Botao Qiao

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/646547/publications.pdf

Version: 2024-02-01

109 papers	19,494 citations	36203 51 h-index	24915 109 g-index
115 all docs	115 docs citations	115 times ranked	13251 citing authors

#	Article	IF	Citations
1	Single-atom catalysis of CO oxidation using Pt1/FeOx. Nature Chemistry, 2011, 3, 634-641.	6.6	5,149
2	Single-Atom Catalysts: A New Frontier in Heterogeneous Catalysis. Accounts of Chemical Research, 2013, 46, 1740-1748.	7.6	3,405
3	FeOx-supported platinum single-atom and pseudo-single-atom catalysts for chemoselective hydrogenation of functionalized nitroarenes. Nature Communications, 2014, 5, 5634.	5.8	890
4	Remarkable Performance of Ir₁/FeO_{<i>x</i>} Single-Atom Catalyst in Water Gas Shift Reaction. Journal of the American Chemical Society, 2013, 135, 15314-15317.	6.6	811
5	Single-Atom Catalysts Based on the Metalâ€“Oxide Interaction. Chemical Reviews, 2020, 120, 11986-12043.	23.0	486
6	Non defect-stabilized thermally stable single-atom catalyst. Nature Communications, 2019, 10, 234.	5.8	452
7	Ultrastable single-atom gold catalysts with strong covalent metal-support interaction (CMSI). Nano Research, 2015, 8, 2913-2924.	5.8	422
8	Atomically dispersed nickel as coke-resistant active sites for methane dry reforming. Nature Communications, 2019, 10, 5181.	5.8	398
9	Highly Efficient Catalysis of Preferential Oxidation of CO in H₂-Rich Stream by Gold Single-Atom Catalysts. ACS Catalysis, 2015, 5, 6249-6254.	5.5	380
10	Hydroformylation of Olefins by a Rhodium Singleâ€Atom Catalyst with Activity Comparable to RhCl(PPh₃)₃. Angewandte Chemie - International Edition, 2016, 55, 16054-16058.	7.2	376
11	Classical strong metalâ€“support interactions between gold nanoparticles and titanium dioxide. Science Advances, 2017, 3, e1700231.	4.7	361
12	Strong Metalâ€“Support Interactions between Gold Nanoparticles and Nonoxides. Journal of the American Chemical Society, 2016, 138, 56-59.	6.6	357
13	Strong Metalâ€“Support Interactions between Pt Single Atoms and TiO₂. Angewandte Chemie - International Edition, 2020, 59, 11824-11829.	7.2	309
14	Alternatives to Phosgene and Carbon Monoxide: Synthesis of Symmetric Urea Derivatives with Carbon Dioxide in Ionic Liquids. Angewandte Chemie - International Edition, 2003, 42, 3257-3260.	7.2	241
15	Supported Single Pt₁/Au₁ Atoms for Methanol Steam Reforming. ACS Catalysis, 2014, 4, 3886-3890.	5.5	204
16	Single-atom catalysis: Bridging the homo- and heterogeneous catalysis. Chinese Journal of Catalysis, 2018, 39, 893-898.	6.9	199
17	Strong metal-support interaction promoted scalable production of thermally stable single-atom catalysts. Nature Communications, 2020, 11, 1263.	5.8	198
18	Ultrastable Hydroxyapatite/Titaniumâ€Dioxideâ€Supported Gold Nanocatalyst with Strong Metalâ€“Support Interaction for Carbon Monoxide Oxidation. Angewandte Chemie - International Edition, 2016, 55, 10606-10611.	7.2	192

#	Article	IF	Citations
19	Design of a Highly Active Ir/Fe(OH)_{<i>x</i>} Catalyst: Versatile Application of Ptâ€Group Metals for the Preferential Oxidation of Carbon Monoxide. Angewandte Chemie - International Edition, 2012, 51, 2920-2924.	7.2	183
20	Origin of the high activity of Au/FeOx for low-temperature CO oxidation: Direct evidence for a redox mechanism. Journal of Catalysis, 2013, 299, 90-100.	3.1	170
21	Maximizing the Number of Interfacial Sites in Singleâ€Atom Catalysts for the Highly Selective, Solventâ€Free Oxidation of Primary Alcohols. Angewandte Chemie - International Edition, 2018, 57, 7795-7799.	7.2	151
22	Size-dependent strong metal-support interaction in TiO2 supported Au nanocatalysts. Nature Communications, 2020, 11, 5811.	5.8	147
23	Theoretical and Experimental Investigations on Single-Atom Catalysis: Ir₁/FeO_{<i>x</i>} for CO Oxidation. Journal of Physical Chemistry C, 2014, 118, 21945-21951.	1.5	145
24	Identifying Size Effects of Pt as Single Atoms and Nanoparticles Supported on FeO_{<i>x</i>} for the Water-Gas Shift Reaction. ACS Catalysis, 2018, 8, 859-868.	5.5	140
25	Solubilities of the Gaseous and Liquid Solutes and Their Thermodynamics of Solubilization in the Novel Room-Temperature Ionic Liquids at Infinite Dilution by Gas Chromatography. Journal of Chemical & Engineering Data, 2007, 52, 2277-2283.	1.0	133
26	Electrostatic Stabilization of Single-Atom Catalysts by Ionic Liquids. CheM, 2019, 5, 3207-3219.	5.8	131
27	Catalytically Active Rh Subâ€Nanoclusters on TiO₂ for CO Oxidation at Cryogenic Temperatures. Angewandte Chemie - International Edition, 2016, 55, 2820-2824.	7.2	127
28	High Activity of Au/Î³-Fe₂O₃ for CO Oxidation: Effect of Support Crystal Phase in Catalyst Design. ACS Catalysis, 2015, 5, 3528-3539.	5.5	119
29	Controlling CO₂ Hydrogenation Selectivity by Metalâ€Supported Electron Transfer. Angewandte Chemie - International Edition, 2020, 59, 19983-19989.	7.2	114
30	Little do more: a highly effective Pt₁/FeO_x single-atom catalyst for the reduction of NO by H₂. Chemical Communications, 2015, 51, 7911-7914.	2.2	107
31	Preparation of highly effective ferric hydroxide supported noble metal catalysts for CO oxidations: From gold to palladium. Journal of Catalysis, 2009, 261, 241-244.	3.1	105
32	A highly active and sintering-resistant Au/FeO_xâ€“hydroxyapatite catalyst for CO oxidation. Chemical Communications, 2011, 47, 1779-1781.	2.2	102
33	Boosting the catalysis of gold by O2 activation at Au-SiO2 interface. Nature Communications, 2020, 11, 558.	5.8	98
34	Ferric Oxide-Supported Pt Subnano Clusters for Preferential Oxidation of CO in H₂-Rich Gas at Room Temperature. ACS Catalysis, 2014, 4, 2113-2117.	5.5	96
35	Remarkable active-site dependent H2O promoting effect in CO oxidation. Nature Communications, 2019, 10, 3824.	5.8	96
36	Highly active Au1/Co3O4 single-atom catalyst for CO oxidation at room temperature. Chinese Journal of Catalysis, 2015, 36, 1505-1511.	6.9	93

#	Article	IF	Citations
37	Oxidative strong metalâ€“support interactions (OMSI) of supported platinum-group metal catalysts. Chemical Science, 2018, 9, 6679-6684.	3.7	89
38	Effect of ZSM-5 on the aromatization performance in cracking catalyst. Journal of Molecular Catalysis A, 2004, 215, 195-199.	4.8	86
39	Single atom gold catalysts for low-temperature CO oxidation. Chinese Journal of Catalysis, 2016, 37, 1580-1586.	6.9	85
40	Novel chemoselective hydrogenation of aromatic nitro compounds over ferric hydroxide supported nanocluster gold in the presence of CO and H2O. Chemical Communications, 2009, , 653-655.	2.2	84
41	Photochemical Deposition of Highly Dispersed Pt Nanoparticles on Porous CeO₂ Nanofibers for the Waterâ€Gas Shift Reaction. Advanced Functional Materials, 2015, 25, 4153-4162.	7.8	75
42	Enhanced performance of Rh₁/TiO₂ catalyst without methanation in waterâ€gas shift reaction. AICHE Journal, 2017, 63, 2081-2088.	1.8	74
43	Styrene Hydroformylation with In Situ Hydrogen: Regioselectivity Control by Coupling with the Lowâ€Temperature Waterâ€“Gas Shift Reaction. Angewandte Chemie - International Edition, 2020, 59, 7430-7434.	7.2	74
44	Remarkable effects of hydroxyl species on low-temperature CO (preferential) oxidation over Ir/Fe(OH) x catalyst. Journal of Catalysis, 2014, 319, 142-149.	3.1	71
45	Catalytic cascade conversion of furfural to 1,4-pentanediol in a single reactor. Green Chemistry, 2018, 20, 1770-1776.	4.6	71
46	Hydroformylation of Olefins by a Rhodium Singleâ€Atom Catalyst with Activity Comparable to RhCl(PPh₃)₃. Angewandte Chemie, 2016, 128, 16288-16292.	1.6	67
47	High-Efficiency Water Gas Shift Reaction Catalysis on Î±-MoC Promoted by Single-Atom Ir Species. ACS Catalysis, 2021, 11, 5942-5950.	5.5	65
48	A Hydrothermally Stable Irreducible Oxideâ€Modified Pd/MgAl₂O₄ Catalyst for Methane Combustion. Angewandte Chemie - International Edition, 2020, 59, 18522-18526.	7.2	64
49	A highly active Rh₁/CeO₂ single-atom catalyst for low-temperature CO oxidation. Chemical Communications, 2020, 56, 4870-4873.	2.2	62
50	Photo-thermo semi-hydrogenation of acetylene on Pd1/TiO2 single-atom catalyst. Nature Communications, 2022, 13, 2648.	5.8	61
51	Identification of Active Sites on High-Performance Pt/Al₂O₃ Catalyst for Cryogenic CO Oxidation. ACS Catalysis, 2020, 10, 8815-8824.	5.5	54
52	Highly effective ferric hydroxide supported gold catalyst for selective oxidation of CO in the presence of H2This work was financially supported by The National Natural Science Foundation of China (No. 20173068).. Chemical Communications, 2003, , 2192.	2.2	53
53	Title is missing!. Angewandte Chemie, 2003, 115, 3379-3382.	1.6	50
54	Highlights of the major progress in single-atom catalysis in 2015 and 2016. Chinese Journal of Catalysis, 2017, 38, 1498-1507.	6.9	49

#	Article	IF	Citations
55	Ferric hydroxide supported gold subnano clusters or quantum dots: enhanced catalytic performance in chemoselective hydrogenation. Dalton Transactions, 2008, , 2542.	1.6	48
56	Superior activity of Rh1/ZnO single-atom catalyst for CO oxidation. Chinese Journal of Catalysis, 2019, 40, 1847-1853.	6.9	47
57	Catalytic co-oxidation of CO and H2 over FeOx-supported Pd catalyst at low temperatures. Journal of Catalysis, 2012, 294, 29-36.	3.1	46
58	Strong Metalâ€“Support Interactions between Pt Single Atoms and TiO₂. Angewandte Chemie, 2020, 132, 11922-11927.	1.6	46
59	Greatly enhanced fluorescence of dicyanamide anion based ionic liquids confined into mesoporous silica gel. Chemical Physics Letters, 2008, 461, 229-234.	1.2	44
60	Highly Active and Carbon-Resistant Nickel Single-Atom Catalysts for Methane Dry Reforming. Catalysts, 2020, 10, 630.	1.6	42
61	More active Ir subnanometer clusters than singleâ€atoms for catalytic oxidation of CO at low temperature. AIChE Journal, 2017, 63, 4003-4012.	1.8	41
62	Atomic-Scale Pd on 2D Titania Sheets for Selective Oxidation of Methane to Methanol. ACS Catalysis, 2021, 11, 14038-14046.	5.5	41
63	Low-temperature prepared highly effective ferric hydroxide supported gold catalysts for carbon monoxide selective oxidation in the presence of hydrogen. Applied Catalysis A: General, 2008, 340, 220-228.	2.2	40
64	Highly effective CuO/Fe(OH)x catalysts for selective oxidation of CO in H2-rich stream. Applied Catalysis B: Environmental, 2011, 105, 103-110.	10.8	40
65	Hetero-epitaxially anchoring Au nanoparticles onto ZnO nanowires for CO oxidation. Chemical Communications, 2015, 51, 15332-15335.	2.2	34
66	Effective Au-Au+-Clx/Fe(OH)y catalysts containing Clâˆ’ for selective CO oxidations at lower temperatures. Applied Catalysis B: Environmental, 2006, 66, 241-248.	10.8	32
67	Catalytically Active Rh Subâ€Nanoclusters on TiO₂ for CO Oxidation at Cryogenic Temperatures. Angewandte Chemie, 2016, 128, 2870-2874.	1.6	31
68	High-loading and thermally stable Pt1/MgAl1.2Fe0.8O4 single-atom catalysts for high-temperature applications. Science China Materials, 2020, 63, 949-958.	3.5	31
69	A Novel Singleâ€Atom Electrocatalyst Ti₁/rGO for Efficient Cathodic Reduction in Hybrid Photovoltaics. Advanced Materials, 2020, 32, e2000478.	11.1	31
70	Ultrastable Hydroxyapatite/Titaniumâ€Dioxideâ€Supported Gold Nanocatalyst with Strong Metalâ€“Support Interaction for Carbon Monoxide Oxidation. Angewandte Chemie, 2016, 128, 10764-10769.	1.6	29
71	Pd single-atom catalysts derived from strong metal-support interaction for selective hydrogenation of acetylene. Nano Research, 2022, 15, 10037-10043.	5.8	28
72	The roles of hydroxyapatite and FeOx in a Au/FeOx hydroxyapatite catalyst for CO oxidation. Chinese Journal of Catalysis, 2013, 34, 1386-1394.	6.9	27

#	Article	IF	Citations
73	Catalytic production of 1,4-pentanediol from furfural in a fixed-bed system under mild conditions. Green Chemistry, 2020, 22, 3532-3538.	4.6	27
74	La-doped Al₂O₃ supported Au nanoparticles: highly active and selective catalysts for PROX under PEMFC operation conditions. Chemical Communications, 2014, 50, 2721-2724.	2.2	26
75	Experimental investigation and theoretical exploration of single-atom electrocatalysis in hybrid photovoltaics: The powerful role of Pt atoms in triiodide reduction. Nano Energy, 2017, 39, 1-8.	8.2	25
76	Reactivity of Methanol Steam Reforming on ZnPd Intermetallic Catalyst: Understanding from Microcalorimetric and FT-IR Studies. Journal of Physical Chemistry C, 2018, 122, 12395-12403.	1.5	25
77	Enhanced stability of Pt/Al2O3 modified by Zn promoter for catalytic dehydrogenation of ethane. Journal of Energy Chemistry, 2020, 51, 14-20.	7.1	25
78	Highly active and sintering-resistant heteroepitaxy of Au nanoparticles on ZnO nanowires for CO oxidation. Journal of Energy Chemistry, 2016, 25, 361-370.	7.1	24
79	Pd1/CeO2 single-atom catalyst for alkoxycarbonylation of aryl iodides. Science China Materials, 2020, 63, 959-964.	3.5	24
80	Highly Active Small Palladium Clusters Supported on Ferric Hydroxide for Carbon Monoxideâ€Tolerant Hydrogen Oxidation. ChemCatChem, 2014, 6, 547-554.	1.8	23
81	Highlights of Major Progress on Single-Atom Catalysis in 2017. Catalysts, 2019, 9, 135.	1.6	23
82	Hydrogenated TiO2 supported Ru for selective methanation of CO in practical conditions. Applied Catalysis B: Environmental, 2021, 298, 120597.	10.8	19
83	Maximizing the Number of Interfacial Sites in Singleâ€Atom Catalysts for the Highly Selective, Solventâ€Free Oxidation of Primary Alcohols. Angewandte Chemie, 2018, 130, 7921-7925.	1.6	18
84	Blocking the non-selective sites through surface plasmon-induced deposition of metal oxide on Au/TiO2 for CO-PROX reaction. Chem Catalysis, 2021, 1, 456-466.	2.9	17
85	Exerting the structural advantages of Ir-in-CeO2 and Ir-on-CeO2 to widen the operating temperature window for preferential CO oxidation. Chemical Engineering Journal, 2011, 168, 822-826.	6.6	16
86	Sizeâ€Dependency of Gold Nanoparticles on TiO₂ for CO Oxidation. Small Methods, 2018, 2, 1800273.	4.6	16
87	Oxidative Strong Metalâ€"Support Interactions. Catalysts, 2021, 11, 896.	1.6	16
88	Nanodisperse gold catalysts in oxidation of benzyl alcohol: comparison of various supports under different conditions. Reaction Kinetics, Mechanisms and Catalysis, 2019, 128, 71-95.	0.8	15
89	A novel Au&Pd/Fe(OH)x catalyst for CO+H2 co-oxidations at low temperatures. Journal of Catalysis, 2011, 279, 361-365.	3.1	14
90	A Hydrothermally Stable Irreducible Oxideâ€Modified Pd/MgAl₂O₄ Catalyst for Methane Combustion. Angewandte Chemie, 2020, 132, 18680-18684.	1.6	14

#	ARTICLE	IF	CITATIONS
91	High Performance of Singleâ€atom Catalyst Pd₁/MgO for Semiâ€hydrogenation of Acetylene to Ethylene in Excess Ethylene. ChemNanoMat, 2021, 7, 526-529.	1.5	14
92	Synergic effect between gold and vanadate substituted hydroxyapatite support for synthesis of methyl methacrylate by one-step oxidative esterification. Chemical Engineering Journal, 2022, 431, 133207.	6.6	13
93	Enhancement effect of strong metal-support interaction (SMSI) on the catalytic activity of substituted-hydroxyapatite supported Au clusters. Journal of Catalysis, 2022, 410, 194-205.	3.1	13
94	Catalysis by Supported Single Metal Atoms. Microscopy and Microanalysis, 2016, 22, 860-861.	0.2	12
95	Controlling CO 2 Hydrogenation Selectivity by Metalâ€Supported Electron Transfer. Angewandte Chemie, 2020, 132, 20158-20164.	1.6	8
96	Styrene Hydroformylation with In Situ Hydrogen: Regioselectivity Control by Coupling with the Lowâ€Temperature Waterâ€"Gas Shift Reaction. Angewandte Chemie, 2020, 132, 7500-7504.	1.6	7
97	Highly active and stable Ir nanoclusters derived from Ir1/MgAl2O4 single-atom catalysts. Journal of Chemical Physics, 2021, 154, 131105.	1.2	5
98	Methane oxidation to methanol over copper-containing zeolite. CheM, 2021, 7, 2270-2272.	5.8	4
99	Highly coke-resistant Ni-La2O2CO3 catalyst with low Ni loading for dry reforming of methane with carbon dioxide. Catalysis Today, 2022, 402, 189-201.	2.2	4
100	Synthesis of Anchored Bimetallic Catalysts via Epitaxy. Catalysts, 2016, 6, 88.	1.6	3
101	Aberration-corrected STEM Study of Atomically Dispersed Pti/FeOx Catalyst with High Loading of Pt. Microscopy and Microanalysis, 2015, 21, 1733-1734.	0.2	2
102	Atom-by-atom fabrication of metal clusters for efficient selective hydrogenation. Science China Chemistry, 2022, 65, 202-203.	4.2	2
103	Selective Hydrogenation of Nitroarenes by Single-Atom Pt Catalyst Through Hydrogen Transfer Reaction. Topics in Catalysis, 2022, 65, 1604-1608.	1.3	2
104	RÃ¼cktitelbild: Hydroformylation of Olefins by a Rhodium Single-Atom Catalyst with Activity Comparable to RhCl(PPh3)3 (Angew. Chem. 52/2016). Angewandte Chemie, 2016, 128, 16412-16412.	1.6	1
105	The catalytic activity of alkali metal alkoxides and titanium alkoxides in the hydrosilylation of unfunctionalized olefins. Phosphorus, Sulfur and Silicon and the Related Elements, 2019, 194, 83-86.	0.8	1
106	Titanium-catalyzed hydrosilylation of olefins: A comparison study on Cp₂TiCl₂/Sm and Cp₂TiCl₂/LiAlH₄ catalyst system. Phosphorus, Sulfur and Silicon and the Related Elements, 2019, 194, 64-68.	0.8	1
107	Alternatives to Phosgene and Carbon Monoxide: Synthesis of Symmetric Urea Derivatives with Carbon Dioxide in Ionic Liquids.. ChemInform, 2003, 34, no.	0.1	0
108	RÃ¼cktitelbild: Catalytically Active Rh Subâ€Nanoclusters on TiO₂ for CO Oxidation at Cryogenic Temperatures (Angew. Chem. 8/2016). Angewandte Chemie, 2016, 128, 2998-2998.	1.6	0

#	Article	IF	Citations
109	H-D exchange and cis-to-trans isomerization over atomically dispersed Pd1/Cu2O and Pd1/Cu3N. Chem Catalysis, 2021, 1, 1362-1365.	2.9	0