Kuan Chang

List of Publications by Year
in descending order

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242 papers	31,462 citations	5430 85 h-index	5244 171 g-index
246 all docs	246 docs citations	246 times ranked	26384 citing authors

#	Article	IF	Citations
1	CO2-assisted ethane aromatization over zinc and phosphorous modified ZSM-5 catalysts. Applied Catalysis B: Environmental, 2022, 304, 120956.	10.8	21
2	Unraveling Unique Surface Chemistry of Transition Metal Nitrides in Controlling Selective Câ€“O Bond Scission Pathways of Glycerol. Jacs Au, 2022, 2, 367-379.	3.6	10
3	Microplasma synthesized gold nanoparticles for surface enhanced Raman spectroscopic detection of methylene blue. Reaction Chemistry and Engineering, 2022, 7, 346-353.	1.9	12
4	General Descriptors for CO₂-Assisted Selective Câ€“H/Câ€“C Bond Scission in Ethane. Journal of the American Chemical Society, 2022, 144, 4186-4195.	6.6	26
5	Achieving complete electrooxidation of ethanol by single atomic Rh decoration of Pt nanocubes. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2112109119.	3.3	40
6	Oxygenate Production from Plasma-Activated Reaction of CO₂ and Ethane. ACS Energy Letters, 2022, 7, 236-241.	8.8	24
7	Electrochemical CO₂ Reduction Reaction over Cu Nanoparticles with Tunable Activity and Selectivity Mediated by Functional Groups in Polymeric Binder. Jacs Au, 2022, 2, 214-222.	3.6	29
8	Tuning Reaction Pathways of Electrochemical Conversion of CO₂ by Growing Pd Shells on Ag Nanocubes. Nano Letters, 2022, 22, 4576-4582.	4.5	17
9	Catalytic Tandem CO₂â€“Ethane Reactions and Hydroformylation for C3 Oxygenate Production. ACS Catalysis, 2022, 12, 8279-8290.	5.5	8
10	Noble Metal-Free 2D 1T-MoS₂ Edge Sites Boosting Selective Hydrogenation of Maleic Anhydride. ACS Catalysis, 2022, 12, 8986-8994.	5.5	18
11	CO₂ hydrogenation over heterogeneous catalysts at atmospheric pressure: from electronic properties to product selectivity. Green Chemistry, 2021, 23, 249-267.	4.6	74
12	Challenges and Opportunities in Utilizing MXenes of Carbides and Nitrides as Electrocatalysts. Advanced Energy Materials, 2021, 11, 2002967.	10.2	94
13	Bimetallic-Derived Catalysts and Their Application in Simultaneous Upgrading of CO2 and Ethane. Matter, 2021, 4, 408-440.	5.0	26
14	Insight into Acetic Acid Synthesis from the Reaction of CH₄ and CO₂. ACS Catalysis, 2021, 11, 3384-3401.	5.5	53
15	Electrochemical reduction of acetonitrile to ethylamine. Nature Communications, 2021, 12, 1949.	5.8	47
16	Simultaneously upgrading <scp>CO₂</scp> and light alkanes into valueâ€added products. AICHE Journal, 2021, 67, e17249.	1.8	15
17	Experimental and Theoretical Insights into the Active Sites on WO_x/Pt(111) Surfaces for Dehydrogenation and Dehydration Reactions. ACS Catalysis, 2021, 11, 8023-8032.	5.5	11
18	Transition metal carbides and nitrides as catalysts for thermochemical reactions. Journal of Catalysis, 2021, 404, 929-942.	3.1	27

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19	Unravelling the electrocatalytic activity of bismuth nanosheets towards carbon dioxide reduction: Edge plane versus basal plane. Applied Catalysis B: Environmental, 2021, 299, 120693.	10.8	21
20	Density functional theory studies of transition metal carbides and nitrides as electrocatalysts. Chemical Society Reviews, 2021, 50, 12338-12376.	18.7	103
21	Comparison of Heterogeneous Hydroformylation of Ethylene and Propylene over RhCo₃/MCM-41 Catalysts. ACS Catalysis, 2021, 11, 14575-14585.	5.5	19
22	Effect of Oxide Support on Catalytic Performance of FeNiâ€based Catalysts for CO₂â€assisted Oxidative Dehydrogenation of Ethane. ChemCatChem, 2020, 12, 494-503.	1.8	24
23	Vibrational Spectroscopic Characterization of Glycerol Reaction Pathways over Metalâ€Modified Molybdenum Carbide Surfaces. ChemCatChem, 2020, 12, 281-286.	1.8	5
24	Isotopic effect on electrochemical CO₂ reduction activity and selectivity in H₂O- and D₂O-based electrolytes over palladium. Chemical Communications, 2020, 56, 106-108.	2.2	17
25	Electrochemical Conversion of CO 2 to Syngas with Controllable CO/H 2 Ratios over Co and Ni Singleâ€Atom Catalysts. Angewandte Chemie, 2020, 132, 3057-3061.	1.6	22
26	Electrochemical Conversion of CO₂ to Syngas with Controllable CO/H₂ Ratios over Co and Ni Singleâ€Atom Catalysts. Angewandte Chemie - International Edition, 2020, 59, 3033-3037.	7.2	203
27	Application of Ceria in CO₂ Conversion Catalysis. ACS Catalysis, 2020, 10, 613-631.	5.5	152
28	Self-terminating electrodeposition of Pt on WC electrocatalysts. Applied Surface Science, 2020, 504, 144472.	3.1	9
29	Electrochemical Conversion of CO₂ to Syngas with Palladium-Based Electrocatalysts. Accounts of Chemical Research, 2020, 53, 1535-1544.	7.6	81
30	Improving CO₂ Electrochemical Reduction to CO Using Space Confinement between Gold or Silver Nanoparticles. Journal of Physical Chemistry Letters, 2020, 11, 1896-1902.	2.1	23
31	Boosting Activity and Selectivity of CO₂ Electroreduction by Preâ€Hydridizing Pd Nanocubes. Small, 2020, 16, e2005305.	5.2	32
32	Identifying Surface Reaction Intermediates in Plasma Catalytic Ammonia Synthesis. ACS Catalysis, 2020, 10, 14763-14774.	5.5	86
33	Oxygen induced promotion of electrochemical reduction of CO2 via co-electrolysis. Nature Communications, 2020, 11, 3844.	5.8	102
34	Predicting the Activity and Selectivity of Bimetallic Metal Catalysts for Ethanol Reforming using Machine Learning. ACS Catalysis, 2020, 10, 9438-9444.	5.5	71
35	Exploring electrocatalytic stability and activity of unmodified and platinum-modified tungsten and niobium nitrides. International Journal of Hydrogen Energy, 2020, 45, 22883-22892.	3.8	17
36	Interfacial Active Sites for CO2 Assisted Selective Cleavage of Câ€“C/Câ€“H Bonds in Ethane. CheM, 2020, 6, 2703-2716.	5.8	57

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37	Using natureâ€™s blueprint to expand catalysis with Earth-abundant metals. Science, 2020, 369, .	6.0	306
38	Template-free fabrication of fractal porous Y2O3 monolithic foam and its functional modification by Ni-doping. Science China Materials, 2020, 63, 1842-1847.	3.5	0
39	Selective electroreduction of CO2 to acetone by single copper atoms anchored on N-doped porous carbon. Nature Communications, 2020, 11, 2455.	5.8	265
40	Understanding the effect of Mo2C support on the activity of Cu for the hydrodeoxygenation of glycerol. Journal of Catalysis, 2020, 388, 141-153.	3.1	12
41	Synthesis and electrocatalytic applications of flower-like motifs and associated composites of nitrogen-enriched tungsten nitride (W2N3). Nano Research, 2020, 13, 1434-1443.	5.8	23
42	Highly efficient conversion of oleic acid to heptadecane without external hydrogen source over atomic layer deposited bimetallic NiPt catalysts. Chemical Engineering Journal, 2020, 390, 124603.	6.6	17
43	Computational and experimental identification of strong synergy of the Fe/ZnO catalyst in promoting acetic acid synthesis from CH₄ and CO₂. Chemical Communications, 2020, 56, 3983-3986.	2.2	27
44	CO₂-Assisted propane aromatization over phosphorus-modified Ga/ZSM-5 catalysts. Catalysis Science and Technology, 2020, 10, 1881-1888.	2.1	28
45	Synchrotron Consortia for Catalysis and Electrocatalysis Research. Synchrotron Radiation News, 2020, 33, 2-3.	0.2	1
46	Accelerating CO₂ Electroreduction to CO Over Pd Singleâ€Atom Catalyst. Advanced Functional Materials, 2020, 30, 2000407.	7.8	173
47	Recent Advances in Carbon Dioxide Hydrogenation to Methanol via Heterogeneous Catalysis. Chemical Reviews, 2020, 120, 7984-8034.	23.0	825
48	Review of Plasma-Assisted Catalysis for Selective Generation of Oxygenates from CO₂ and CH₄. ACS Catalysis, 2020, 10, 2855-2871.	5.5	118
49	Promoting H2O2 production via 2-electron oxygen reduction by coordinating partially oxidized Pd with defect carbon. Nature Communications, 2020, 11, 2178.	5.8	209
50	Transition Metal Nitrides as Promising Catalyst Supports for Tuning CO/H 2 Syngas Production from Electrochemical CO 2 Reduction. Angewandte Chemie, 2020, 132, 11441-11444.	1.6	11
51	Reactions of CO2 and ethane enable CO bond insertion for production of C3 oxygenates. Nature Communications, 2020, 11, 1887.	5.8	49
52	Transition Metal Nitrides as Promising Catalyst Supports for Tuning CO/H₂Syngas Production from Electrochemical CO₂Reduction. Angewandte Chemie - International Edition, 2020, 59, 11345-11348.	7.2	100
53	Tuning the activity and selectivity of electroreduction of CO2 to synthesis gas using bimetallic catalysts. Nature Communications, 2019, 10, 3724.	5.8	156
54	Revealing Energetics of Surface Oxygen Redox from Kinetic Fingerprint in Oxygen Electrocatalysis. Journal of the American Chemical Society, 2019, 141, 13803-13811.	6.6	151

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55	CO₂ Hydrogenation to Methanol over ZrO₂-Containing Catalysts: Insights into ZrO₂ Induced Synergy. ACS Catalysis, 2019, 9, 7840-7861.	5.5	253
56	Enhancing Câ€“C Bond Scission for Efficient Ethanol Oxidation using PtIr Nanocube Electrocatalysts. ACS Catalysis, 2019, 9, 7618-7625.	5.5	79
57	Quantification of Active Sites and Elucidation of the Reaction Mechanism of the Electrochemical Nitrogen Reduction Reaction on Vanadium Nitride. Angewandte Chemie, 2019, 131, 13906-13910.	1.6	24
58	Quantification of Active Sites and Elucidation of the Reaction Mechanism of the Electrochemical Nitrogen Reduction Reaction on Vanadium Nitride. Angewandte Chemie - International Edition, 2019, 58, 13768-13772.	7.2	86
59	Constant Electrode Potential Quantum Mechanical Study of CO₂ Electrochemical Reduction Catalyzed by N-Doped Graphene. ACS Catalysis, 2019, 9, 8197-8207.	5.5	42
60	Computational and experimental demonstrations of one-pot tandem catalysis for electrochemical carbon dioxide reduction to methane. Nature Communications, 2019, 10, 3340.	5.8	150
61	Exploring Metalâ€“Support Interactions To Immobilize Subnanometer Co Clusters on Î³â€“Mo₂N: A Highly Selective and Stable Catalyst for CO₂ Activation. ACS Catalysis, 2019, 9, 9087-9097.	5.5	50
62	Tandem Reactions of CO₂ Reduction and Ethane Aromatization. Journal of the American Chemical Society, 2019, 141, 17771-17782.	6.6	62
63	Titelbild: Quantification of Active Sites and Elucidation of the Reaction Mechanism of the Electrochemical Nitrogen Reduction Reaction on Vanadium Nitride (Angew. Chem. 39/2019). Angewandte Chemie, 2019, 131, 13733-13733.	1.6	0
64	Elucidation of the Active Phase and Deactivation Mechanisms of Chromium Nitride in the Electrochemical Nitrogen Reduction Reaction. Journal of Physical Chemistry C, 2019, 123, 23967-23975.	1.5	27
65	Carbon dioxide reduction in tandem with light-alkane dehydrogenation. Nature Reviews Chemistry, 2019, 3, 638-649.	13.8	124
66	The effects of bimetallic interactions for CO₂â€assisted oxidative dehydrogenation and dry reforming of propane. AICHE Journal, 2019, 65, e16670.	1.8	38
67	Conversion of CO₂ on a highly active and stable Cu/FeO_x/CeO₂ catalyst: tuning catalytic performance by oxide-oxide interactions. Catalysis Science and Technology, 2019, 9, 3735-3742.	2.1	28
68	SO₂-Induced Selectivity Change in CO₂ Electroreduction. Journal of the American Chemical Society, 2019, 141, 9902-9909.	6.6	102
69	Tuning CO2 hydrogenation selectivity via metal-oxide interfacial sites. Journal of Catalysis, 2019, 374, 60-71.	3.1	115
70	Generating Defectâ€Rich Bismuth for Enhancing the Rate of Nitrogen Electroreduction to Ammonia. Angewandte Chemie - International Edition, 2019, 58, 9464-9469.	7.2	226
71	Generating Defectâ€Rich Bismuth for Enhancing the Rate of Nitrogen Electroreduction to Ammonia. Angewandte Chemie, 2019, 131, 9564-9569.	1.6	47
72	1,2-Propanediol as a Surrogate Molecule of Glycerol for Mechanistic Studies of Selective Hydrodeoxygenation Reactions over Mo₂C and Cu/Mo₂C Surfaces. ACS Sustainable Chemistry and Engineering, 2019, 7, 8077-8082.	3.2	12

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73	Effectively Increased Efficiency for Electroreduction of Carbon Monoxide Using Supported Polycrystalline Copper Powder Electrocatalysts. ACS Catalysis, 2019, 9, 4709-4718.	5.5	91
74	Methanol Synthesis from CO₂ Hydrogenation over CuZnCeTi Mixed Oxide Catalysts. Industrial & Engineering Chemistry Research, 2019, 58, 7922-7928.	1.8	23
75	A Combined experimental and theoretical study of the accelerated hydrogen evolution kinetics over wide pH range on porous transition metal doped tungsten phosphide electrocatalysts. Applied Catalysis B: Environmental, 2019, 251, 162-167.	10.8	58
76	Enhancing Activity and Reducing Cost for Electrochemical Reduction of CO₂ by Supporting Palladium on Metal Carbides. Angewandte Chemie, 2019, 131, 6337-6341.	1.6	31
77	Exploring the ternary interactions in Cuâ€“ZnOâ€“ZrO2 catalysts for efficient CO2 hydrogenation to methanol. Nature Communications, 2019, 10, 1166.	5.8	258
78	Enhancing Activity and Reducing Cost for Electrochemical Reduction of CO₂ by Supporting Palladium on Metal Carbides. Angewandte Chemie - International Edition, 2019, 58, 6271-6275.	7.2	123
79	Net reduction of CO2 via its thermocatalytic and electrocatalytic transformation reactions in standard and hybrid processes. Nature Catalysis, 2019, 2, 381-386.	16.1	317
80	Trends and Descriptors of Metal-Modified Transition Metal Carbides for Hydrogen Evolution in Alkaline Electrolyte. ACS Catalysis, 2019, 9, 2415-2422.	5.5	74
81	Effects of oxide supports on the CO2 reforming of ethane over Pt-Ni bimetallic catalysts. Applied Catalysis B: Environmental, 2019, 245, 376-388.	10.8	75
82	Shapeâ€Controlled CO₂ Electrochemical Reduction on Nanosized Pd Hydride Cubes and Octahedra. Advanced Energy Materials, 2019, 9, 1802840.	10.2	132
83	Elucidating the roles of metallic Ni and oxygen vacancies in CO2 hydrogenation over Ni/CeO2 using isotope exchange and in situ measurements. Applied Catalysis B: Environmental, 2019, 245, 360-366.	10.8	57
84	Unsaturated edge-anchored Ni single atoms on porous microwave exfoliated graphene oxide for electrochemical CO2. Applied Catalysis B: Environmental, 2019, 243, 294-303.	10.8	243
85	Pt-modified TaC as an efficient electrocatalyst for ethanol oxidation in acid and alkaline electrolytes. Applied Catalysis B: Environmental, 2018, 234, 329-336.	10.8	22
86	Cobalt-modified molybdenum carbide as a selective catalyst for hydrodeoxygenation of furfural. Applied Catalysis B: Environmental, 2018, 233, 160-166.	10.8	64
87	Combining CO2 reduction with propane oxidative dehydrogenation over bimetallic catalysts. Nature Communications, 2018, 9, 1398.	5.8	113
88	Reducing Iridium Loading in Oxygen Evolution Reaction Electrocatalysts Using Coreâ€“Shell Particles with Nitride Cores. ACS Catalysis, 2018, 8, 2615-2621.	5.5	117
89	Growth of Nanoparticles with Desired Catalytic Functions by Controlled Doping-Segregation of Metal in Oxide. Chemistry of Materials, 2018, 30, 1585-1592.	3.2	11
90	A Comparative Study of Hydrodeoxygenation of Furfural Over Fe/Pt(111) and Fe/Mo2C Surfaces. Topics in Catalysis, 2018, 61, 439-445.	1.3	13

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91	Combining CO₂ Reduction with Ethane Oxidative Dehydrogenation by Oxygen-Modification of Molybdenum Carbide. ACS Catalysis, 2018, 8, 5374-5381.	5.5	58
92	Enhancing catalytic selectivity and stability for CO2 hydrogenation to methanol using a solid-solution catalyst. National Science Review, 2018, 5, 607-608.	4.6	3
93	Identifying Dynamic Structural Changes of Active Sites in Ptâ€“Ni Bimetallic Catalysts Using Multimodal Approaches. ACS Catalysis, 2018, 8, 4120-4131.	5.5	54
94	In situ hydrogenation and decarboxylation of oleic acid into heptadecane over a Cuâ€“Ni alloy catalyst using methanol as a hydrogen carrier. Green Chemistry, 2018, 20, 197-205.	4.6	142
95	Tuning Ni-catalyzed CO2 hydrogenation selectivity via Ni-ceria support interactions and Ni-Fe bimetallic formation. Applied Catalysis B: Environmental, 2018, 224, 442-450.	10.8	133
96	Spectroscopic characterization of a highly selective NiCu₃/C hydrodeoxygenation catalyst. Catalysis Science and Technology, 2018, 8, 6100-6108.	2.1	9
97	Tungsten Carbide and Cobalt Modified Nickel Nanoparticles Supported on Multiwall Carbon Nanotubes as Highly Efficient Electrocatalysts for Urea Oxidation in Alkaline Electrolyte. ACS Applied Materials & Interfaces, 2018, 10, 41338-41343.	4.0	25
98	Mechanistic Insights into Electrochemical Nitrogen Reduction Reaction on Vanadium Nitride Nanoparticles. Journal of the American Chemical Society, 2018, 140, 13387-13391.	6.6	438
99	Bimetallic Electrocatalysts for CO2 Reduction. Topics in Current Chemistry, 2018, 376, 41.	3.0	57
100	Controlling reaction pathways of selective Câ€“O bond cleavage of glycerol. Nature Communications, 2018, 9, 4612.	5.8	54
101	Selective Hydrogenation of Biomass-Derived 2(5H)-Furanone to Î³-Butyrolactone over Ni-Based Bimetallic Catalysts. ACS Sustainable Chemistry and Engineering, 2018, 6, 16039-16046.	3.2	16
102	Understanding the Role of Functional Groups in Polymeric Binder for Electrochemical Carbon Dioxide Reduction on Gold Nanoparticles. Advanced Functional Materials, 2018, 28, 1804762.	7.8	76
103	Palladium-Modified Tungsten Carbide for Ethanol Electrooxidation: From Surface Science Studies to ElectrochemicalÂEvaluation. Journal of the Electrochemical Society, 2018, 165, J3031-J3038.	1.3	7
104	Activity and Selectivity Control in CO₂ Electroreduction to Multicarbon Products over CuO_x Catalysts via Electrolyte Design. ACS Catalysis, 2018, 8, 10012-10020.	5.5	173
105	Beyond fossil fuelâ€“driven nitrogen transformations. Science, 2018, 360, .	6.0	1,379
106	L-Phenylalanine-Templated Platinum Catalyst with Enhanced Performance for Oxygen Reduction Reaction. ACS Applied Materials & Interfaces, 2018, 10, 21321-21327.	4.0	15
107	Hydrodeoxygenation of biomass-derived oxygenates over metal carbides: from model surfaces to powder catalysts. Green Chemistry, 2018, 20, 2679-2696.	4.6	80
108	Active sites for tandem reactions of CO ₂ reduction and ethane dehydrogenation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8278-8283.	3.3	105

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109	Role of Surface Oxophilicity in Copper-Catalyzed Water Dissociation. ACS Catalysis, 2018, 8, 9327-9333.	5.5	46
110	Controlled Synthesis of Fe₃O₄ Nanospheres Coated with Nitrogen-Doped Carbon for High Performance Supercapacitors. ACS Applied Energy Materials, 2018, 1, 4599-4605.	2.5	21
111	High selectivity of CO₂ hydrogenation to CO by controlling the valence state of nickel using perovskite. Chemical Communications, 2018, 54, 7354-7357.	2.2	49
112	Mechanistic study of dry reforming of ethane by CO₂ on a bimetallic PtNi(111) model surface. Catalysis Science and Technology, 2018, 8, 3748-3758.	2.1	24
113	Ringâ€Opening Reaction of Furfural and Tetrahydrofurfuryl Alcohol on Hydrogenâ€Predosed Iridium(1â€‰1â€‰1) and Cobalt/Iridium(1â€‰1â€‰1) Surfaces. ChemCatChem, 2017, 9, 1701-1707.	1.8	34
114	Hydrogenation of CO2 to methanol over CuCeTiO catalysts. Applied Catalysis B: Environmental, 2017, 206, 704-711.	10.8	109
115	Comparison of Methodologies of Activation Barrier Measurements for Reactions with Deactivation. Industrial & Engineering Chemistry Research, 2017, 56, 1360-1364.	1.8	11
116	Reactions of water and C1 molecules on carbide and metal-modified carbide surfaces. Chemical Society Reviews, 2017, 46, 1807-1823.	18.7	85
117	The Central Role of Bicarbonate in the Electrochemical Reduction of Carbon Dioxide on Gold. Journal of the American Chemical Society, 2017, 139, 3774-3783.	6.6	479
118	Electrochemical reduction of CO₂to synthesis gas with controlled CO/H₂ratios. Energy and Environmental Science, 2017, 10, 1180-1185.	15.6	341
119	Active sites for CO ₂ hydrogenation to methanol on Cu/ZnO catalysts. Science, 2017, 355, 1296-1299.	6.0	1,180
120	Quantum Mechanical Study of N-Heterocyclic Carbene Adsorption on Au Surfaces. Journal of Physical Chemistry A, 2017, 121, 2674-2682.	1.1	29
121	Janus structured Ptâ€“FeNC nanoparticles as a catalyst for the oxygen reduction reaction. Chemical Communications, 2017, 53, 1660-1663.	2.2	46
122	Opportunities and Challenges in Utilizing Metal-Modified Transition Metal Carbides as Low-Cost Electrocatalysts. Joule, 2017, 1, 253-263.	11.7	94
123	Grand Canonical Quantum Mechanical Study of the Effect of the Electrode Potential on N-Heterocyclic Carbene Adsorption on Au Surfaces. Journal of Physical Chemistry C, 2017, 121, 24618-24625.	1.5	12
124	Tuning catalytic properties using an atomically dispersed metal overlayer on transition metal carbide substrates. National Science Review, 2017, 4, 788-789.	4.6	4
125	Response to Comment on â€œActive sites for CO ₂ hydrogenation to methanol on Cu/ZnO catalystsâ€• Science, 2017, 357, .	6.0	37
126	Tuning Selectivity of CO₂ Hydrogenation Reactions at the Metal/Oxide Interface. Journal of the American Chemical Society, 2017, 139, 9739-9754.	6.6	823

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127	Adsorbate-mediated strong metalâ€“support interactions in oxide-supported Rh catalysts. Nature Chemistry, 2017, 9, 120-127.	6.6	609
128	Understanding the Role of M/Pt(111) (M = Fe, Co, Ni, Cu) Bimetallic Surfaces for Selective Hydrodeoxygenation of Furfural. ACS Catalysis, 2017, 7, 5758-5765.	5.5	76
129	Trends in Hydrogen Evolution Activity of Metalâ€Modified Molybdenum Carbides in Alkaline and Acid Electrolytes. ChemElectroChem, 2016, 3, 1686-1693.	1.7	19
130	Ordered Mesoporous Metal Carbides with Enhanced Anisole Hydrodeoxygenation Selectivity. ACS Catalysis, 2016, 6, 3506-3514.	5.5	91
131	Reaction Pathways and Intermediates in Selective Ring Opening of Biomass-Derived Heterocyclic Compounds by Iridium. ACS Catalysis, 2016, 6, 7002-7009.	5.5	41
132	Dry Reforming of Ethane and Butane with CO₂ over PtNi/CeO₂ Bimetallic Catalysts. ACS Catalysis, 2016, 6, 7283-7292.	5.5	103
133	Optimizing Binding Energies of Key Intermediates for CO₂ Hydrogenation to Methanol over Oxide-Supported Copper. Journal of the American Chemical Society, 2016, 138, 12440-12450.	6.6	565
134	Porous MS₂/MO₂ (M = W, Mo) Nanorods as Efficient Hydrogen Evolution Reaction Catalysts. ACS Catalysis, 2016, 6, 6585-6590.	5.5	80
135	CO₂ Hydrogenation over Oxideâ€Supported PtCo Catalysts: The Role of the Oxide Support in Determining the Product Selectivity. Angewandte Chemie - International Edition, 2016, 55, 7968-7973.	7.2	261
136	Metal-modified niobium carbides as low-cost and impurity-resistant electrocatalysts for hydrogen evolution in acidic and alkaline electrolytes. International Journal of Hydrogen Energy, 2016, 41, 5948-5954.	3.8	21
137	CO2 hydrogenation on Pt, Pt/SiO2 and Pt/TiO2: Importance of synergy between Pt and oxide support. Journal of Catalysis, 2016, 343, 115-126.	3.1	250
138	Low loadings of platinum on transition metal carbides for hydrogen oxidation and evolution reactions in alkaline electrolytes. Chemical Communications, 2016, 52, 3697-3700.	2.2	42
139	Reaction pathways of furfural, furfuryl alcohol and 2-methylfuran on Cu(111) and NiCu bimetallic surfaces. Surface Science, 2016, 652, 91-97.	0.8	73
140	Reforming and oxidative dehydrogenation of ethane with CO2 as a soft oxidant over bimetallic catalysts. Journal of Catalysis, 2016, 343, 168-177.	3.1	115
141	Catalytic reduction of CO₂ by H₂ for synthesis of CO, methanol and hydrocarbons: challenges and opportunities. Energy and Environmental Science, 2016, 9, 62-73.	15.6	979
142	Direct Epoxidation of Propylene over Stabilized Cu⁺ Surface Sites on Titaniumâ€Modified Cu₂O. Angewandte Chemie - International Edition, 2015, 54, 11946-11951.	7.2	62
143	Identifying Different Types of Catalysts for CO₂ Reduction by Ethane through Dry Reforming and Oxidative Dehydrogenation. Angewandte Chemie - International Edition, 2015, 54, 15501-15505.	7.2	99
144	Identifying trends and descriptors for selective CO₂ conversion to CO over transition metal carbides. Chemical Communications, 2015, 51, 6988-6991.	2.2	122

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145	Correlating hydrogen oxidation and evolution activity on platinum at different pH with measured hydrogen binding energy. Nature Communications, 2015, 6, 5848.	5.8	784
146	Platinumâ€“Ruthenium Nanotubes and Platinumâ€“Ruthenium Coated Copper Nanowires As Efficient Catalysts for Electro-Oxidation of Methanol. ACS Catalysis, 2015, 5, 1468-1474.	5.5	155
147	Low Pressure CO₂ Hydrogenation to Methanol over Gold Nanoparticles Activated on a CeO_x/TiO₂ Interface. Journal of the American Chemical Society, 2015, 137, 10104-10107.	6.6	200
148	Biomass conversion to H₂ with substantially suppressed CO₂ formation in the presence of Group I & Group II hydroxides and a Ni/ZrO₂ catalyst. Energy and Environmental Science, 2015, 8, 1702-1706.	15.6	52
149	Reaction Pathways of Biomassâ€Derived Oxygenates over Metals and Carbides: From Model Surfaces to Supported Catalysts. ChemCatChem, 2015, 7, 1402-1421.	1.8	50
150	Replacing Precious Metals with Carbide Catalysts for Hydrogenation Reactions. Topics in Catalysis, 2015, 58, 240-246.	1.3	27
151	Highly porous non-precious bimetallic electrocatalysts for efficient hydrogen evolution. Nature Communications, 2015, 6, 6567.	5.8	440
152	Oxygen Reduction at Very Low Overpotential on Nanoporous Ag Catalysts. Advanced Energy Materials, 2015, 5, 1500149.	10.2	68
153	Hydrogenation of CO₂ to Methanol: Importance of Metalâ€“Oxide and Metalâ€“Carbide Interfaces in the Activation of CO₂. ACS Catalysis, 2015, 5, 6696-6706.	5.5	374
154	Understanding the Role of Metal-Modified Mo(110) Bimetallic Surfaces for Câ€“O/Câ•O and Câ€“C Bond Scission in C3 Oxygenates. ACS Catalysis, 2015, 5, 256-263.	5.5	9
155	Understanding the role of oxygen in the segregation of sodium at the surface of molybdenum coated sodaâ€lime glass. AIChE Journal, 2014, 60, 2365-2372.	1.8	29
156	Selective deoxygenation of aldehydes and alcohols on molybdenum carbide (Mo 2 C) surfaces. Applied Surface Science, 2014, 323, 88-95.	3.1	46
157	Theoretical and Experimental Studies of Ethanol Decomposition and Electrooxidation over Pt-Modified Tungsten Carbide. Journal of the Electrochemical Society, 2014, 161, E3165-E3170.	1.3	10
158	Effect of Na on Cu(In,Ga)Se<inf>2</inf> in-plane conductance and Seebeck coefficient. , 2014, , .		1
159	Controlling Câ€“O, Câ€“C and Câ€“H bond scission for deoxygenation, reforming, and dehydrogenation of ethanol using metal-modified molybdenum carbide surfaces. Green Chemistry, 2014, 16, 777-784.	4.6	51
160	Theoretical prediction and experimental verification of low loading of platinum on titanium carbide as low-cost and stable electrocatalysts. Journal of Catalysis, 2014, 312, 216-220.	3.1	56
161	Molybdenum Carbide as Alternative Catalysts to Precious Metals for Highly Selective Reduction of CO₂ to CO. Angewandte Chemie - International Edition, 2014, 53, 6705-6709.	7.2	329
162	A selective and efficient electrocatalyst for carbon dioxide reduction. Nature Communications, 2014, 5, 3242.	5.8	1,111

#	Article	IF	Citations
163	Tungsten carbides as selective deoxygenation catalysts: experimental and computational studies of converting C3 oxygenates to propene. Green Chemistry, 2014, 16, 761-769.	4.6	71
164	Non-precious metal electrocatalysts with high activity for hydrogen oxidation reaction in alkaline electrolytes. Energy and Environmental Science, 2014, 7, 1719-1724.	15.6	276
165	Trends in Electrochemical Stability of Transition Metal Carbides and Their Potential Use As Supports for Low-Cost Electrocatalysts. ACS Catalysis, 2014, 4, 1558-1562.	5.5	142
166	Theoretical and Experimental Studies of Câ€“C versus Câ€“O Bond Scission of Ethylene Glycol Reaction Pathways via Metal-Modified Molybdenum Carbides. ACS Catalysis, 2014, 4, 1409-1418.	5.5	45
167	Pt-modified molybdenum carbide for the hydrogen evolution reaction: From model surfaces to powder electrocatalysts. Journal of Power Sources, 2014, 271, 76-81.	4.0	51
168	Platinumâ€Modified Gold Electrocatalysts for the Hydrogen Oxidation Reaction in Alkaline Electrolytes. ChemElectroChem, 2014, 1, 2058-2063.	1.7	23
169	Reaction Pathways of Propanal and 1-Propanol on Fe/Ni(111) and Cu/Ni(111) Bimetallic Surfaces. Journal of Physical Chemistry C, 2014, 118, 11340-11349.	1.5	33
170	Molybdenum Carbide as a Highly Selective Deoxygenation Catalyst for Converting Furfural to 2â€Methylfuran. ChemSusChem, 2014, 7, 2146-2149.	3.6	105
171	Comparison of Ethylene Glycol Steam Reforming Over Pt and NiPt Catalysts on Various Supports. Topics in Catalysis, 2013, 56, 1644-1650.	1.3	16
172	Selection of oxide supports to anchor desirable bimetallic structures for ethanol reforming and 1,3-butadiene hydrogenation. Chinese Journal of Catalysis, 2013, 34, 2009-2017.	6.9	4
173	Understanding the effect of Na in improving the performance of Cu(InGa)Se<inf>2</inf>-based photovoltaics. , 2013, , .		2
174	Trends in the catalytic reduction of CO2 by hydrogen over supported monometallic and bimetallic catalysts. Journal of Catalysis, 2013, 301, 30-37.	3.1	168
175	Monolayer palladium supported on molybdenum and tungsten carbide substrates as low-cost hydrogen evolution reaction (HER) electrocatalysts. International Journal of Hydrogen Energy, 2013, 38, 5638-5644.	3.8	92
176	Metal Carbides as Alternative Electrocatalyst Supports. ACS Catalysis, 2013, 3, 1184-1194.	5.5	358
177	Selective Hydrodeoxygenation of Biomassâ€Derived Oxygenates to Unsaturated Hydrocarbons using Molybdenum Carbide Catalysts. ChemSusChem, 2013, 6, 798-801.	3.6	173
178	Ordered mesoporous nickel cobaltite spinel with ultra-high supercapacitance. Journal of Materials Chemistry A, 2013, 1, 2331.	5.2	99
179	Correlating the hydrogen evolution reaction activity in alkaline electrolytes with the hydrogen binding energy on monometallic surfaces. Energy and Environmental Science, 2013, 6, 1509.	15.6	869
180	Binding of styrene on silicon (111)-7â€‰Ã—â€‰7 surfaces as a model molecular electronics system. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, 031401.	0.9	1

#	Article	IF	Citations
181	Photoelectrochemical reforming of glucose for hydrogen production using a WO3-based tandem cell device. Energy and Environmental Science, 2012, 5, 9091.	15.6	63
182	Atomic layer deposition synthesis of platinumâ€“tungsten carbide coreâ€“shell catalysts for the hydrogen evolution reaction. Chemical Communications, 2012, 48, 1063-1065.	2.2	111
183	Review of Pt-Based Bimetallic Catalysis: From Model Surfaces to Supported Catalysts. Chemical Reviews, 2012, 112, 5780-5817.	23.0	1,082
184	Metal overlayer on metal carbide substrate: unique bimetallic properties for catalysis and electrocatalysis. Chemical Society Reviews, 2012, 41, 8021.	18.7	137
185	Synthesis of rigid and stable large-inner-diameter multiwalled carbon nanotubes. RSC Advances, 2012, 2, 2685.	1.7	6
186	Reactions of oxygen-containing molecules on transition metal carbides: Surface science insight into potential applications in catalysis and electrocatalysis. Surface Science Reports, 2012, 67, 201-232.	3.8	86
187	Correlating Ethylene Glycol Reforming Activity with In Situ EXAFS Detection of Ni Segregation in Supported NiPt Bimetallic Catalysts. ACS Catalysis, 2012, 2, 2290-2296.	5.5	80
188	Pd-Modified Tungsten Carbide for Methanol Electro-oxidation: From Surface Science Studies to Electrochemical Evaluation. ACS Catalysis, 2012, 2, 751-758.	5.5	84
189	Activation of Tungsten Carbide Catalysts by Use of an Oxygen Plasma Pretreatment. ACS Catalysis, 2012, 2, 765-769.	5.5	67
190	A New Class of Electrocatalysts for Hydrogen Production from Water Electrolysis: Metal Monolayers Supported on Low-Cost Transition Metal Carbides. Journal of the American Chemical Society, 2012, 134, 3025-3033.	6.6	482
191	Comparison of Reaction Pathways of Ethylene Glycol, Acetaldehyde, and Acetic Acid on Tungsten Carbide and Ni-Modified Tungsten Carbide Surfaces. Journal of Physical Chemistry C, 2012, 116, 5720-5729.	1.5	29
192	Effect of surface carbon on the hydrogen evolution reactivity of tungsten carbide (WC) and Pt-modified WC electrocatalysts. International Journal of Hydrogen Energy, 2012, 37, 3019-3024.	3.8	114
193	Rotating disk electrode measurements of activity and stability of monolayer Pt on tungsten carbide disks for oxygen reduction reaction. Journal of Power Sources, 2012, 199, 46-52.	4.0	49
194	Comparison of electrochemical stability of transition metal carbides (WC, W2C, Mo2C) over a wide pH range. Journal of Power Sources, 2012, 202, 11-17.	4.0	157
195	Replacing Platinum with Tungsten Carbide (WC) for Reforming Reactions: Similarities in Ethanol Decomposition on Ni/Pt and Ni/WC Surfaces. ACS Catalysis, 2011, 1, 390-398.	5.5	44
196	Low-temperature hydrogenation of the Cî€Ò bond of propanal over Niâ€“Pt bimetallic catalysts: from model surfaces to supported catalysts. Catalysis Science and Technology, 2011, 1, 638.	2.1	22
197	Comparison of Oâˆ’H, Câˆ’H, and Câˆ’O Bond Scission Sequence of Methanol on Tungsten Carbide Surfaces Modified by Ni, Rh, and Au. Journal of Physical Chemistry C, 2011, 115, 6644-6650.	1.5	49
198	Glycolaldehyde as a Probe Molecule for Biomass Derivatives: Reaction of Câ€”OH and Câ•Ò Functional Groups on Monolayer Ni Surfaces. Journal of the American Chemical Society, 2011, 133, 20528-20535.	6.6	42

#	Article	IF	Citations
199	Atomic Layer Deposition of Pt on Tungsten Monocarbide (WC) for the Oxygen Reduction Reaction. Journal of Physical Chemistry C, 2011, 115, 3709-3715.	1.5	94
200	Monolayer platinum supported on tungsten carbides as low-cost electrocatalysts: opportunities and limitations. Energy and Environmental Science, 2011, 4, 3900.	15.6	243
201	Catalysis Center for Energy Innovation for Biomass Processing: Research Strategies and Goals. Catalysis Letters, 2010, 140, 77-84.	1.4	38
202	Theoretical Prediction and Experimental Verification of Stability of Ptâ€“3dâ€“Pt Subsurface Bimetallic Structures: From Single Crystal Surfaces to Polycrystalline Films. Topics in Catalysis, 2010, 53, 338-347.	1.3	19
203	Correlating extent of Ptâ€“Ni bond formation with low-temperature hydrogenation of benzene and 1,3-butadiene over supported Pt/Ni bimetallic catalysts. Journal of Catalysis, 2010, 271, 239-250.	3.1	95
204	Replacing bulk Pt in Ptâ€“Niâ€“Pt bimetallic structures with tungsten monocarbide (WC): Hydrogen adsorption and cyclohexene hydrogenation on Ptâ€“Niâ€“WC. Journal of Catalysis, 2010, 271, 132-139.	3.1	44
205	Differentiation of Bulk and Surface Contribution to Supercapacitance in Amorphous and Crystalline NiO. ChemSusChem, 2010, 3, 1367-1370.	3.6	45
206	Lowâ€Cost Hydrogenâ€Evolution Catalysts Based on Monolayer Platinum on Tungsten Monocarbide Substrates. Angewandte Chemie - International Edition, 2010, 49, 9859-9862.	7.2	499
207	Comparison of bond scission sequence of methanol on tungsten monocarbide and Pt-modified tungsten monocarbide. Journal of Chemical Physics, 2010, 133, 104702.	1.2	26
208	Synthesis and Characterization of Three-Dimensionally Ordered Macroporous (3DOM) Tungsten Carbide: Application to Direct Methanol Fuel Cells. Chemistry of Materials, 2010, 22, 966-973.	3.2	68
209	Electrochemical Stability of Tungsten and Tungsten Monocarbide (WC) Over Wide pH and Potential Ranges. Journal of the Electrochemical Society, 2010, 157, F179.	1.3	79
210	Cyclic voltammetry and X-ray photoelectron spectroscopy studies of electrochemical stability of clean and Pt-modified tungsten and molybdenum carbide (WC and Mo2C) electrocatalysts. Journal of Power Sources, 2009, 193, 501-506.	4.0	97
211	Effects of Zeolite Structures, Exchanged Cations, and Bimetallic Formulations on the Selective Hydrogenation of Acetylene Over Zeolite-Supported Catalysts. Catalysis Letters, 2009, 130, 380-385.	1.4	9
212	Correlating NEXAFS characterization of Coâ€“W and Niâ€“W bimetallic carbide catalysts with reactivity for dry reforming of methane. Applied Catalysis A: General, 2009, 356, 18-22.	2.2	23
213	Monolayer bimetallic surfaces: Experimental and theoretical studies of trends in electronic and chemical properties. Surface Science Reports, 2008, 63, 201-254.	3.8	472
214	Reforming of Oxygenates for H2 Production on 3d/Pt(111) Bimetallic Surfaces. Topics in Catalysis, 2008, 51, 49-59.	1.3	42
215	Preparation and catalytic performance of monolayer-dispersed Pd/Ni bimetallic catalysts for hydrogenation. Frontiers of Chemistry in China: Selected Publications From Chinese Universities, 2008, 3, 161-165.	0.4	3
216	Enhancing CO Tolerance of Electrocatalysts: Electro-oxidation of CO on WC and Pt-Modified WC. Electrochemical and Solid-State Letters, 2008, 11, B63.	2.2	37

#	Article	IF	Citations
217	Tungsten Monocarbide as Potential Replacement of Platinum for Methanol Electrooxidation. Journal of Physical Chemistry C, 2007, 111, 14617-14620.	1.5	149
218	A Combined Surface Science and Electrochemical Study of Tungsten Carbides as Anode Electrocatalysts. Topics in Catalysis, 2007, 46, 349-357.	1.3	32
219	Pd-based bimetallic catalysts prepared by replacement reactions. Catalysis Letters, 2007, 114, 169-173.	1.4	14
220	Surface science and electrochemical studies of WC and W2C PVD films as potential electrocatalysts. Catalysis Today, 2005, 99, 299-307.	2.2	189
221	Trends in the chemical properties of early transition metal carbide surfaces: A density functional study. Catalysis Today, 2005, 105, 66-73.	2.2	302
222	The chemical and electronic properties of oxygen-modified C/Mo(110): a model system for molybdenum oxycarbides. Journal of Catalysis, 2005, 229, 30-44.	3.1	27
223	Comparative studies of methanol decomposition on carbide-modified V(110) and Ti(0001). Surface Science, 2005, 598, 185-199.	0.8	19
224	Correlating Low-temperature Hydrogenation Activity of Co/Pt(111) Bimetallic Surfaces to Supported Co/Pt/Î³-Al2O3 Catalysts. Catalysis Letters, 2005, 105, 233-238.	1.4	10
225	Potential Application of Tungsten Carbides as Electrocatalysts: Synergistic Effect by Supporting Pt on Câ•W(110) for the Reactions of Methanol, Water, and CO. Journal of the Electrochemical Society, 2005, 152, A1483.	1.3	40
226	Surface Chemistry of Transition Metal Carbides. Chemical Reviews, 2005, 105, 185-212.	23.0	677
227	A Comparison of Similarities and Differences in the Activities of Pt/Ni(111) and Ni/Pt(111) Surfaces. Catalysis Letters, 2004, 95, 1-6.	1.4	30
228	Synthesis, characterization and surface reactivity of tungsten carbide (WC) PVD films. Surface Science, 2004, 569, 89-98.	0.8	39
229	Potential application of tungsten carbides as electrocatalysts III. Reactions of methanol, water, and hydrogen on Pt-modified C/W(111) surfaces. Journal of Catalysis, 2003, 215, 254-263.	3.1	62
230	Reactions of methanol and water over carbide-modified Mo(). Surface Science, 2003, 536, 75-87.	0.8	52
231	Potential Application of Tungsten Carbides as Electrocatalysts:â€‰4. Reactions of Methanol, Water, and Carbon Monoxide over Carbide-Modified W(110). Journal of Physical Chemistry B, 2003, 107, 2029-2039.	1.2	68
232	Correlating Mechanical Strain with Low-Temperature Hydrogenation Activity on Submonolayer Ni/W(110) Surfaces. Journal of Physical Chemistry B, 2003, 107, 4334-4341.	1.2	12
233	Using chemical probes to investigate properties of monolayer metal thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1302-1306.	0.9	11
234	Electron Transfer Effects in Ozone Decomposition on Supported Manganese Oxide. Journal of Physical Chemistry B, 2001, 105, 4245-4253.	1.2	179

#	Article	IF	Citations
235	Oxygen-Containing Functional Groups on Single-Wall Carbon Nanotubes:â€‰ NEXAFS and Vibrational Spectroscopic Studies. Journal of the American Chemical Society, 2001, 123, 10699-10704.	6.6	478
236	Potential Application of Tungsten Carbides as Electrocatalysts. 2. Coadsorption of CO and H2O on Carbide-Modified W(111). Journal of Physical Chemistry B, 2001, 105, 10045-10053.	1.2	56
237	Potential Application of Tungsten Carbides as Electrocatalysts. 1. Decomposition of Methanol over Carbide-Modified W(111). Journal of Physical Chemistry B, 2001, 105, 10037-10044.	1.2	79
238	Decomposition of NO on Tungsten Carbide and Molybdenum Carbide Surfaces. Catalysis Letters, 2001, 77, 29-34.	1.4	17
239	Title is missing!. Catalysis Letters, 2001, 77, 35-40.	1.4	7
240	Supported Bimetallic Nbâˆ’Mo Carbide:Â Synthesis, Characterization, and Reactivity. Journal of Physical Chemistry B, 2000, 104, 8800-8806.	1.2	28
241	Mechanism of Dehydrocyclization of 1-Hexene to Benzene on Cu3Pt(111):Â Identification of 1,3,5-Hexatriene as Reaction Intermediate. Langmuir, 1998, 14, 1337-1344.	1.6	15
242	Carbide and Nitride Overlayers on Early Transition Metal Surfaces:Â Preparation, Characterization, and Reactivities. Chemical Reviews, 1996, 96, 1477-1498.	23.0	677