

# Shu-Dong Wang

## List of Publications by Year in descending order

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112  
papers

3,622  
citations

117571

34  
h-index

161767

54  
g-index

113  
all docs

113  
docs citations

113  
times ranked

4179  
citing authors

#	ARTICLE	IF	CITATIONS
1	Composites of metal-organic frameworks and carbon-based materials: preparations, functionalities and applications. <i>Journal of Materials Chemistry A</i> , 2016, 4, 3584-3616.	5.2	301
2	In situ FTIR spectroscopic study of the CO <sub>2</sub> methanation mechanism on Ni/Ce <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> . <i>Catalysis Science and Technology</i> , 2014, 4, 502-509.	2.1	187
3	Performance and characterization of supported metal catalysts for complete oxidation of formaldehyde at low temperatures. <i>Applied Catalysis B: Environmental</i> , 2007, 73, 282-291.	10.8	168
4	Targeted classification of metal-organic frameworks in the Cambridge structural database (CSD). <i>Chemical Science</i> , 2020, 11, 8373-8387.	3.7	119
5	CO <sub>2</sub> methanation on Ni/Ce <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> catalysts for the production of synthetic natural gas. <i>Fuel Processing Technology</i> , 2014, 123, 166-171.	3.7	95
6	CeO <sub>2</sub> -ZrO <sub>2</sub> -promoted CuO/ZnO catalyst for methanol steam reforming. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 4397-4406.	3.8	92
7	La-Ce-Ni-O monolithic perovskite catalysts potential for gasoline autothermal reforming system. <i>Applied Catalysis A: General</i> , 2005, 281, 233-246.	2.2	83
8	Catalytic activity of Pd/Al <sub>2</sub> O <sub>3</sub> toward the combustion of methane. <i>Catalysis Communications</i> , 2008, 9, 2583-2587.	1.6	76
9	A comparison of Ni/SiC and Ni/Al <sub>2</sub> O <sub>3</sub> catalyzed total methanation for production of synthetic natural gas. <i>Applied Catalysis A: General</i> , 2013, 462-463, 75-81.	2.2	74
10	Methanol steam reforming in a compact plate-fin reformer for fuel-cell systems. <i>International Journal of Hydrogen Energy</i> , 2005, 30, 973-979.	3.8	69
11	Water gas shift reaction over Cu-Mn mixed oxides catalysts: Effects of the third metal. <i>Fuel Processing Technology</i> , 2008, 89, 131-138.	3.7	63
12	Influence of metal oxides on the performance of Pd/Al <sub>2</sub> O <sub>3</sub> catalysts for methane combustion under lean-fuel conditions. <i>Fuel Processing Technology</i> , 2013, 111, 55-61.	3.7	63
13	Highly enhanced selectivity for the separation of CH <sub>4</sub> over N <sub>2</sub> on two ultra-microporous frameworks with multiple coordination modes. <i>Microporous and Mesoporous Materials</i> , 2014, 186, 137-145.	2.2	63
14	Selective CO oxidation with real methanol reformat over monolithic Pt group catalysts: PEMFC applications. <i>International Journal of Hydrogen Energy</i> , 2006, 31, 924-933.	3.8	61
15	Hydrodynamics of Taylor flow in noncircular capillaries. <i>Chemical Engineering and Processing: Process Intensification</i> , 2008, 47, 2098-2106.	1.8	61
16	Scalable solvent-free preparation of [Ni <sub>3</sub> (HCOO) <sub>6</sub> ] frameworks for highly efficient separation of CH <sub>4</sub> from N <sub>2</sub> . <i>Chemical Engineering Journal</i> , 2017, 327, 564-572.	6.6	61
17	Separation of CH <sub>4</sub> /N <sub>2</sub> mixtures in metal-organic frameworks with 1D micro-channels. <i>RSC Advances</i> , 2016, 6, 64039-64046.	1.7	58
18	A MEMS resonant accelerometer for low-frequency vibration detection. <i>Sensors and Actuators A: Physical</i> , 2018, 283, 151-158.	2.0	58

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19	Mass transfer characteristics of H <sub>2</sub> S absorption from gaseous mixture into methyldiethanolamine solution in a T-junction microchannel. Separation and Purification Technology, 2010, 72, 326-334.	3.9	56
20	Flow Pattern, Pressure Drop, and Mass Transfer in a Gas-Liquid Concurrent Two-Phase Flow Microchannel Reactor. Industrial & Engineering Chemistry Research, 2009, 48, 1621-1628.	1.8	54
21	Modeling of a compact plate-fin reformer for methanol steam reforming in fuel cell systems. Chemical Engineering Journal, 2005, 108, 51-58.	6.6	50
22	Gas-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.	1.9	49
23	Crystal-Plane-Dependent Activity of Spinel Co <sub>3</sub> O <sub>4</sub> Towards Water Splitting and the Oxygen Reduction Reaction. ChemElectroChem, 2018, 5, 1080-1086.	1.7	47
24	Water Resistant and Flexible MOF Materials for Highly Efficient Separation of Methane from Nitrogen. Industrial & Engineering Chemistry Research, 2019, 58, 20392-20400.	1.8	46
25	Correlation between Microstructure and Performance of Pt/TiO <sub>2</sub> Catalysts for Formaldehyde Catalytic Oxidation at Ambient Temperature: Effects of Hydrogen Pretreatment. Journal of Physical Chemistry C, 2007, 111, 9897-9904.	1.5	44
26	Identifying the descriptor governing NO oxidation on mullite Sm(Y, Tb, Gd) <sub>2</sub> Ti <sub>2</sub> O <sub>7</sub> (Lu)Mn <sub>2</sub> O <sub>7</sub> . Applied Catalysis B: Environmental, 2016, 6, 3971-3975.	2.1	44
27	Rationally tuning the separation performances of [M <sub>3</sub> (HCOO) <sub>6</sub> ] frameworks for CH <sub>4</sub> /N <sub>2</sub> mixtures via metal substitution. Microporous and Mesoporous Materials, 2016, 225, 456-464.	2.2	40
28	Selective Hydrogenation of Benzene to Cyclohexene on a Ru/Al <sub>2</sub> O <sub>3</sub> /Cordierite Monolithic Catalyst: Effect of Mass Transfer on the Catalytic Performance. Industrial & Engineering Chemistry Research, 2008, 47, 4641-4647.	1.8	38
29	Autothermal reforming of methane over Rh/Ce <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> catalyst: Effects of the crystal structure of the supports. Fuel Processing Technology, 2010, 91, 306-312.	3.7	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.	10.8	38
31	Effects of Design and Operating Parameters on CO <sub>2</sub> Absorption in Microchannel Contactors. Industrial & Engineering Chemistry Research, 2009, 48, 8629-8634.	1.8	36
32	Cost-effective synthesis of CHA zeolites with controllable morphology and size. Chemical Engineering Journal, 2019, 358, 331-339.	6.6	35
33	Rh/MgO/Ce <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> supported catalyst for autothermal reforming of methane: The effects of ceria-zirconia doping. Catalysis Today, 2009, 146, 124-131.	2.2	34
34	The sintering of Ni/Al <sub>2</sub> O <sub>3</sub> methanation catalyst for substitute natural gas production. Reaction Kinetics, Mechanisms and Catalysis, 2014, 112, 437-451.	0.8	34
35	Methane Combustion over Pd/Al <sub>2</sub> O <sub>3</sub> Catalyst: Effects of Chlorine Ions and Water on Catalytic Activity. Chinese Journal of Catalysis, 2008, 29, 1221-1225.	6.9	33
36	Programmable synchronization enhanced MEMS resonant accelerometer. Microsystems and Nanoengineering, 2020, 6, 63.	3.4	33

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37	Temperature compensation for MEMS resonant accelerometer based on genetic algorithm optimized backpropagation neural network. <i>Sensors and Actuators A: Physical</i> , 2020, 316, 112393.	2.0	32
38	Monolithic Ru-based catalyst for selective hydrogenation of benzene to cyclohexene. <i>Catalysis Communications</i> , 2008, 9, 459-464.	1.6	31
39	Gas-Liquid Mass Transfer in Taylor Flow through Circular Capillaries. <i>Industrial &amp; Engineering Chemistry Research</i> , 2011, 50, 2323-2330.	1.8	31
40	Rational Synthesis of Chabazite (CHA) Zeolites with Controlled Si/Al Ratio and Their CO <sub>2</sub> /CH <sub>4</sub> /N <sub>2</sub> Adsorptive Separation Performances. <i>Chemistry - an Asian Journal</i> , 2018, 13, 3222-3230.	1.7	30
41	Flow Pattern and Pressure Drop of Upward Two-Phase Flow in Vertical Capillaries. <i>Industrial &amp; Engineering Chemistry Research</i> , 2008, 47, 243-255.	1.8	29
42	Insights into the Reactive and Deactivation Mechanisms of Manganese Oxides for Ozone Elimination: The Roles of Surface Oxygen Species. <i>Langmuir</i> , 2021, 37, 1410-1419.	1.6	28
43	A thermally stable isoquinoline based ultra-microporous metal-organic framework for CH <sub>4</sub> separation from coal mine methane. <i>Chemical Engineering Journal</i> , 2022, 428, 131136.	6.6	27
44	Autothermal reforming of methanol in a mini-reactor for a miniature fuel cell. <i>International Journal of Hydrogen Energy</i> , 2007, 32, 3327-3334.	3.8	26
45	Study on a compact methanol reformer for a miniature fuel cell. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 319-325.	3.8	25
46	Synthesis optimization of the ultra-microporous [Ni <sub>3</sub> (HCOO) <sub>6</sub> ] framework to improve its CH <sub>4</sub> /N <sub>2</sub> separation selectivity. <i>RSC Advances</i> , 2014, 4, 42326-42336.	1.7	25
47	The role of isolated Cu <sup>2+</sup> location in structural stability of Cu-modified SAPO-34 in NH <sub>3</sub> -SCR of NO. <i>Environmental Technology (United Kingdom)</i> , 2015, 36, 169-177.	1.2	25
48	Explosive synthesis of metal-formate frameworks for methane capture: an experimental and computational study. <i>Chemical Communications</i> , 2017, 53, 11437-11440.	2.2	25
49	Insights into the Ultra-High Volumetric Capacity in a Robust Metal-Organic Framework for Efficient C <sub>2</sub> H <sub>2</sub> /CO <sub>2</sub> Separation. <i>Chemistry of Materials</i> , 2022, 34, 2708-2716.	3.2	24
50	Effect of impregnation sequence of Ce promoter on the microstructure and performance of Ce-promoted Rh-Fe/SiO <sub>2</sub> for the ethanol synthesis. <i>Applied Catalysis A: General</i> , 2016, 510, 227-232.	2.2	23
51	Enhanced Trace Carbon Dioxide Capture on Heteroatom-Substituted RHO Zeolites under Humid Conditions. <i>ChemSusChem</i> , 2017, 10, 4207-4214.	3.6	23
52	The role of CeO <sub>2</sub> -ZrO <sub>2</sub> as support in the ZnO-ZnCr <sub>2</sub> O <sub>4</sub> catalysts for autothermal reforming of methanol. <i>Fuel Processing Technology</i> , 2008, 89, 574-581.	3.7	22
53	Effects of the oxidation extent of the SiC surface on the performance of Ni/SiC methanation catalysts. <i>Chinese Journal of Catalysis</i> , 2013, 34, 1745-1755.	6.9	22
54	Influence of Operating Conditions on Carbon Deposition Over a Ni Catalyst for the Production of Synthetic Natural Gas (SNG) from Coal. <i>Catalysis Letters</i> , 2014, 144, 2157-2166.	1.4	22

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55	A highly stable Pd/SiO <sub>2</sub> /cordierite monolith catalyst for 2-ethyl-anthraquinone hydrogenation. RSC Advances, 2015, 5, 100968-100977.	1.7	22
56	Bench-scale methanol autothermal reformer for distributed hydrogen production. Chemical Engineering Journal, 2008, 139, 56-62.	6.6	21
57	Effects of precipitation aging time on the performance of CuO/ZnO/CeO <sub>2</sub> -ZrO <sub>2</sub> for methanol steam reforming. Journal of Fuel Chemistry and Technology, 2013, 41, 883-888.	0.9	21
58	The Promoting Effect of Fe Doping on Rh/CeO <sub>2</sub> for the Ethanol Synthesis. Catalysis Letters, 2015, 145, 1741-1749.	1.4	21
59	Highly dispersed Pd/AlPO-5 catalyst for catalytic hydrogenation of 2-ethylanthraquinone. Applied Catalysis A: General, 2016, 528, 168-174.	2.2	21
60	Targeted Synthesis of Ultrastable High-Silica RHO Zeolite Through Alkali Metal-Crown Ether Interaction. Chemistry - an Asian Journal, 2017, 12, 1043-1047.	1.7	21
61	The combined method to synthesis silica nanoparticle by Stober process. Journal of Sol-Gel Science and Technology, 2020, 96, 108-120.	1.1	21
62	A high resolution tilt measurement system based on multi-accelerometers. Measurement: Journal of the International Measurement Confederation, 2017, 109, 215-222.	2.5	20
63	Accelerated Construction of High-Silica RHO and CHA Zeolites via Interzeolite Transformation and Their NH <sub>3</sub> -SCR Performances after Copper Exchange. Industrial & Engineering Chemistry Research, 2018, 57, 16763-16771.	1.8	20
64	A compact integrated fuel-processing system for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2006, 31, 447-454.	3.8	19
65	Preparation and Characterization of Ru/Al <sub>2</sub> O <sub>3</sub> /Cordierite Monolithic Catalysts for Selective Hydrogenation of Benzene to Cyclohexene. Catalysis Letters, 2009, 131, 597-605.	1.4	19
66	Template-based Synthesis of a Formate Metal-Organic Framework/Activated Carbon Fiber Composite for High-performance Methane Adsorptive Separation. Chemistry - an Asian Journal, 2016, 11, 3014-3017.	1.7	19
67	Hydrogenation of 2-ethylanthraquinone under Taylor flow in single square channel monolith reactors. AIChE Journal, 2009, 55, 726-736.	1.8	18
68	Experimental Evaluation of the Adsorption, Diffusion, and Separation of CH <sub>4</sub> /N <sub>2</sub> and CH <sub>4</sub> /CO <sub>2</sub> Mixtures on Al-BDC MOF. Separation Science and Technology, 2015, 50, 874-885.	1.3	18
69	HF-assisted synthesis of ultra-microporous [Mg <sub>3</sub> (OOCH) <sub>6</sub> ] frameworks for selective adsorption of CH <sub>4</sub> over N <sub>2</sub> . Microporous and Mesoporous Materials, 2015, 204, 73-80.	2.2	18
70	Economical synthesis strategy of RHO zeolites with fine-tuned composition and porosity for enhanced trace CO <sub>2</sub> capture. Chemical Engineering Journal, 2019, 359, 344-353.	6.6	18
71	Liquid-phase selective hydrogenation of benzene to cyclohexene on Ru/Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> /cordierite monolithic catalysts. Journal of Molecular Catalysis A, 2009, 309, 35-39.	4.8	17
72	Measurement of concentration profiles over ZnO-Cr <sub>2</sub> O <sub>3</sub> /CeO <sub>2</sub> -ZrO <sub>2</sub> monolithic catalyst in oxidative steam reforming of methanol. Fuel Processing Technology, 2007, 88, 65-71.	3.7	16

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73	Autothermal Reforming of Methane Over CeO <sub>2</sub> -ZrO <sub>2</sub> -La <sub>2</sub> O <sub>3</sub> Supported Rh Catalyst. <i>Catalysis Letters</i> , 2009, 131, 474-479.	1.4	16
74	Mixed-Linker Metal-Organic frameworks for carbon and hydrocarbons capture under moist conditions. <i>Chemical Engineering Journal</i> , 2022, 433, 134447.	6.6	16
75	Distribution optimization for plate-fin catalytic combustion heat exchanger. <i>Chemical Engineering Journal</i> , 2007, 131, 171-179.	6.6	14
76	Seed-assisted synthesis of Cu-(Mn)-UZM-9 zeolite as excellent NO removal and N <sub>2</sub> O inhibition catalysts in wider temperature window. <i>Chemical Engineering Journal</i> , 2020, 391, 123491.	6.6	14
77	Experimental and numerical investigations on the separation performance of [Cu(INA) <sub>2</sub> ] adsorbent for CH <sub>4</sub> recovery by VPSA from oxygen-bearing coal mine methane. <i>Chemical Engineering Journal</i> , 2021, 408, 127238.	6.6	14
78	Preparation and characterization of Ir-based catalysts on metallic supports for high-temperature steam reforming of methanol. <i>Applied Catalysis A: General</i> , 2008, 341, 1-7.	2.2	13
79	Mechanistic insights into the contribution of Lewis acidity to brominated VOCs combustion over titanium oxide supported Ru catalyst. <i>Chemosphere</i> , 2021, 263, 128112.	4.2	13
80	A Novel Single-Axis MEMS Tilt Sensor with a High Sensitivity in the Measurement Range from 0° to 360°. <i>Sensors</i> , 2018, 18, 346.	2.1	12
81	Steady and Transient Characteristics of Catalytic Flow Reverse Reactor Integrated with Central Heat Exchanger. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 12644-12654.	1.8	11
82	Enhanced CO <sub>2</sub> /CH <sub>4</sub> separation performance of BTDA-TDI/MDI (P84) copolyimide mixed-matrix membranes by incorporating submicrometer-sized [Ni <sub>3</sub> (HCOO) <sub>6</sub> ] framework crystals. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 75, 103123.	2.1	11
83	Mechanistic insights on the reaction behaviors of the acrylonitrile selective catalytic combustion over Cu-based UZM-9. <i>Journal of Hazardous Materials</i> , 2020, 392, 122497.	6.5	11
84	Insights into the Behaviors of the Catalytic Combustion of Propane over Spinel Catalysts. <i>Catalysis Letters</i> , 2020, 150, 3617-3625.	1.4	10
85	Experimental and Numerical Analysis on the Enhanced Separation Performance of a Medical Oxygen Concentrator through Two-Bed Rapid Pressure Swing Adsorption. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 5903-5913.	1.8	10
86	NO <sub>x</sub> storage-reduction over Pt/Mg-Al-O catalysts with different Mg/Al atomic ratios. <i>Korean Journal of Chemical Engineering</i> , 2004, 21, 595-600.	1.2	9
87	From nanoparticles to nanorods: Insights into the morphology changing mechanism of ceria. <i>Ceramics International</i> , 2018, 44, 23232-23238.	2.3	9
88	Ceria nanocube with reactive {100} exposure planes: Simple and controllable synthesis under moderate conditions. <i>Ceramics International</i> , 2019, 45, 15199-15204.	2.3	8
89	HPLC with cellulose Tris (3,5-DimethylPhenylcarbamate) chiral stationary phase: Influence of coating times and coating amount on chiral discrimination. <i>Chirality</i> , 2019, 31, 164-173.	1.3	8
90	Deactivation mechanism and anti-deactivation modification of Ru/TiO <sub>2</sub> catalysts for CH <sub>3</sub> Br oxidation. <i>Chemosphere</i> , 2020, 257, 127249.	4.2	8

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91	Reaction Mechanism Dominated by the Hardâ€“Soft Acidâ€“Base Theory for the Oxidation of CH <sub>2</sub> Cl <sub>2</sub> and CH <sub>3</sub> Br over a Titanium Oxide-Supported Ru Catalyst. Industrial & Engineering Chemistry Research, 2020, 59, 7383-7388.	1.8	8
92	Ru/Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> -NiO/cordierite monolithic catalysts for selective hydrogenation of benzene. Chinese Journal of Catalysis, 2013, 34, 1543-1550.	6.9	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.	1.2	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.	3.8	6
95	A MEMS accelerometer based on synchronizing DETF oscillators. , 2019, , .		6
96	The comparative study on the catalytic activity of Cuâ€“M/Ce <sub>0.8</sub> Zr <sub>0.2</sub> O <sub>2</sub> (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.	2.1	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.	1.4	6
98	A high-resolution resonant torque sensor based on MEMS quartz resonator. Sensors and Actuators A: Physical, 2021, 320, 112579.	2.0	6
99	A probe-type high-precision micro-force sensor based on quartz DETF resonator. Measurement Science and Technology, 2021, 32, 115107.	1.4	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.	1.1	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.	1.1	4
102	Organicâ€“Free, ZnOâ€“Assisted Synthesis of Zeolite FAU with Tunable SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> Molar Ratio. Chemistry - an Asian Journal, 2018, 13, 1114-1118.	1.7	4
103	Robot-aided fNâ™ torque sensing within an ultrawide dynamic range. Microsystems and Nanoengineering, 2021, 7, 2.	3.4	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.	3.2	4
105	Dynamic performance of a novel tilting angle measurement system using three accelerometers. , 2016, , .		3
106	Fractal analysis of pre-reduced Pt/TiO <sub>2</sub> catalysts for formaldehyde oxidation. RSC Advances, 2017, 7, 13536-13542.	1.7	3
107	Deactivation of PdO-Alumina Catalysts Caused by SO <sub>2</sub> : The Effect of Support Calcination. Catalysis Letters, 2020, 150, 1471-1478.	1.4	3
108	Facile and Mild Synthesis of Metalâ€“Formate Frameworks for Methane Adsorptive Separation. Chemistry Letters, 2017, 46, 1766-1768.	0.7	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.	0.9	1
111	A MEMS resonant tilt sensor with high sensitivity maintained in the whole 360° 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.	1.1	0