Mingshu Chen

List of Publications by Year
in descending order

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Version: 2024-02-01

97 papers	9,010 citations	81900 39 h-index	39675 94 g-index
98 all docs	98 docs citations	98 times ranked	10287 citing authors

#	Article	IF	Citations
1	The Structure of Catalytically Active Gold on Titania. Science, 2004, 306, 252-255.	12.6	1,541
2	The Promotional Effect of Gold in Catalysis by Palladium-Gold. Science, 2005, 310, 291-293.	12.6	936
3	Interfacial Effects in Iron-Nickel Hydroxideâ€“Platinum Nanoparticles Enhance Catalytic Oxidation. Science, 2014, 344, 495-499.	12.6	591
4	Multiscale structural and electronic control of molybdenum disulfide foam for highly efficient hydrogen production. Nature Communications, 2017, 8, 14430.	12.8	488
5	Catalytically Active Gold:â€‰ From Nanoparticles to Ultrathin Films. Accounts of Chemical Research, 2006, 39, 739-746.	15.6	473
6	Structureâ€“activity relationships in supported Au catalysts. Catalysis Today, 2006, 111, 22-33.	4.4	357
7	Highly active surfaces for CO oxidation on Rh, Pd, and Pt. Surface Science, 2007, 601, 5326-5331.	1.9	346
8	Catalytically active gold on ordered titania supports. Chemical Society Reviews, 2008, 37, 1860.	38.1	314
9	Sulfur vacancy-rich MoS2 as a catalyst for the hydrogenation of CO2 to methanol. Nature Catalysis, 2021, 4, 242-250.	34.4	308
10	On the Origin of the Unique Properties of Supported Au Nanoparticles. Journal of the American Chemical Society, 2006, 128, 6341-6346.	13.7	221
11	Graphene cover-promoted metal-catalyzed reactions. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17023-17028.	7.1	183
12	The role of ruthenium in improving the kinetics of hydrogen oxidation and evolution reactions of platinum. Nature Catalysis, 2021, 4, 711-718.	34.4	182
13	Single-pass transformation of syngas into ethanol with high selectivity by triple tandem catalysis. Nature Communications, 2020, 11, 827.	12.8	156
14	Direct Conversion of Syngas into Methyl Acetate, Ethanol, and Ethylene by Relay Catalysis via the Intermediate Dimethyl Ether. Angewandte Chemie - International Edition, 2018, 57, 12012-12016.	13.8	142
15	Hexagonal Boron Nitride Cover on Pt(111): A New Route to Tune Moleculeâ€“Metal Interaction and Metal-Catalyzed Reactions. Nano Letters, 2015, 15, 3616-3623.	9.1	131
16	CO oxidation trends on Pt-group metals from ultrahigh vacuum to near atmospheric pressures: A combined in situ PM-IRAS and reaction kinetics study. Surface Science, 2009, 603, 65-70.	1.9	106
17	Sintering of Au Particles Supported on TiO₂(110) during CO Oxidation. Journal of Physical Chemistry C, 2009, 113, 254-260.	3.1	105
18	Structure of thinSiO2films grown on Mo(112). Physical Review B, 2004, 69, .	3.2	104

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19	Synthesis of vinyl acetate on Pd-based catalysts. Catalysis Today, 2007, 123, 77-85.	4.4	104
20	The nature of the active site for vinyl acetate synthesis over Pdâ€“Au. Catalysis Today, 2006, 117, 37-45.	4.4	100
21	Facile Preparation of Well-Dispersed CeO₂â€“ZnO Composite Hollow Microspheres with Enhanced Catalytic Activity for CO Oxidation. ACS Applied Materials & Interfaces, 2014, 6, 421-428.	8.0	98
22	CO oxidation on ruthenium: The nature of the active catalytic surface. Surface Science, 2007, 601, L124-L126.	1.9	78
23	In situ FTIR and ex situ XPS/HS-LEIS study of supported Cu/Al2O3 and Cu/ZnO catalysts for CO2 hydrogenation. Chinese Journal of Catalysis, 2021, 42, 367-375.	14.0	73
24	Ammonia-assisted synthesis towards a phyllosilicate-derived highly-dispersed and long-lived Ni/SiO₂catalyst. Catalysis Science and Technology, 2015, 5, 5095-5099.	4.1	68
25	Low charge overpotential of lithium-oxygen batteries with metallic Co encapsulated in single-layer graphene shell as the catalyst. Nano Energy, 2016, 30, 877-884.	16.0	67
26	The interaction of water with silica thin films grown on Mo(112). Surface Science, 2004, 565, 107-120.	1.9	65
27	CO Oxidation on Pt-Group Metals from Ultrahigh Vacuum to Near Atmospheric Pressures. 1. Rhodium. Journal of Physical Chemistry C, 2009, 113, 182-192.	3.1	60
28	The Formation of Surface Lithiumâ€“Iron Ternary Hydride and its Function on Catalytic Ammonia Synthesis at Low Temperatures. Angewandte Chemie - International Edition, 2017, 56, 8716-8720.	13.8	58
29	Hydrogenation of methyl acetate to ethanol over a highly stable Cu/SiO2 catalyst: Reaction mechanism and structural evolution. Applied Catalysis A: General, 2017, 531, 79-88.	4.3	57
30	Synthesis of well-ordered ultra-thin titanium oxide films on Mo(112). Surface Science, 2005, 581, 115-121.	1.9	53
31	Catalysis under shell: Improved CO oxidation reaction confined in Pt@h-BN coreâ€“shell nanoreactors. Nano Research, 2017, 10, 1403-1412.	10.4	53
32	Electronic and vibrational properties of ultrathinSiO2films grown on Mo(112). Physical Review B, 2005, 72, .	3.2	50
33	Ultrathin, ordered oxide films on metal surfaces. Journal of Physics Condensed Matter, 2008, 20, 264013.	1.8	50
34	Interaction of Au with titania: the role of reduced Ti. Topics in Catalysis, 2007, 44, 41-47.	2.8	49
35	Seizing gaseous Fe²⁺ to densify O₂-accessible Feâ€“N₄ sites for high-performance proton exchange membrane fuel cells. Energy and Environmental Science, 2022, 15, 3033-3040.	30.8	49
36	Enhanced CO Oxidation on the Oxide/Metal Interface: From Ultraâ€High Vacuum to Nearâ€Atmospheric Pressures. ChemCatChem, 2015, 7, 2620-2627.	3.7	47

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37	Characterization of ultra-thin TiO2 films grown on Mo(112). Thin Solid Films, 2006, 515, 1475-1479.	1.8	44
38	Promotional Effects of Au in Pd-Au Catalysts for Vinyl Acetate Synthesis. Chinese Journal of Catalysis, 2008, 29, 1178-1186.	14.0	44
39	Effect of Surface Oxygen on the Activation of Methane on Palladium and Platinum Surfaces. ACS Catalysis, 2014, 4, 2598-2604.	11.2	43
40	Long-range ordered and atomic-scale control of graphene hybridization by photocycloaddition. Nature Chemistry, 2020, 12, 1035-1041.	13.6	41
41	Exsolutionâ€“Dissolution of Supported Metals on High-Entropy Co₃MnNiCuZnO_x: Toward Sintering-Resistant Catalysis. ACS Catalysis, 2021, 11, 12247-12257.	11.2	39
42	Active Surfaces for CO Oxidation on Palladium in the Hyperactive State. Langmuir, 2010, 26, 18113-18118.	3.5	37
43	Evidence of the Encapsulation Model for Strong Metalâ€“Support Interaction under Oxidized Conditions: A Case Study on TiO_x/Pt(111) for CO Oxidation by in Situ Wide Spectral Range Infrared Reflection Adsorption Spectroscopy. ACS Catalysis, 2018, 8, 10156-10163.	11.2	37
44	Electron penetration triggering interface activity of Pt-graphene for CO oxidation at room temperature. Nature Communications, 2021, 12, 5814.	12.8	37
45	The structure of monolayer SiO2 on Mo(112): A 2-D [Siâ€“Oâ€“Si] network or isolated [SiO4] units?. Surface Science, 2006, 600, L255-L259.	1.9	36
46	Disclosure of the Surface Composition of TiO₂-Supported Goldâ€“Palladium Bimetallic Catalysts by High-Sensitivity Low-Energy Ion Scattering Spectroscopy. ACS Catalysis, 2018, 8, 1790-1795.	11.2	35
47	Reply to comment on â€œCO oxidation on ruthenium: The nature of the active catalytic surfaceâ€• by H. Over, M. Muhler, A.P. Seitsonen. Surface Science, 2007, 601, 5663-5665.	1.9	34
48	A Highly Porous Carbon Support Rich in Graphiticâ€N Stabilizes Copper Nanocatalysts for Efficient Ethanol Dehydrogenation. ChemCatChem, 2017, 9, 505-510.	3.7	34
49	Size and support effects for CO oxidation on supported Pd catalysts. Science China Chemistry, 2010, 53, 2047-2056.	8.2	33
50	Design and Preparation of Supported Au Catalyst with Enhanced Catalytic Activities by Rationally Positioning Au Nanoparticles on Anatase. Journal of Physical Chemistry Letters, 2015, 6, 2345-2349.	4.6	32
51	The effect of the support on the surface composition of PtCu alloy nanocatalysts: In situ XPS and HS-LEIS studies. Chinese Journal of Catalysis, 2017, 38, 1229-1236.	14.0	32
52	Title is missing!. Catalysis Letters, 1998, 53, 43-50.	2.6	30
53	The structure of ordered Au films on TiOx. Surface Science, 2007, 601, 632-637.	1.9	30
54	Self-regeneration of supported transition metals by a high entropy-driven principle. Nature Communications, 2021, 12, 5917.	12.8	30

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55	CO-tolerant PtRu@h-BN/C coreâ€“shell electrocatalysts for proton exchange membrane fuel cells. Applied Surface Science, 2018, 450, 244-250.	6.1	28
56	NO Adsorption and Dissociation on Rh(111):Â PM-IRAS Study. Journal of Physical Chemistry B, 2006, 110, 6245-6249.	2.6	26
57	Preparation and characterization of a highly dispersed and stable Ni catalyst with a microporous nanosilica support. RSC Advances, 2016, 6, 81237-81244.	3.6	25
58	Activation of CO and surface carbon species for conversion of syngas to light olefins on ZnCrO -Al2O3 catalysts. Applied Surface Science, 2019, 494, 353-360.	6.1	25
59	Effect of Dispersion on Catalytic Performance of Supported Pt Catalysts for CO Oxidation. Chinese Journal of Catalysis, 2012, 33, 1901-1905.	14.0	24
60	Growth and vibrational properties of MnO thin films on Rh(111). Surface Science, 2012, 606, 1507-1511.	1.9	24
61	Kinetic and Spectroscopic Studies of Vinyl Acetate Synthesis Over Pd(100). Catalysis Letters, 2006, 106, 1-5.	2.6	23
62	An investigation of the TiOxâ€“SiO2/Mo(112) interface. Surface Science, 2005, 574, 259-268.	1.9	21
63	Kinetics and Active Surfaces for CO Oxidation on Pt-Group Metals Under Oxygen Rich Conditions. Topics in Catalysis, 2013, 56, 1299-1313.	2.8	21
64	Oxidative coupling of methane over BaF2-promoted rare earth oxides with variable valence. Applied Catalysis A: General, 1997, 159, 171-185.	4.3	18
65	Synergistic Effects of VO_xâ€“Pt Probed by the Oxidation of Propane on VO_x/Pt(111). Langmuir, 2013, 29, 9090-9097.	3.5	17
66	Reaction of propane with the ordered NiO/Rh(1â€¯1â€¯1) studied by XPS and LEISS. Applied Surface Science, 2018, 439, 569-576.	6.1	17
67	Adsorption of Dye Molecules on Single Crystalline Semiconductor Surfaces: An Electrochemical Shell-Isolated Nanoparticle Enhanced Raman Spectroscopy Study. Journal of Physical Chemistry C, 2016, 120, 22500-22507.	3.1	15
68	Adsorption of Benzene on a Mo(112)â^'c(2 Ã— 2)-[SiO4] Surface. Journal of Physical Chemistry B, 2004, 108, 17940-17945.	2.6	14
69	Site-specific deposition creates electron-rich Pd atoms for unprecedented Câ^'H activation in aerobic alcohol oxidation. Chinese Journal of Catalysis, 2020, 41, 1240-1247.	14.0	13
70	Vinyl Acetate Synthesis over Model Pdâ^'Sn Bimetallic Catalysts. Journal of Physical Chemistry C, 2008, 112, 8332-8337.	3.1	12
71	The Structureâ€“Sensitivity of n-Heptane Dehydrocyclization on Pt/SiO₂ Model Catalysts. Journal of Physical Chemistry C, 2012, 116, 18155-18159.	3.1	12
72	Onâ€Surface Decarboxylation Coupling Facilitated by Lockâ€toâ€Unlock Variation of Molecules upon the Reaction. Angewandte Chemie - International Edition, 2021, 60, 17435-17439.	13.8	12

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73	Enhance catalytic activity for CO oxidation over titania supported gold catalysts that dispersed on SiO2. Catalysis Today, 2011, 160, 144-152.	4.4	11
74	New Insights into the Role of Al₂O₃ in the Promotion of CuZnAl Catalysts: A Model Study. Chemistry - A European Journal, 2017, 23, 10632-10637.	3.3	11
75	Insight into the high efficiency of Cu/CeO2(1 1 0) catalysts for preferential oxidation of CO from hydrogen rich fuel. Applied Surface Science, 2021, 566, 150707.	6.1	11
76	Adsorbate lone-pair-electron stimulated charge transfer between surface dangling bonds: methanol chemisorption on Si(111)-7Ã—7. Chemical Physics Letters, 2004, 388, 190-194.	2.6	10
77	Reply to comment on â€œThe structure of monolayer SiO2 on Mo(112): A 2-D [Siâ€“Oâ€“Si] network or isolated [SiO4] units?â€• Surface Science, 2007, 601, 591-593.	1.9	10
78	Comment on â€œCatalytic Activity of the Rh Surface Oxide: CO Oxidation over Rh(111) under Realistic Conditionsâ€• Journal of Physical Chemistry C, 2010, 114, 22369-22371.	3.1	10
79	Effects of O2 pressure on the oxidation of VOx/Pt(111). Physical Chemistry Chemical Physics, 2013, 15, 12124.	2.8	10
80	The study of the active surface for CO oxidation over supported Pd catalysts. Science China Chemistry, 2015, 58, 174-179.	8.2	10
81	Real-space characterization of reactivity towards water at theBi2Te3(111) surface. Physical Review B, 2016, 93, .	3.2	8
82	An ordered surface alloy formed by attractive interaction between coadsorbates: c(2Ã—2) on Cu(001) by Mg and Bi. Surface Science, 2003, 530, L307-L312.	1.9	7
83	Promoting Effect of Bismuth Oxide on Palladium for Lowâ€Temperature Carbon Monoxide Oxidation. ChemCatChem, 2017, 9, 499-504.	3.7	6
84	Determination of ()R26.7Â° structures formed on Cu(001) by coadsorption of Bi and K(Cs): on-top site adsorption of K(Cs). Surface Science, 2003, 536, L415-L422.	1.9	5
85	Ordered mixed surface structures formed by coadsorption of dissimilar metal atoms on Cu(001). Vacuum, 2004, 74, 121-131.	3.5	5
86	Asymmetric adsorption-site of potassium atoms in the (3Ã—2)-p2mg structure formed on Cu(001). Surface Science, 2007, 601, 5162-5169.	1.9	5
87	An HREELS investigation of MnO /Rh(100) model catalyst. Surface Science, 2015, 641, 78-81.	1.9	4
88	Surface Compositions of Oxide Supported Bimetallic Catalysts: A Compared Study by Highâ€Sensitivity Low Energy Ion Scattering Spectroscopy and Xâ€Ray Photoemission Spectroscopy. Chemical Record, 2019, 19, 1432-1443.	5.8	4
89	Applications of in-situ wide spectral range infrared absorption spectroscopy for CO oxidation over Pd/SiO2 and Cu/SiO2 catalysts. Chinese Journal of Catalysis, 2022, 43, 2001-2009.	14.0	4
90	In situ time-resolved FTIR investigation on the reaction mechanism of partial oxidation of methane to syngas over supported Rh and Ru catalysts. Science Bulletin, 2000, 45, 2236-2240.	1.7	3

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91	In situ FT-IR studies on the CO2 hydrogenation over the SiO2-supported RhM (M=Cr, Mo, W) complex catalysts. Journal of Molecular Catalysis A, 2001, 166, 331-335.	4.8	3
92	Chapter 5 Oxide-supported metal clusters. Chemical Physics of Solid Surfaces, 2007, 12, 201-269.	0.3	3
93	<scp>NO</scp> Reduction on <scp>Cuâ€Based</scp> Model Catalysts Studied by inâ€situ<scp>IRAS</scp>. Chinese Journal of Chemistry, 2022, 40, 1267-1274.	4.9	3
94	Performance of CO Oxidation over Highly Dispersed Gold Catalyst on TiO_x/SiO₂ Composite Supports. Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2015, 31, 1753-1760.	4.9	2
95	Model catalysis studies of the oxidation of propane over VOx-based catalysts. Catalysis Today, 2015, 245, 172-178.	4.4	2
96	Onâ€Surface Decarboxylation Coupling Facilitated by Lockâ€toâ€Unlock Variation of Molecules upon the Reaction. Angewandte Chemie, 2021, 133, 17575-17579.	2.0	2
97	Promotion Effect of Cu for CO Oxidation on Ceria Supported Pd_xCu_y Bimetallic Catalysts. Journal of Physical Chemistry C, 2022, 126, 1420-1425.	3.1	2