30	Enhanced hydrothermal stability of high performance lean fuel combustion alumina-supported palladium catalyst modified by nickel. Applied Catalysis B: Environmental, 2012, 119-120, 321-328.	20.2	38
31	Effects of Design and Operating Parameters on CO₂ Absorption in Microchannel Contactors. Industrial & Engineering Chemistry Research, 2009, 48, 8629-8634.	3.7	36
32	Cost-effective synthesis of CHA zeolites with controllable morphology and size. Chemical Engineering Journal, 2019, 358, 331-339.	12.7	35
33	Rh/MgO/Ce0.5Zr0.5O2 supported catalyst for autothermal reforming of methane: The effects of ceriaâ€“zirconia doping. Catalysis Today, 2009, 146, 124-131.	4.4	34
34	The sintering of Ni/Al2O3 methanation catalyst for substitute natural gas production. Reaction Kinetics, Mechanisms and Catalysis, 2014, 112, 437-451.	1.7	34
35	Methane Combustion over Pd/Al2O3 Catalyst: Effects of Chlorine Ions and Water on Catalytic Activity. Chinese Journal of Catalysis, 2008, 29, 1221-1225.	14.0	33
36	Programmable synchronization enhanced MEMS resonant accelerometer. Microsystems and Nanoengineering, 2020, 6, 63.	7.0	33

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37	Temperature compensation for MEMS resonant accelerometer based on genetic algorithm optimized backpropagation neural network. Sensors and Actuators A: Physical, 2020, 316, 112393.	4.1	32
38	Monolithic Ru-based catalyst for selective hydrogenation of benzene to cyclohexene. Catalysis Communications, 2008, 9, 459-464.	3.3	31
39	Gasâ^'Liquid Mass Transfer in Taylor Flow through Circular Capillaries. Industrial & Engineering Chemistry Research, 2011, 50, 2323-2330.	3.7	31
40	Rational Synthesis of Chabazite (CHA) Zeolites with Controlled Si/Al Ratio and Their CO₂/CH₄/N₂ Adsorptive Separation Performances. Chemistry - an Asian Journal, 2018, 13, 3222-3230.	3.3	30
41	Flow Pattern and Pressure Drop of Upward Two-Phase Flow in Vertical Capillaries. Industrial & Engineering Chemistry Research, 2008, 47, 243-255.	3.7	29
42	Insights into the Reactive and Deactivation Mechanisms of Manganese Oxides for Ozone Elimination: The Roles of Surface Oxygen Species. Langmuir, 2021, 37, 1410-1419.	3.5	28
43	A thermally stable isoquinoline based ultra-microporous metal-organic framework for CH4 separation from coal mine methane. Chemical Engineering Journal, 2022, 428, 131136.	12.7	27
44	Autothermal reforming of methanol in a mini-reactor for a miniature fuel cell. International Journal of Hydrogen Energy, 2007, 32, 3327-3334.	7.1	26
45	Study on a compact methanol reformer for a miniature fuel cell. International Journal of Hydrogen Energy, 2011, 36, 319-325.	7.1	25
46	Synthesis optimization of the ultra-microporous [Ni₃(HCOO)₆] framework to improve its CH₄/N₂separation selectivity. RSC Advances, 2014, 4, 42326-42336.	3.6	25
47	The role of isolated Cu2+location in structural stability of Cu-modified SAPO-34 in NH3-SCR of NO. Environmental Technology (United Kingdom), 2015, 36, 169-177.	2.2	25
48	â€œExplosiveâ€•synthesis of metal-formate frameworks for methane capture: an experimental and computational study. Chemical Communications, 2017, 53, 11437-11440.	4.1	25
49	Insights into the Ultra-High Volumetric Capacity in a Robust Metalâ€“Organic Framework for Efficient C₂H₂/CO₂ Separation. Chemistry of Materials, 2022, 34, 2708-2716.	6.7	24
50	Effect of impregnation sequence of Ce promoter on the microstructure and performance of Ce-promoted Rh-Fe/SiO2 for the ethanol synthesis. Applied Catalysis A: General, 2016, 510, 227-232.	4.3	23
51	Enhanced Trace Carbon Dioxide Capture on Heteroatomâ€Substituted RHO Zeolites under Humid Conditions. ChemSusChem, 2017, 10, 4207-4214.	6.8	23
52	The role of CeO2â€“ZrO2 as support in the ZnOâ€“ZnCr2O4 catalysts for autothermal reforming of methanol. Fuel Processing Technology, 2008, 89, 574-581.	7.2	22
53	Effects of the oxidation extent of the SiC surface on the performance of Ni/SiC methanation catalysts. Chinese Journal of Catalysis, 2013, 34, 1745-1755.	14.0	22
54	Influence of Operating Conditions on Carbon Deposition Over a Ni Catalyst for the Production of Synthetic Natural Gas (SNG) from Coal. Catalysis Letters, 2014, 144, 2157-2166.	2.6	22

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55	A highly stable Pd/SiO₂/cordierite monolith catalyst for 2-ethyl-anthraquinone hydrogenation. RSC Advances, 2015, 5, 100968-100977.	3.6	22
56	Bench-scale methanol autothermal reformer for distributed hydrogen production. Chemical Engineering Journal, 2008, 139, 56-62.	12.7	21
57	Effects of precipitation aging time on the performance of CuO/ZnO/CeO2-ZrO2 for methanol steam reforming. Journal of Fuel Chemistry and Technology, 2013, 41, 883-888.	2.0	21
58	The Promoting Effect of Fe Doping on Rh/CeO2 for the Ethanol Synthesis. Catalysis Letters, 2015, 145, 1741-1749.	2.6	21
59	Highly dispersed Pd/AlPO-5 catalyst for catalytic hydrogenation of 2-ethylanthraquinone. Applied Catalysis A: General, 2016, 528, 168-174.	4.3	21
60	Targeted Synthesis of Ultrastable Highâ€Silica RHO Zeolite Through Alkali Metalâ€“Crown Ether Interaction. Chemistry - an Asian Journal, 2017, 12, 1043-1047.	3.3	21
61	The combined method to synthesis silica nanoparticle by StÃ¶ber process. Journal of Sol-Gel Science and Technology, 2020, 96, 108-120.	2.4	21
62	A high resolution tilt measurement system based on multi-accelerometers. Measurement: Journal of the International Measurement Confederation, 2017, 109, 215-222.	5.0	20
63	Accelerated Construction of High-Silica RHO and CHA Zeolites via Interzeolite Transformation and Their NH₃â€“SCR Performances after Copper Exchange. Industrial & Engineering Chemistry Research, 2018, 57, 16763-16771.	3.7	20
64	A compact integrated fuel-processing system for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2006, 31, 447-454.	7.1	19
65	Preparation and Characterization of Ru/Al2O3/Cordierite Monolithic Catalysts for Selective Hydrogenation of Benzene to Cyclohexene. Catalysis Letters, 2009, 131, 597-605.	2.6	19
66	Templateâ€based Synthesis of a Formate Metalâ€“Organic Framework/Activated Carbon Fiber Composite for Highâ€performance Methane Adsorptive Separation. Chemistry - an Asian Journal, 2016, 11, 3014-3017.	3.3	19
67	Hydrogenation of 2â€ethylanthraquinone under Taylor flow in single square channel monolith reactors. AIChE Journal, 2009, 55, 726-736.	3.6	18
68	Experimental Evaluation of the Adsorption, Diffusion, and Separation of CH₄/N₂and CH₄/CO₂Mixtures on Al-BDC MOF. Separation Science and Technology, 2015, 50, 874-885.	2.5	18
69	HF-assisted synthesis of ultra-microporous [Mg3(OOCH)6] frameworks for selective adsorption of CH4 over N2. Microporous and Mesoporous Materials, 2015, 204, 73-80.	4.4	18
70	Economical synthesis strategy of RHO zeolites with fine-tuned composition and porosity for enhanced trace CO2 capture. Chemical Engineering Journal, 2019, 359, 344-353.	12.7	18
71	Liquid-phase selective hydrogenation of benzene to cyclohexene on Ru/Al2O3â€“ZrO2/cordierite monolithic catalysts. Journal of Molecular Catalysis A, 2009, 309, 35-39.	4.8	17
72	Measurement of concentration profiles over ZnOâ€“Cr2O3/CeO2â€“ZrO2 monolithic catalyst in oxidative steam reforming of methanol. Fuel Processing Technology, 2007, 88, 65-71.	7.2	16

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73	Autothermal Reforming of Methane Over CeO2â€“ZrO2â€“La2O3 Supported Rh Catalyst. Catalysis Letters, 2009, 131, 474-479.	2.6	16
74	Mixed-Linker Metal-Organic frameworks for carbon and hydrocarbons capture under moist conditions. Chemical Engineering Journal, 2022, 433, 134447.	12.7	16
75	Distribution optimization for plate-fin catalytic combustion heat exchanger. Chemical Engineering Journal, 2007, 131, 171-179.	12.7	14
76	Seed-assisted synthesis of Cu-(Mn)-UZM-9 zeolite as excellent NO removal and N2O inhibition catalysts in wider temperature window. Chemical Engineering Journal, 2020, 391, 123491.	12.7	14
77	Experimental and numerical investigations on the separation performance of [Cu(INA)2] adsorbent for CH4 recovery by VPSA from oxygen-bearing coal mine methane. Chemical Engineering Journal, 2021, 408, 127238.	12.7	14
78	Preparation and characterization of Ir-based catalysts on metallic supports for high-temperature steam reforming of methanol. Applied Catalysis A: General, 2008, 341, 1-7.	4.3	13
79	Mechanistic insights into the contribution of Lewis acidity to brominated VOCs combustion over titanium oxide supported Ru catalyst. Chemosphere, 2021, 263, 128112.	8.2	13
80	A Novel Single-Axis MEMS Tilt Sensor with a High Sensitivity in the Measurement Range from 0â˜ to 360â˜. Sensors, 2018, 18, 346.	3.8	12
81	Steady and Transient Characteristics of Catalytic Flow Reverse Reactor Integrated with Central Heat Exchanger. Industrial & Engineering Chemistry Research, 2014, 53, 12644-12654.	3.7	11
82	Enhanced CO2/CH4 separation performance of BTDA-TDI/MDI (P84) copolyimide mixed-matrix membranes by incorporating submicrometer-sized [Ni3(HCOO)6] framework crystals. Journal of Natural Gas Science and Engineering, 2020, 75, 103123.	4.4	11
83	Mechanistic insights on the reaction behaviors of the acrylonitrile selective catalytic combustion over Cu-based UZM-9. Journal of Hazardous Materials, 2020, 392, 122497.	12.4	11
84	Insights into the Behaviors of the Catalytic Combustion of Propane over Spinel Catalysts. Catalysis Letters, 2020, 150, 3617-3625.	2.6	10
85	Experimental and Numerical Analysis on the Enhanced Separation Performance of a Medical Oxygen Concentrator through Two-Bed Rapid Pressure Swing Adsorption. Industrial & Engineering Chemistry Research, 2021, 60, 5903-5913.	3.7	10
86	NOx storage-reduction over Pt/Mg-Al-O catalysts with different Mg/Al atomic ratios. Korean Journal of Chemical Engineering, 2004, 21, 595-600.	2.7	9
87	From nanoparticles to nanorods: Insights into the morphology changing mechanism of ceria. Ceramics International, 2018, 44, 23232-23238.	4.8	9
88	Ceria nanocube with reactive {100} exposure planes: Simple and controllable synthesis under moderate conditions. Ceramics International, 2019, 45, 15199-15204.	4.8	8
89	HPLC with cellulose Tris (3,5â€Dimethylphenylcarbamate) chiral stationary phase: Influence of coating times and coating amount on chiral discrimination. Chirality, 2019, 31, 164-173.	2.6	8
90	Deactivation mechanism and anti-deactivation modification of Ru/TiO2 catalysts for CH3Br oxidation. Chemosphere, 2020, 257, 127249.	8.2	8

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91	Reaction Mechanism Dominated by the Hardâ€“Soft Acidâ€“Base Theory for the Oxidation of CH₂Cl₂ and CH₃Br over a Titanium Oxide-Supported Ru Catalyst. Industrial & Engineering Chemistry Research, 2020, 59, 7383-7388.	3.7	8
92	Ru/Al2O3-ZrO2-NiO/cordierite monolithic catalysts for selective hydrogenation of benzene. Chinese Journal of Catalysis, 2013, 34, 1543-1550.	14.0	7
93	Mesoporous silica with monodispersed pores synthesized from the controlled self-assembly of silica nanoparticles. Korean Journal of Chemical Engineering, 2015, 32, 852-859.	2.7	7
94	Study on an integrated natural gas fuel processor for 2-kW solid oxide fuel cell. International Journal of Hydrogen Energy, 2015, 40, 15491-15502.	7.1	6
95	A MEMS accelerometer based on synchronizing DETF oscillators. , 2019, , .		6
96	The comparative study on the catalytic activity of Cuâ€“M/Ce_{0.8}Zr_{0.2}O₂ (M = W, Nb, Cr and Mo) catalysts with dual-function for the simultaneous removal of NO and CO under oxygen-rich conditions. Catalysis Science and Technology, 2021, 11, 4987-4995.	4.1	6
97	CuW/CeZr Catalysts: A Dual-Function Catalyst for Selective Catalytic Reduction of NO and CO Oxidation Under Oxygen-Rich Conditions. Catalysis Letters, 2021, 151, 3361-3371.	2.6	6
98	A high-resolution resonant torque sensor based on MEMS quartz resonator. Sensors and Actuators A: Physical, 2021, 320, 112579.	4.1	6
99	A probe-type high-precision micro-force sensor based on quartz DETF resonator. Measurement Science and Technology, 2021, 32, 115107.	2.6	6
100	The properties of silica nanoparticles with high monodispersity synthesized in the microreactor system. Journal of Sol-Gel Science and Technology, 2014, 72, 375-384.	2.4	5
101	Effect of drying technique on the morphological and textural characteristics of mesoporous silica synthesized in the microreactor. Journal of Sol-Gel Science and Technology, 2015, 73, 460-468.	2.4	4
102	Organicâ€Free, ZnOâ€Assisted Synthesis of Zeolite FAU with Tunable SiO₂/Al₂O₃ Molar Ratio. Chemistry - an Asian Journal, 2018, 13, 1114-1118.	3.3	4
103	Robot-aided fNâ˜™m torque sensing within an ultrawide dynamic range. Microsystems and Nanoengineering, 2021, 7, 2.	7.0	4
104	Fructose to Sorbents: Synthesis of Metalâ€“Organic Frameworks Directly from Biomass for Humid Shale Gas Separation. ACS Sustainable Chemistry and Engineering, 2021, 9, 17310-17318.	6.7	4
105	Dynamic performance of a novel tilting angle measurement system using three acceleromenters. , 2016, , .		3
106	Fractal analysis of pre-reduced Pt/TiO2catalysts for formaldehyde oxidation. RSC Advances, 2017, 7, 13536-13542.	3.6	3
107	Deactivation of PdO-Alumina Catalysts Caused by SO2: The Effect of Support Calcination. Catalysis Letters, 2020, 150, 1471-1478.	2.6	3
108	Facile and Mild Synthesis of Metalâ€“Formate Frameworks for Methane Adsorptive Separation. Chemistry Letters, 2017, 46, 1766-1768.	1.3	2

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109	In-plane Dual-axis MEMS Resonant Accelerometer with A Uniform Sensitivity. , 2020, , .		2
110	Palladium Supported on Carbon Nanotubes for Methane Catalytic Oxidation. Chemical Engineering and Technology, 2016, 39, 960-968.	1.5	1
111	A MEMS resonant tilt sensor with high sensitivity maintained in the whole 360Â° measurement range. , 2016, , .		1
112	Monolithic catalysts for hydrogenation of nitrobenzene to aniline: influence of aluminum suspension properties. Journal of Sol-Gel Science and Technology, 2015, 73, 48-53.	2.4	0