

Jingguang G Chen

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/6985169/jingguang-g-chen-publications-by-year.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

179
papers

19,741
citations

70
h-index

139
g-index

187
ext. papers

24,106
ext. citations

15.1
avg, IF

7.58
L-index

#	Paper	IF	Citations
179	Unraveling Unique Surface Chemistry of Transition Metal Nitrides in Controlling Selective C-O Bond Scission Pathways of Glycerol.. <i>Jacs Au</i> , 2022 , 2, 367-379		1
178	CO ₂ -assisted ethane aromatization over zinc and phosphorous modified ZSM-5 catalysts. <i>Applied Catalysis B: Environmental</i> , 2022 , 304, 120956	21.8	3
177	Coupling CO ₂ reduction with ethane aromatization for enhancing catalytic stability of iron-modified ZSM-5. <i>Journal of Energy Chemistry</i> , 2022 , 66, 210-217	12	2
176	Achieving complete electrooxidation of ethanol by single atomic Rh decoration of Pt nanocubes.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2112109119	11.5	3
175	Machine Learning Prediction and Experimental Verification of Pt-Modified Nitride Catalysts for Ethanol Reforming with Reduced Precious Metal Loading. <i>Applied Catalysis B: Environmental</i> , 2022 , 121380	21.8	1
174	Oxygenate Production from Plasma-Activated Reaction of CO ₂ and Ethane. <i>ACS Energy Letters</i> , 2022 , 7, 236-241	20.1	1
173	Electrochemical CO Reduction Reaction over Cu Nanoparticles with Tunable Activity and Selectivity Mediated by Functional Groups in Polymeric Binder.. <i>Jacs Au</i> , 2022 , 2, 214-222		4
172	Comparison of Heterogeneous Hydroformylation of Ethylene and Propylene over RhCo ₃ /MCM-41 Catalysts. <i>ACS Catalysis</i> , 2021 , 11, 14575-14585	13.1	3
171	Insight into Acetic Acid Synthesis from the Reaction of CH ₄ and CO ₂ . <i>ACS Catalysis</i> , 2021 , 11, 3384-3401	13.1	12
170	Electrochemical reduction of acetonitrile to ethylamine. <i>Nature Communications</i> , 2021 , 12, 1949	17.4	12
169	Simultaneously upgrading CO ₂ and light alkanes into value-added products. <i>AIChE Journal</i> , 2021 , 67, e17249	3.6	3
168	Experimental and Theoretical Insights into the Active Sites on WO _x /Pt(111) Surfaces for Dehydrogenation and Dehydration Reactions. <i>ACS Catalysis</i> , 2021 , 11, 8023-8032	13.1	2
167	CO ₂ hydrogenation over heterogeneous catalysts at atmospheric pressure: from electronic properties to product selectivity. <i>Green Chemistry</i> , 2021 , 23, 249-267	10	22
166	N ₂ Fixation by Plasma-Activated Processes. <i>Joule</i> , 2021 , 5, 300-315	27.8	41
165	Challenges and Opportunities in Utilizing MXenes of Carbides and Nitrides as Electrocatalysts. <i>Advanced Energy Materials</i> , 2021 , 11, 2002967	21.8	33
164	Bimetallic-Derived Catalysts and Their Application in Simultaneous Upgrading of CO ₂ and Ethane. <i>Matter</i> , 2021 , 4, 408-440	12.7	8
163	Transition metal carbides and nitrides as catalysts for thermochemical reactions. <i>Journal of Catalysis</i> , 2021 , 404, 929-929	7.3	5

162	Recent advances in carbon dioxide hydrogenation to produce olefins and aromatics. <i>Chem</i> , 2021 , 7, 2277-2311	24	
161	Trends and descriptors for tuning CO ₂ electroreduction to synthesis gas over Ag and Au supported on transition metal carbides and nitrides. <i>Chemical Engineering Journal</i> , 2021 , 426, 130781	14.7	2
160	Density functional theory studies of transition metal carbides and nitrides as electrocatalysts. <i>Chemical Society Reviews</i> , 2021 , 50, 12338-12376	58.5	11
159	Selective electroreduction of CO to acetone by single copper atoms anchored on N-doped porous carbon. <i>Nature Communications</i> , 2020 , 11, 2455	17.4	121
158	Understanding the effect of Mo ₂ C support on the activity of Cu for the hydrodeoxygenation of glycerol. <i>Journal of Catalysis</i> , 2020 , 388, 141-153	7.3	7
157	Synthesis and electrocatalytic applications of flower-like motifs and associated composites of nitrogen-enriched tungsten nitride (W ₂ N ₃). <i>Nano Research</i> , 2020 , 13, 1434-1443	10	8
156	Bimetallic Electrocatalysts for CO ₂ Reduction. <i>Topics in Current Chemistry Collections</i> , 2020 , 105-125	1.8	1
155	Computational and experimental identification of strong synergy of the Fe/ZnO catalyst in promoting acetic acid synthesis from CH ₄ and CO. <i>Chemical Communications</i> , 2020 , 56, 3983-3986	5.8	8
154	CO ₂ -Assisted propane aromatization over phosphorus-modified Ga/ZSM-5 catalysts. <i>Catalysis Science and Technology</i> , 2020 , 10, 1881-1888	5.5	10
153	Accelerating CO ₂ Electroreduction to CO Over Pd Single-Atom Catalyst. <i>Advanced Functional Materials</i> , 2020 , 30, 2000407	15.6	77
152	Recent Advances in Carbon Dioxide Hydrogenation to Methanol via Heterogeneous Catalysis. <i>Chemical Reviews</i> , 2020 , 120, 7984-8034	68.1	337
151	Review of Plasma-Assisted Catalysis for Selective Generation of Oxygenates from CO ₂ and CH ₄ . <i>ACS Catalysis</i> , 2020 , 10, 2855-2871	13.1	51
150	Promoting HO production via 2-electron oxygen reduction by coordinating partially oxidized Pd with defect carbon. <i>Nature Communications</i> , 2020 , 11, 2178	17.4	79
149	Innentitelbild: Electrochemical Conversion of CO ₂ to Syngas with Controllable CO/H ₂ Ratios over Co and Ni Single-Atom Catalysts (Angew. Chem. 8/2020). <i>Angewandte Chemie</i> , 2020 , 132, 2938-2938	3.6	
148	Vibrational Spectroscopic Characterization of Glycerol Reaction Pathways over Metal-Modified Molybdenum Carbide Surfaces. <i>ChemCatChem</i> , 2020 , 12, 281-286	5.2	1
147	Electrochemical Conversion of CO ₂ to Syngas with Controllable CO/H ₂ Ratios over Co and Ni Single-Atom Catalysts. <i>Angewandte Chemie</i> , 2020 , 132, 3057-3061	3.6	12
146	Electrochemical Conversion of CO to Syngas with Controllable CO/H Ratios over Co and Ni Single-Atom Catalysts. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 3033-3037	16.4	110
145	Strong Evidence of the Role of H ₂ O in Affecting Methanol Selectivity from CO ₂ Hydrogenation over Cu-ZnO-ZrO ₂ . <i>Chem</i> , 2020 , 6, 419-430	16.2	54

144	Electrochemical Conversion of CO to Syngas with Palladium-Based Electrocatalysts. <i>Accounts of Chemical Research</i> , 2020 , 53, 1535-1544	24.3	46
143	Boosting Activity and Selectivity of CO Electroreduction by Pre-Hydrizing Pd Nanocubes. <i>Small</i> , 2020 , 16, e2005305	11	16
142	Identifying Surface Reaction Intermediates in Plasma Catalytic Ammonia Synthesis. <i>ACS Catalysis</i> , 2020 , 10, 14763-14774	13.1	31
141	Oxygen induced promotion of electrochemical reduction of CO via co-electrolysis. <i>Nature Communications</i> , 2020 , 11, 3844	17.4	35
140	Exploring electrocatalytic stability and activity of unmodified and platinum-modified tungsten and niobium nitrides. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 22883-22892	6.7	8
139	Interfacial Active Sites for CO ₂ Assisted Selective Cleavage of C-C/C-H Bonds in Ethane. <i>Chem</i> , 2020 , 6, 2703-2716	16.2	28
138	Using nature@ blueprint to expand catalysis with Earth-abundant metals. <i>Science</i> , 2020 , 369,	33.3	124
137	Correlating furfural reaction pathways with interactions between furfural and monometallic surfaces. <i>Catalysis Today</i> , 2020 , 339, 289-295	5.3	9
136	Effect of Oxide Support on Catalytic Performance of FeNi-based Catalysts for CO ₂ -assisted Oxidative Dehydrogenation of Ethane. <i>ChemCatChem</i> , 2020 , 12, 494-503	5.2	18
135	Transition Metal Nitrides as Promising Catalyst Supports for Tuning CO/H ₂ Syngas Production from Electrochemical CO ₂ Reduction. <i>Angewandte Chemie</i> , 2020 , 132, 11441-11444	3.6	5
134	Reactions of CO and ethane enable CO bond insertion for production of C ₃ oxygenates. <i>Nature Communications</i> , 2020 , 11, 1887	17.4	23
133	Transition Metal Nitrides as Promising Catalyst Supports for Tuning CO/H Syngas Production from Electrochemical CO Reduction. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 11345-11348	16.4	56
132	Carbon dioxide reduction in tandem with light-alkane dehydrogenation. <i>Nature Reviews Chemistry</i> , 2019 , 3, 638-649	34.6	72
131	The effects of bimetallic interactions for CO ₂ -assisted oxidative dehydrogenation and dry reforming of propane. <i>AIChE Journal</i> , 2019 , 65, e16670	3.6	25
130	Conversion of CO ₂ on a highly active and stable Cu/FeOx/CeO ₂ catalyst: tuning catalytic performance by oxide-oxide interactions. <i>Catalysis Science and Technology</i> , 2019 , 9, 3735-3742	5.5	18
129	Tuning CO ₂ hydrogenation selectivity via metal-oxide interfacial sites. <i>Journal of Catalysis</i> , 2019 , 374, 60-71	7.3	51
128	Generating Defect-Rich Bismuth for Enhancing the Rate of Nitrogen Electroreduction to Ammonia. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 9464-9469	16.4	178
127	Generating Defect-Rich Bismuth for Enhancing the Rate of Nitrogen Electroreduction to Ammonia. <i>Angewandte Chemie</i> , 2019 , 131, 9564-9569	3.6	30

126	1,2-Propanediol as a Surrogate Molecule of Glycerol for Mechanistic Studies of Selective Hydrodeoxygenation Reactions over Mo ₂ C and Cu/Mo ₂ C Surfaces. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 , 7, 8077-8082	8.3	7
125	Effectively Increased Efficiency for Electroreduction of Carbon Monoxide Using Supported Polycrystalline Copper Powder Electrocatalysts. <i>ACS Catalysis</i> , 2019 , 9, 4709-4718	13.1	47
124	A General Method to Probe Oxygen Evolution Intermediates at Operating Conditions. <i>Joule</i> , 2019 , 3, 1498-1509	27.8	115
123	Methanol Synthesis from CO ₂ Hydrogenation over CuZnCeTi Mixed Oxide Catalysts. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 7922-7928	3.9	15
122	Enhancing Activity and Reducing Cost for Electrochemical Reduction of CO ₂ by Supporting Palladium on Metal Carbides. <i>Angewandte Chemie</i> , 2019 , 131, 6337-6341	3.6	17
121	Exploring the ternary interactions in Cu-ZnO-ZrO catalysts for efficient CO hydrogenation to methanol. <i>Nature Communications</i> , 2019 , 10, 1166	17.4	130
120	Enhancing Activity and Reducing Cost for Electrochemical Reduction of CO by Supporting Palladium on Metal Carbides. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 6271-6275	16.4	87
119	Net reduction of CO ₂ via its thermocatalytic and electrocatalytic transformation reactions in standard and hybrid processes. <i>Nature Catalysis</i> , 2019 , 2, 381-386	36.5	174
118	Trends and Descriptors of Metal-Modified Transition Metal Carbides for Hydrogen Evolution in Alkaline Electrolyte. <i>ACS Catalysis</i> , 2019 , 9, 2415-2422	13.1	41
117	Tuning the activity and selectivity of electroreduction of CO to synthesis gas using bimetallic catalysts. <i>Nature Communications</i> , 2019 , 10, 3724	17.4	100
116	Revealing Energetics of Surface Oxygen Redox from Kinetic Fingerprint in Oxygen Electrocatalysis. <i>Journal of the American Chemical Society</i> , 2019 , 141, 13803-13811	16.4	87
115	CO ₂ Hydrogenation to Methanol over ZrO ₂ -Containing Catalysts: Insights into ZrO ₂ Induced Synergy. <i>ACS Catalysis</i> , 2019 , 9, 7840-7861	13.1	125
114	Enhancing C-C Bond Scission for Efficient Ethanol Oxidation using PtIr Nanocube Electrocatalysts. <i>ACS Catalysis</i> , 2019 , 9, 7618-7625	13.1	44
113	Quantification of Active Sites and Elucidation of the Reaction Mechanism of the Electrochemical Nitrogen Reduction Reaction on Vanadium Nitride. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 13768-13772	16.4	57
112	Constant Electrode Potential Quantum Mechanical Study of CO ₂ Electrochemical Reduction Catalyzed by N-Doped Graphene. <i>ACS Catalysis</i> , 2019 , 9, 8197-8207	13.1	25
111	Computational and experimental demonstrations of one-pot tandem catalysis for electrochemical carbon dioxide reduction to methane. <i>Nature Communications</i> , 2019 , 10, 3340	17.4	81
110	Tandem Reactions of CO Reduction and Ethane Aromatization. <i>Journal of the American Chemical Society</i> , 2019 , 141, 17771-17782	16.4	30
109	Isotopic effect on electrochemical CO reduction activity and selectivity in HO- and DO-based electrolytes over palladium. <i>Chemical Communications</i> , 2019 , 56, 106-108	5.8	11

108	Effects of oxide supports on the CO ₂ reforming of ethane over Pt-Ni bimetallic catalysts. <i>Applied Catalysis B: Environmental</i> , 2019 , 245, 376-388	21.8	42
107	Shape-Controlled CO ₂ Electrochemical Reduction on Nanosized Pd Hydride Cubes and Octahedra. <i>Advanced Energy Materials</i> , 2019 , 9, 1802840	21.8	85
106	Elucidating the roles of metallic Ni and oxygen vacancies in CO ₂ hydrogenation over Ni/CeO ₂ using isotope exchange and in situ measurements. <i>Applied Catalysis B: Environmental</i> , 2019 , 245, 360-366	21.8	39
105	Oxidative dehydrogenation and dry reforming of n-butane with CO ₂ over NiFe bimetallic catalysts. <i>Applied Catalysis B: Environmental</i> , 2018 , 231, 213-223	21.8	16
104	Electrochemical CO ₂ Reduction via Low-Valent Nickel Single-Atom Catalyst. <i>Joule</i> , 2018 , 2, 587-589	27.8	29
103	Cobalt-modified molybdenum carbide as a selective catalyst for hydrodeoxygenation of furfural. <i>Applied Catalysis B: Environmental</i> , 2018 , 233, 160-166	21.8	42
102	Combining CO reduction with propane oxidative dehydrogenation over bimetallic catalysts. <i>Nature Communications</i> , 2018 , 9, 1398	17.4	72
101	Reducing Iridium Loading in Oxygen Evolution Reaction Electrocatalysts Using Core-Shell Particles with Nitride Cores. <i>ACS Catalysis</i> , 2018 , 8, 2615-2621	13.1	77
100	Growth of Nanoparticles with Desired Catalytic Functions by Controlled Doping-Segregation of Metal in Oxide. <i>Chemistry of Materials</i> , 2018 , 30, 1585-1592	9.6	10
99	A Comparative Study of Hydrodeoxygenation of Furfural Over Fe/Pt(111) and Fe/Mo ₂ C Surfaces. <i>Topics in Catalysis</i> , 2018 , 61, 439-445	2.3	10
98	LaFe _{0.9} Ni _{0.1} O ₃ perovskite catalyst with enhanced activity and coke-resistance for dry reforming of ethane. <i>Journal of Catalysis</i> , 2018 , 358, 168-178	7.3	47
97	Combining CO ₂ Reduction with Ethane Oxidative Dehydrogenation by Oxygen-Modification of Molybdenum Carbide. <i>ACS Catalysis</i> , 2018 , 8, 5374-5381	13.1	38
96	Enhancing catalytic selectivity and stability for CO ₂ hydrogenation to methanol using a solid-solution catalyst. <i>National Science Review</i> , 2018 , 5, 607-608	10.8	1
95	Identifying Dynamic Structural Changes of Active Sites in Pt-Ni Bimetallic Catalysts Using Multimodal Approaches. <i>ACS Catalysis</i> , 2018 , 8, 4120-4131	13.1	38
94	Insight into the synergistic effect between nickel and tungsten carbide for catalyzing urea electrooxidation in alkaline electrolyte. <i>Applied Catalysis B: Environmental</i> , 2018 , 232, 365-370	21.8	40
93	Active sites for tandem reactions of CO reduction and ethane dehydrogenation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 8278-8283	11.5	70
92	Role of Surface Oxophilicity in Copper-Catalyzed Water Dissociation. <i>ACS Catalysis</i> , 2018 , 8, 9327-9333	13.1	32
91	Controlled Synthesis of Fe ₃ O ₄ Nanospheres Coated with Nitrogen-Doped Carbon for High Performance Supercapacitors. <i>ACS Applied Energy Materials</i> , 2018 , 1, 4599-4605	6.1	16

90	High selectivity of CO hydrogenation to CO by controlling the valence state of nickel using perovskite. <i>Chemical Communications</i> , 2018 , 54, 7354-7357	5.8	29
89	Mechanistic study of dry reforming of ethane by CO ₂ on a bimetallic PtNi(111) model surface. <i>Catalysis Science and Technology</i> , 2018 , 8, 3748-3758	5.5	19
88	Tungsten Carbide and Cobalt Modified Nickel Nanoparticles Supported on Multiwall Carbon Nanotubes as Highly Efficient Electrocatalysts for Urea Oxidation in Alkaline Electrolyte. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 41338-41343	9.5	17
87	Mechanistic Insights into Electrochemical Nitrogen Reduction Reaction on Vanadium Nitride Nanoparticles. <i>Journal of the American Chemical Society</i> , 2018 , 140, 13387-13391	16.4	300
86	Bimetallic Electrocatalysts for CO Reduction. <i>Topics in Current Chemistry</i> , 2018 , 376, 41	7.2	33
85	Controlling reaction pathways of selective C-O bond cleavage of glycerol. <i>Nature Communications</i> , 2018 , 9, 4612	17.4	29
84	Understanding the Role of Functional Groups in Polymeric Binder for Electrochemical Carbon Dioxide Reduction on Gold Nanoparticles. <i>Advanced Functional Materials</i> , 2018 , 28, 1804762	15.6	44
83	Palladium-Modified Tungsten Carbide for Ethanol Electrooxidation: From Surface Science Studies to Electrochemical Evaluation. <i>Journal of the Electrochemical Society</i> , 2018 , 165, J3031-J3038	3.9	7
82	Activity and Selectivity Control in CO ₂ Electroreduction to Multicarbon Products over CuOx Catalysts via Electrolyte Design. <i>ACS Catalysis</i> , 2018 , 8, 10012-10020	13.1	105
81	Beyond fossil fuel-driven nitrogen transformations. <i>Science</i> , 2018 , 360,	33.3	772
80	L-Phenylalanine-Templated Platinum Catalyst with Enhanced Performance for Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 21321-21327	9.5	12
79	Hydrodeoxygenation of biomass-derived oxygenates over metal carbides: from model surfaces to powder catalysts. <i>Green Chemistry</i> , 2018 , 20, 2679-2696	10	58
78	Ring-Opening Reaction of Furfural and Tetrahydrofurfuryl Alcohol on Hydrogen-Predosed Iridium(1 1 1) and Cobalt/Iridium(1 1 1) Surfaces. <i>ChemCatChem</i> , 2017 , 9, 1701-1707	5.2	24
77	Hydrogenation of CO ₂ to methanol over CuCeTiOx catalysts. <i>Applied Catalysis B: Environmental</i> , 2017 , 206, 704-711	21.8	70
76	Comparison of Methodologies of Activation Barrier Measurements for Reactions with Deactivation. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 1360-1364	3.9	9
75	Reactions of water and C1 molecules on carbide and metal-modified carbide surfaces. <i>Chemical Society Reviews</i> , 2017 , 46, 1807-1823	58.5	66
74	Pt/Mo ₂ C/C-cp as a highly active and stable catalyst for ethanol electrooxidation. <i>Journal of Power Sources</i> , 2017 , 345, 182-189	8.9	25
73	The Central Role of Bicarbonate in the Electrochemical Reduction of Carbon Dioxide on Gold. <i>Journal of the American Chemical Society</i> , 2017 , 139, 3774-3783	16.4	324

72	Electrochemical reduction of CO ₂ to synthesis gas with controlled CO/H ₂ ratios. <i>Energy and Environmental Science</i> , 2017 , 10, 1180-1185	35.4	257
71	Active sites for CO hydrogenation to methanol on Cu/ZnO catalysts. <i>Science</i> , 2017 , 355, 1296-1299	33.3	788
70	Quantum Mechanical Study of N-Heterocyclic Carbene Adsorption on Au Surfaces. <i>Journal of Physical Chemistry A</i> , 2017 , 121, 2674-2682	2.8	23
69	Opportunities and Challenges in Utilizing Metal-Modified Transition Metal Carbides as Low-Cost Electrocatalysts. <i>Joule</i> , 2017 , 1, 253-263	27.8	69
68	Grand Canonical Quantum Mechanical Study of the Effect of the Electrode Potential on N-Heterocyclic Carbene Adsorption on Au Surfaces. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 24618-24625	2.8	10
67	Response to Comment on "Active sites for CO hydrogenation to methanol on Cu/ZnO catalysts". <i>Science</i> , 2017 , 357,	33.3	25
66	Tuning Selectivity of CO Hydrogenation Reactions at the Metal/Oxide Interface. <i>Journal of the American Chemical Society</i> , 2017 , 139, 9739-9754	16.4	522
65	Adsorbate-mediated strong metal-support interactions in oxide-supported Rh catalysts. <i>Nature Chemistry</i> , 2017 , 9, 120-127	17.6	401
64	Understanding the Role of M/Pt(111) (M = Fe, Co, Ni, Cu) Bimetallic Surfaces for Selective Hydrodeoxygenation of Furfural. <i>ACS Catalysis</i> , 2017 , 7, 5758-5765	13.1	48
63	Catalytic reduction of CO ₂ by H ₂ for synthesis of CO, methanol and hydrocarbons: challenges and opportunities. <i>Energy and Environmental Science</i> , 2016 , 9, 62-73	35.4	673
62	Optimizing Binding Energies of Key Intermediates for CO ₂ Hydrogenation to Methanol over Oxide-Supported Copper. <i>Journal of the American Chemical Society</i> , 2016 , 138, 12440-50	16.4	333
61	CO ₂ Hydrogenation over Oxide-Supported PtCo Catalysts: The Role of the Oxide Support in Determining the Product Selectivity. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 7968-73	16.4	172
60	Metal-modified niobium carbides as low-cost and impurity-resistant electrocatalysts for hydrogen evolution in acidic and alkaline electrolytes. <i>International Journal of Hydrogen Energy</i> , 2016 , 41, 5948-5954	6.7	17
59	CO ₂ hydrogenation on Pt, Pt/SiO ₂ and Pt/TiO ₂ : Importance of synergy between Pt and oxide support. <i>Journal of Catalysis</i> , 2016 , 343, 115-126	7.3	174
58	Toward Benchmarking in Catalysis Science: Best Practices, Challenges, and Opportunities. <i>ACS Catalysis</i> , 2016 , 6, 2590-2602	13.1	139
57	Reforming and oxidative dehydrogenation of ethane with CO ₂ as a soft oxidant over bimetallic catalysts. <i>Journal of Catalysis</i> , 2016 , 343, 168-177	7.3	88
56	Trends in Hydrogen Evolution Activity of Metal-Modified Molybdenum Carbides in Alkaline and Acid Electrolytes. <i>ChemElectroChem</i> , 2016 , 3, 1686-1693	4.3	15
55	Dry Reforming of Ethane and Butane with CO ₂ over PtNi/CeO ₂ Bimetallic Catalysts. <i>ACS Catalysis</i> , 2016 , 6, 7283-7292	13.1	76

54	Low Pressure CO ₂ Hydrogenation to Methanol over Gold Nanoparticles Activated on a CeO(x)/TiO ₂ Interface. <i>Journal of the American Chemical Society</i> , 2015 , 137, 10104-7	16.4	166
53	Reaction Pathways of Biomass-Derived Oxygenates over Metals and Carbides: From Model Surfaces to Supported Catalysts. <i>ChemCatChem</i> , 2015 , 7, 1402-1421	5.2	42
52	Replacing Precious Metals with Carbide Catalysts for Hydrogenation Reactions. <i>Topics in Catalysis</i> , 2015 , 58, 240-246	2.3	22
51	Highly porous non-precious bimetallic electrocatalysts for efficient hydrogen evolution. <i>Nature Communications</i> , 2015 , 6, 6567	17.4	359
50	Hydrogenation of CO ₂ to Methanol: Importance of MetalOxide and MetalCarbide Interfaces in the Activation of CO ₂ . <i>ACS Catalysis</i> , 2015 , 5, 6696-6706	13.1	278
49	Identifying Different Types of Catalysts for CO ₂ Reduction by Ethane through Dry Reforming and Oxidative Dehydrogenation. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 15501-5	16.4	75
48	Identifying Different Types of Catalysts for CO ₂ Reduction by Ethane through Dry Reforming and Oxidative Dehydrogenation. <i>Angewandte Chemie</i> , 2015 , 127, 15721-15725	3.6	6
47	Correlating hydrogen oxidation and evolution activity on platinum at different pH with measured hydrogen binding energy. <i>Nature Communications</i> , 2015 , 6, 5848	17.4	556
46	Theoretical prediction and experimental verification of low loading of platinum on titanium carbide as low-cost and stable electrocatalysts. <i>Journal of Catalysis</i> , 2014 , 312, 216-220	7.3	47
45	Molybdenum carbide as alternative catalysts to precious metals for highly selective reduction of CO ₂ to CO. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 6705-9	16.4	249
44	A selective and efficient electrocatalyst for carbon dioxide reduction. <i>Nature Communications</i> , 2014 , 5, 3242	17.4	930
43	Non-precious metal electrocatalysts with high activity for hydrogen oxidation reaction in alkaline electrolytes. <i>Energy and Environmental Science</i> , 2014 , 7, 1719-1724	35.4	211
42	Trends in Electrochemical Stability of Transition Metal Carbides and Their Potential Use As Supports for Low-Cost Electrocatalysts. <i>ACS Catalysis</i> , 2014 , 4, 1558-1562	13.1	110
41	Theoretical and Experimental Studies of C-C versus C-O Bond Scission of Ethylene Glycol Reaction Pathways via Metal-Modified Molybdenum Carbides. <i>ACS Catalysis</i> , 2014 , 4, 1409-1418	13.1	38
40	Theoretical and experimental studies of the adsorption geometry and reaction pathways of furfural over FeNi bimetallic model surfaces and supported catalysts. <i>Journal of Catalysis</i> , 2014 , 317, 253-262	7.3	67
39	Reaction Pathways of Propanal and 1-Propanol on Fe/Ni(111) and Cu/Ni(111) Bimetallic Surfaces. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 11340-11349	3.8	30
38	Molybdenum carbide as a highly selective deoxygenation catalyst for converting furfural to 2-methylfuran. <i>ChemSusChem</i> , 2014 , 7, 2146-9	8.3	93
37	Theoretical and Experimental Studies of Ethanol Decomposition and Electrooxidation over Pt-Modified Tungsten Carbide. <i>Journal of the Electrochemical Society</i> , 2014 , 161, E3165-E3170	3.9	9

36	Controlling C _D , C _C and C _H bond scission for deoxygenation, reforming, and dehydrogenation of ethanol using metal-modified molybdenum carbide surfaces. <i>Green Chemistry</i> , 2014 , 16, 777-784	10	47
35	Nanostructured electrodes for high-performance pseudocapacitors. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 1882-9	16.4	431
34	Trends in the catalytic reduction of CO ₂ by hydrogen over supported monometallic and bimetallic catalysts. <i>Journal of Catalysis</i> , 2013 , 301, 30-37	7.3	129
33	Selective hydrodeoxygenation of biomass-derived oxygenates to unsaturated hydrocarbons using molybdenum carbide catalysts. <i>ChemSusChem</i> , 2013 , 6, 798-801	8.3	148
32	Correlating the hydrogen evolution reaction activity in alkaline electrolytes with the hydrogen binding energy on monometallic surfaces. <i>Energy and Environmental Science</i> , 2013 , 6, 1509	35.4	624
31	Challenges and opportunities in correlating bimetallic model surfaces and supported catalysts. <i>Journal of Catalysis</i> , 2013 , 308, 2-10	7.3	24
30	Comparison of electrochemical stability of transition metal carbides (WC, W ₂ C, Mo ₂ C) over a wide pH range. <i>Journal of Power Sources</i> , 2012 , 202, 11-17	8.9	135
29	Atomic layer deposition synthesis of platinum-tungsten carbide core-shell catalysts for the hydrogen evolution reaction. <i>Chemical Communications</i> , 2012 , 48, 1063-5	5.8	98
28	Review of Pt-based bimetallic catalysis: from model surfaces to supported catalysts. <i>Chemical Reviews</i> , 2012 , 112, 5780-817	68.1	919
27	Metal overlayer on metal carbide substrate: unique bimetallic properties for catalysis and electrocatalysis. <i>Chemical Society Reviews</i> , 2012 , 41, 8021-34	58.5	121
26	Correlating Ethylene Glycol Reforming Activity with In Situ EXAFS Detection of Ni Segregation in Supported NiPt Bimetallic Catalysts. <i>ACS Catalysis</i> , 2012 , 2, 2290-2296	13.1	72
25	Pd-Modified Tungsten Carbide for Methanol Electro-oxidation: From Surface Science Studies to Electrochemical Evaluation. <i>ACS Catalysis</i> , 2012 , 2, 751-758	13.1	78
24	A new class of electrocatalysts for hydrogen production from water electrolysis: metal monolayers supported on low-cost transition metal carbides. <i>Journal of the American Chemical Society</i> , 2012 , 134, 3025-33	16.4	398
23	Bimetallic effects in the hydrodeoxygenation of meta-cresol on Al ₂ O ₃ supported PtNi and PtCo catalysts. <i>Green Chemistry</i> , 2012 , 14, 1388	10	132
22	Effect of surface carbon on the hydrogen evolution reactivity of tungsten carbide (WC) and Pt-modified WC electrocatalysts. <i>International Journal of Hydrogen Energy</i> , 2012 , 37, 3019-3024	6.7	99
21	Monolayer platinum supported on tungsten carbides as low-cost electrocatalysts: opportunities and limitations. <i>Energy and Environmental Science</i> , 2011 , 4, 3900	35.4	221
20	Differentiation of O-H and C-H bond scission mechanisms of ethylene glycol on Pt and Ni/Pt using theory and isotopic labeling experiments. <i>Journal of the American Chemical Society</i> , 2011 , 133, 7996-8004	16.4	101
19	Comparison of O _H , C _H , and C _D Bond Scission Sequence of Methanol on Tungsten Carbide Surfaces Modified by Ni, Rh, and Au. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 6644-6650	3.8	45

18	Glycolaldehyde as a probe molecule for biomass derivatives: reaction of C-OH and C=O functional groups on monolayer Ni surfaces. <i>Journal of the American Chemical Society</i> , 2011 , 133, 20528-35	16.4	41
17	Using first principles to predict bimetallic catalysts for the ammonia decomposition reaction. <i>Nature Chemistry</i> , 2010 , 2, 484-9	17.6	314
16	Electrochemical Stability of Tungsten and Tungsten Monocarbide (WC) Over Wide pH and Potential Ranges. <i>Journal of the Electrochemical Society</i> , 2010 , 157, F179	3.9	72
15	Catalysis Center for Energy Innovation for Biomass Processing: Research Strategies and Goals. <i>Catalysis Letters</i> , 2010 , 140, 77-84	2.8	36
14	Correlating extent of Pt-Ni bond formation with low-temperature hydrogenation of benzene and 1,3-butadiene over supported Pt/Ni bimetallic catalysts. <i>Journal of Catalysis</i> , 2010 , 271, 239-250	7.3	87
13	Low-cost hydrogen-evolution catalysts based on monolayer platinum on tungsten monocarbide substrates. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 9859-62	16.4	449
12	General trend for adsorbate-induced segregation of subsurface metal atoms in bimetallic surfaces. <i>Journal of Chemical Physics</i> , 2009 , 130, 174709	3.9	97
11	Reactions of methanol and ethylene glycol on Ni/Pt: Bridging the materials gap between single crystal and polycrystalline bimetallic surfaces. <i>Surface Science</i> , 2009 , 603, 2630-2638	1.8	30
10	Correlating hydrogenation activity with binding energies of hydrogen and cyclohexene on M/Pt(111) (M = Fe, Co, Ni, Cu) bimetallic surfaces. <i>Journal of Catalysis</i> , 2008 , 257, 297-306	7.3	78
9	Enhancing CO Tolerance of Electrocatalysts: Electro-oxidation of CO on WC and Pt-Modified WC. <i>Electrochemical and Solid-State Letters</i> , 2008 , 11, B63		37
8	Monolayer bimetallic surfaces: Experimental and theoretical studies of trends in electronic and chemical properties. <i>Surface Science Reports</i> , 2008 , 63, 201-254	12.9	433
7	Enhancing H ₂ and CO production from glycerol using bimetallic surfaces. <i>ChemSusChem</i> , 2008 , 1, 524-6	8.3	46
6	Surface chemistry of transition metal carbides. <i>Chemical Reviews</i> , 2005 , 105, 185-212	68.1	574
5	Chemical properties of carbon-modified titanium: reaction pathways of cyclohexene and ethylene over Ti(0001) and C/Ti(0001). <i>Surface Science</i> , 2004 , 557, 144-158	1.8	14
4	Reactions of methanol and water over carbide-modified Mo(). <i>Surface Science</i> , 2003 , 536, 75-87	1.8	42
3	Potential Application of Tungsten Carbides as Electrocatalysts: 4. Reactions of Methanol, Water, and Carbon Monoxide over Carbide-Modified W(110). <i>Journal of Physical Chemistry B</i> , 2003 , 107, 2029-2039	3.4	66
2	Carbide and Nitride Overlayers on Early Transition Metal Surfaces: Preparation, Characterization, and Reactivities. <i>Chemical Reviews</i> , 1996 , 96, 1477-1498	68.1	566
1	Sustainable Ammonia Synthesis [Exploring the scientific challenges associated with discovering alternative, sustainable processes for ammonia production]		32

