Homogeneous Functionalization of Methane

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Citation Report

#	Article	IF	Citations
1	Catalytic Methane Monofunctionalization by an Electrogenerated High-Valent Pd Intermediate. ACS Central Science, 2017, 3, 1174-1179.	5.3	76
2	When Electrochemistry Met Methane: Rapid Catalyst Oxidation Fuels Hydrocarbon Functionalization. ACS Central Science, 2017, 3, 1137-1139.	5.3	10
3	Reductive Disproportionation of CO₂ with Bulky Divalent Samarium Complexes. Organometallics, 2017, 36, 4660-4668.	1.1	30
4	A DFT study of hydrogen and methane activation by B(C6F5)3/P(t-Bu)3 and Al(C6F5)3/P(t-Bu)3 frustrated Lewis pairs. Journal of Molecular Modeling, 2017, 23, 234.	0.8	13
5	One-Pot Conversion of Methane to Light Olefins or Higher Hydrocarbons through H-SAPO-34-Catalyzed in Situ Halogenation. Journal of the American Chemical Society, 2017, 139, 18078-18083.	6.6	31
6	Reactivity of a Palladacyclic Complex: A Monodentate Carbonate Complex and the Remarkable Selectivity and Mechanism of a Neophyl Rearrangement. Organometallics, 2017, 36, 4759-4769.	1.1	8
7	Electronic Effects on Room-Temperature, Gas-Phase Câ€“H Bond Activations by Cluster Oxides and Metal Carbides: The Methane Challenge. Journal of the American Chemical Society, 2017, 139, 17201-17212.	6.6	149
8	Activation of Dioxygen by Dimethylplatinum(II) Complexes. Organometallics, 2017, 36, 4169-4178.	1.1	18
9	Introduction: CH Activation. Chemical Reviews, 2017, 117, 8481-8482.	23.0	264
10	Methane upgraded by rhodium. Nature, 2017, 551, 575-576.	13.7	0
11	Selective electrocatalytic conversion of methane to fuels and chemicals. Journal of Energy Chemistry, 2018, 27, 1629-1636.	7.1	97
12	Direkte Umwandlung von Methan zu protoniertem Formaldehyd bei Raumtemperatur in der Gasphase: Zur Rolle von Quecksilber unter den Oxidkationen der Zinktriade. Angewandte Chemie, 2018, 130, 3306-3310.	1.6	7
13	Direct Roomâ€Temperature Conversion of Methane into Protonated Formaldehyde: The Gasâ€Phase Chemistry of Mercury among the Zinc Triad Oxide Cations. Angewandte Chemie - International Edition, 2018, 57, 3251-3255.	7.2	15
14	Hydrocarbon functionalization on palladium compounds in acidic solutions (a historical review). Journal of Organometallic Chemistry, 2018, 867, 25-32.	0.8	5
15	Iron and Copper Active Sites in Zeolites and Their Correlation to Metalloenzymes. Chemical Reviews, 2018, 118, 2718-2768.	23.0	263
16	Gold plasmon-induced photocatalytic dehydrogenative coupling of methane to ethane on polar oxide surfaces. Energy and Environmental Science, 2018, 11, 294-298.	15.6	202
17	Thermal and photocatalytic oxidation of organic substrates by dioxygen with water as an electron source. Green Chemistry, 2018, 20, 948-963.	4.6	19
18	A breakthrough in direct conversion of methane to oxygenates under mild conditions. Science China Materials, 2018, 61, 1012-1014.	3.5	5

#	Article	IF	Citations
19	Mechanism of Hydrocarbon Functionalization by an Iodate/Chloride System: The Role of Ester Protection. ACS Catalysis, 2018, 8, 3138-3149.	5.5	23
20	Steigerung der Katalysatoreffizienz in der Câ€Hâ€Aktivierungskatalyse. Angewandte Chemie, 2018, 130, 2318-2328.	1.6	62
21	Increasing Catalyst Efficiency in Câ^'H Activation Catalysis. Angewandte Chemie - International Edition, 2018, 57, 2296-2306.	7.2	206
22	Continuous methanol synthesis directly from methane and steam over Cu(II)-exchanged mordenite. Korean Journal of Chemical Engineering, 2018, 35, 2145-2149.	1.2	21
23	Enhanced Catalytic Activity of (DMSO)₂PtCl₂ for the Methane Oxidation in the SO₃â€“H₂SO₄ System. ACS Catalysis, 2018, 8, 11854-11862.	5.5	30
26	Metalâ€“Organic Framework (MOF)â€Based Materials as Heterogeneous Catalysts for Câ^'H Bond Activation. Chemistry - A European Journal, 2019, 25, 2935-2948.	1.7	103
27	Phenylacetylene and Carbon Dioxide Activation by an Organometallic Samarium Complex. Inorganics, 2018, 6, 82.	1.2	7
28	Coupling of Methane and Carbon Dioxide Mediated by Diatomic Copper Boride Cations. Angewandte Chemie, 2018, 130, 14330-14334.	1.6	10
29	Methane Activation by Gas Phase Atomic Clusters. Accounts of Chemical Research, 2018, 51, 2603-2610.	7.6	94
30	Câ€“H Bond Activation Mediated by Inorganic and Organometallic Compounds of Main Group Metals. Advances in Organometallic Chemistry, 2018, 70, 233-311.	0.5	10
31	Evidence for regioselective Pt(II)-mediated hydroxylation of long linear alkanes in acetic acid. Journal of Catalysis, 2018, 368, 345-353.	3.1	1
32	Mechanistic Variants in Methane Activation Mediated by Gold(I) Supported on Silicon Oxide Clusters. Chemistry - A European Journal, 2018, 24, 17506-17512.	1.7	10
33	Cycloneophylplatinum Chemistry: A New Route to Platinum(II) Complexes and the Mechanism and Selectivity of Protonolysis of Platinumâ€“Carbon Bonds. Organometallics, 2018, 37, 3368-3377.	1.1	17
34	Rational Design of a Catalyst for the Selective Monoborylation of Methane. ACS Catalysis, 2018, 8, 10021-10031.	5.5	29
35	Coupling of Methane and Carbon Dioxide Mediated by Diatomic Copper Boride Cations. Angewandte Chemie - International Edition, 2018, 57, 14134-14138.	7.2	27
36	A renaissance of ligand-to-metal charge transfer by cerium photocatalysis. Organic Chemistry Frontiers, 2018, 5, 3018-3021.	2.3	33
37	Influence of Catalyst Concentration on Activity and Selectivity in Selective Methane Oxidation with Platinum Compounds in Sulfuric Acid and Oleum. ACS Catalysis, 2018, 8, 9262-9268.	5.5	23
38	Electrophilic Impact of High-Oxidation State Main-Group Metal and Ligands on Alkane Câ€“H Activation and Functionalization Reactions. Organometallics, 2018, 37, 3045-3054.	1.1	7

#	Article	IF	Citations
39	Iron- and Copper-exchanged Beta Zeolite Catalysts for Hydroxylation of Benzene to Phenol with H₂O₂. Chemistry Letters, 2018, 47, 1112-1115.	0.7	10
40	Dynamical Mechanism May Avoid High-Oxidation State Ir(V)â€“H Intermediate and Coordination Complex in Alkane and Arene Câ€“H Activation by Cationic Ir(III) Phosphine. Journal of the American Chemical Society, 2018, 140, 11039-11045.	6.6	38
41	Environmental assessment of alternative methanesulfonic acid production using direct activation of methane. Journal of Cleaner Production, 2018, 202, 1179-1191.	4.6	7
42	Ligand and solvent control of selectivity in the Câ€“H activation of a pyridylimine-substituted 1-naphthalene; a combined synthetic and computational study. Dalton Transactions, 2018, 47, 11680-11690.	1.6	3
43	Selective functionalization of methane, ethane, and higher alkanes by cerium photocatalysis. Science, 2018, 361, 668-672.	6.0	480
44	Oxidative functionalization of Câ€“H compounds induced by the extremely efficient osmium catalysts (a) Tj ETQq1 1 0.784314 rgBT /O	2.1	16
45	Catalytic chemoselective functionalization of methane in a metalâ˜organic framework. Nature Catalysis, 2018, 1, 356-362.	16.1	153
46	Mechanisms and Reactivity of Tl(III) Main-Group-Metalâ€“Alkyl Functionalization in Water. Organometallics, 2018, 37, 2723-2731.	1.1	3
47	Photocatalytic upgrading of natural gas. Science, 2018, 361, 647-648.	6.0	6
48	Room-Temperature Methane Conversion by Graphene-Confined Single Iron Atoms. CheM, 2018, 4, 1902-1910.	5.8	350
49	Homogeneous catalytic systems for the oxidative functionalization of alkanes: design, oxidants, and mechanisms. Russian Chemical Bulletin, 2019, 68, 1465-1477.	0.4	13
50	Solution Catalytic Cycle of Incompatible Steps for Ambient Air Oxidation of Methane to Methanol. ACS Central Science, 2019, 5, 1584-1590.	5.3	25
51	Aqueousâ€Phase Selective Oxidation of Methane with Oxygen over Iron Salts and Pd/C in the Presence of Hydrogen. ChemCatChem, 2019, 11, 4247-4251.	1.8	18
52	Methane Activation by (n=0, 1, 2; m= 1, 2): Reactivity Parameters, Electronic Properties and Binding Energy Analysis. ChemistrySelect, 2019, 4, 7912-7921.	0.7	0
53	Unveiling the potential of scandium complexes for methane Câ€“H bond activation: a computational study. New Journal of Chemistry, 2019, 43, 12257-12263.	1.4	9
54	Recent Advances in the Functionalization of Hydrocarbons: Synthesis of Amides and its Derivatives. Asian Journal of Organic Chemistry, 2019, 8, 1227-1262.	1.3	13
55	Direct Methane Conversion under Mild Condition by Thermo-, Electro-, or Photocatalysis. CheM, 2019, 5, 2296-2325.	5.8	331
56	Electrochemical Direct Partial Oxidation of Methane to Methanol. Joule, 2019, 3, 2589-2593.	11.7	58

#	Article	IF	Citations
57	Selective Photoâ€Oxygenation of Light Alkanes Using Iodine Oxides and Chloride. ChemCatChem, 2019, 11, 5045-5054.	1.8	14
58	Methane functionalization by an Ir(III) catalyst supported on a metalâ€“organic framework: an alternative explanation of steric confinement effects. Theoretical Chemistry Accounts, 2019, 138, 1.	0.5	12
59	Dry reforming of methane with isotopic gas mixture over Ni-based pyrochlore catalyst. International Journal of Hydrogen Energy, 2019, 44, 4167-4176.	3.8	40
60	New horizon in C1 chemistry: breaking the selectivity limitation in transformation of syngas and hydrogenation of CO₂ into hydrocarbon chemicals and fuels. Chemical Society Reviews, 2019, 48, 3193-3228.	18.7	742
61	Metalâ€“Organic Framework Stabilizes a Low-Coordinate Iridium Complex for Catalytic Methane Borylation. Journal of the American Chemical Society, 2019, 141, 11196-11203.	6.6	65
62	Electrochemical Reoxidation Enables Continuous Methane-to-Methanol Catalysis with Aqueous Pt Salts. ACS Central Science, 2019, 5, 1179-1186.	5.3	55
63	A computational DFT study of methane C H and ammine N H activations by group 9 N-pyrrolyl complexes. Computational and Theoretical Chemistry, 2019, 1162, 112503.	1.1	2
64	Direct conversion of methane to methanol with zeolites: towards understanding the role of extra-framework d-block metal and zeolite framework type. Dalton Transactions, 2019, 48, 10364-10384.	1.6	27
65	Efficient and Selective Methane Borylation Through Pore Size Tuning of Hybrid Porous Organicâ€Polymerâ€Based Iridium Catalysts. Angewandte Chemie - International Edition, 2019, 58, 10671-10676.	7.2	27
66	Continued Progress towards Efficient Functionalization of Natural and Nonâ€natural Targets under Mild Conditions: Oxygenation by Cå^'H Bond Activation with Dioxirane. Chemistry - A European Journal, 2019, 25, 12003-12017.	1.7	17
67	Efficient and Selective Methane Borylation Through Pore Size Tuning of Hybrid Porous Organicâ€Polymerâ€Based Iridium Catalysts. Angewandte Chemie, 2019, 131, 10781-10786.	1.6	4
68	Selective N Functionalization of Methane and Ethane to Aminated Derivatives by Main-Group-Directed Câ€“H Activation. Organometallics, 2019, 38, 2319-2322.	1.1	13
69	Experimental and theoretical study of multinuclear indiumâ€“oxo clusters in CHA zeolite for CH₄ activation at room temperature. Physical Chemistry Chemical Physics, 2019, 21, 13415-13427.	1.3	18
70	Zeolite acidity strongly influences hydrogen peroxide activation and oxygenate selectivity in the partial oxidation of methane over M,Fe-MFI (M: Ga, Al, B) zeolites. Catalysis Science and Technology, 2019, 9, 2945-2951.	2.1	20
71	Pt black catalyzed methane oxidation to methyl bisulfate in H2SO4-SO3. Journal of Catalysis, 2019, 374, 230-236.	3.1	16
72	Activation of methane: A selective industrial route to methanesulfonic acid. Science, 2019, 363, 1326-1329.	6.0	67
73	Activation of Methane on PdZn/C Electrocatalysts in an Acidic Electrolyte at Low Temperatures. International Journal of Electrochemical Science, 2019, 14, 10819-10834.	0.5	14
74	Excited State Electronic Structure of Single-Site Vanadium Oxide Photocatalysts Supported on Mesoporous Silica. ACS Symposium Series, 2019, , 327-341.	0.5	2

#	Article	IF	Citations
75	Selective mild oxidation of methane to methanol or formic acid on Feâ€“MOR catalysts. Catalysis Science and Technology, 2019, 9, 6946-6956.	2.1	29
76	Organometallic Complexes of Polyazines. Advances in Heterocyclic Chemistry, 2019, 127, 315-390.	0.9	3
77	Selective Câˆ’H Functionalization of Methane and Ethane by a Molecular Sb^V Complex. Angewandte Chemie - International Edition, 2019, 58, 2241-2245.	7.2	19
79	Selective Câˆ’H Functionalization of Methane and Ethane by a Molecular Sb V Complex. Angewandte Chemie, 2019, 131, 2263-2267.	1.6	4
80	Models for Cooperative Catalysis: Oxidative Addition Reactions of Dimethylplatinum(II) Complexes with Ligands Having Both NH and OH Functionality. ACS Omega, 2019, 4, 257-268.	1.6	7
81	Ï€-Bond Character in Metalâ€“Alkyl Compounds for Câ€“H Activation: How, When, and Why?. Journal of the American Chemical Society, 2019, 141, 648-656.	6.6	46
82	Intrinsic Reactivity of Diatomic 3d Transition-Metal Carbides in the Thermal Activation of Methane: Striking Electronic Structure Effects. Journal of the American Chemical Society, 2019, 141, 599-610.	6.6	39
83	Palladium Dimer Supported on Mo₂CO₂(MXene) for Direct Methane to Methanol Conversion. Advanced Theory and Simulations, 2019, 2, 1800158.	1.3	22
84	Quasicatalytic and catalytic selective oxidation of methane to methanol over solid materials: a review on the roles of water. Catalysis Reviews - Science and Engineering, 2020, 62, 313-345.	5.7	14
85	Photocatalytic conversion of ethane: status and perspective. International Journal of Energy Research, 2020, 44, 708-717.	2.2	4
86	Pressureâ€Enhanced Câ€“H Bond Activation in Chloromethane Platinum(II) Complexes. European Journal of Inorganic Chemistry, 2020, 2020, 79-83.	1.0	7
87	The Catalyzed Conversion of Methane to Valueâ€Added Products. Energy Technology, 2020, 8, 1900665.	1.8	13
88	CH3â€“X Reductive Elimination Reactivity of PtIVMe Complexes Supported by a Sulfonated CNN Pincer Ligand (X = OH, CF3CO2, PhNMe2+). Organometallics, 2020, 39, 142-152.	1.1	5
89	A CHA zeolite supported Ga-oxo cluster for partial oxidation of CH4 at room temperature. Catalysis Today, 2020, 352, 118-126.	2.2	13
90	Photoinduced Generation of Superoxidants for the Oxidation of Substrates with High Câˆ’H Bond Dissociation Energies. ChemPhotoChem, 2020, 4, 271-281.	1.5	3
91	Conversion of Methane into Liquid Fuelsâ€”Bridging Thermal Catalysis with Electrocatalysis. Advanced Energy Materials, 2020, 10, 2002154.	10.2	57
92	Effect of Oxygen on the Oxidation of Methane with Hydrogen Peroxide to Methanol in the Presence of Glutathione-Stabilized Gold Nanoclusters. Kinetics and Catalysis, 2020, 61, 740-749.	0.3	2
93	Cyclic (alkyl)(amino)carbenes in organic and organometallic methane Câ€“H activation: a DFT and MCSCF study. Physical Chemistry Chemical Physics, 2020, 22, 24320-24329.	1.3	6

#	Article	IF	Citations
94	Alternate Strategies for Solar Fuels from Carbon Dioxide. ACS Energy Letters, 2020, 5, 2505-2507.	8.8	8
95	Transition-Metal-Catalyzed Arene Alkylation and Alkenylation: Catalytic Processes for the Generation of Chemical Intermediates. ACS Catalysis, 2020, 10, 14080-14092.	5.5	15
96	A Pd^{III} Sulfate Dimer Initiates Rapid Methane Monofunctionalization by H Atom Abstraction. ACS Catalysis, 2020, 10, 14782-14792.	5.5	15
97	Solar-Energy-Mediated Methane Conversion Over Nanometal and Semiconductor Catalysts. Springer Theses, 2020, , .	0.0	0
98	Ambient methane functionalization initiated by electrochemical oxidation of a vanadium (V)-oxo dimer. Nature Communications, 2020, 11, 3686.	5.8	36
99	Effect of Medium Acidity on the Rate of Oxidative Functionalization of Hydrocarbons in Sulfuric Acid Solutions. Kinetics and Catalysis, 2020, 61, 557-568.	0.3	2
100	Response to Comment on â€œActivation of methane to CH ₃ ⁺ : A selective industrial route to methanesulfonic acidâ€• Science, 2020, 369, .	6.0	3
101	Catalytic Oxidation of Methane to Oxygenated Products: Recent Advancements and Prospects for Electrocatalytic and Photocatalytic Conversion at Low Temperatures. Advanced Science, 2020, 7, 2001946.	5.6	85
102	Direct Hydroxylation of Methane. , 2020, , .		6
103	Effects of Additives on Catalytic Arene Câ€“H Activation: Study of Rh Catalysts Supported by Bis-phosphine Pincer Ligands. Organometallics, 2020, 39, 3918-3935.	1.1	4
104	Kinetic Analysis and Sequencing of Siâ€“H and Câ€“H Bond Activation Reactions: Direct Silylation of Arenes Catalyzed by an Iridium-Polyhydride. Journal of the American Chemical Society, 2020, 142, 19119-19131.	6.6	17
105	Synthesis, Characterization, and Reactivity of Cyclometalated Gold(III) Dihalide Complexes in Aqua Regia. European Journal of Inorganic Chemistry, 2020, 2020, 3249-3258.	1.0	5
106	Metal and Ligand Effects on Coordinated Methane pK_a: Direct Correlation with the Methane Activation Barrier. Journal of Physical Chemistry A, 2020, 124, 7283-7289.	1.1	4
107	Methane Activation with N-Haloimides. Industrial & Engineering Chemistry Research, 2020, 59, 22690-22695.	1.8	6
108	Homogeneous Metal-Complex Catalyst Systems in the Partial Oxidation of Propane with Oxygen. Petroleum Chemistry, 2020, 60, 1260-1267.	0.4	5
109	Simultaneous Functionalization of Methane and Carbon Dioxide Mediated by Single Platinum Atomic Anions. Journal of the American Chemical Society, 2020, 142, 21556-21561.	6.6	24
110	Direct Câˆ’H Borylation of Arenes Catalyzed by Saturated Hydrideâ€“Borylâ€“Iridiumâ€“POP Complexes: Kinetic Analysis of the Elemental Steps. Chemistry - A European Journal, 2020, 26, 12632-12644.	1.7	18
111	Methane dehydrogenation on 3d 13-atom transition-metal clusters: A density functional theory investigation combined with Spearman rank correlation analysis. Fuel, 2020, 275, 117790.	3.4	14

#	Article	IF	Citations
112	Electrocatalytic oxidation of methane to ethanol via NiO/Ni interface. Applied Catalysis B: Environmental, 2020, 270, 118888.	10.8	66
113	Synthesis and Reactivity of PtII Methyl Complexes Supported by Pyrazolate Pincer Ligands. Organometallics, 2020, 39, 1230-1237.	1.1	4
114	C(sp ³)â€“H functionalizations of light hydrocarbons using decatungstate photocatalysis in flow. Science, 2020, 369, 92-96.	6.0	263
115	Nâ€“H and Câ€“H Bond Activations of an Isoindoline Promoted by Iridium- and Osmium-Polyhydride Complexes: A Noninnocent Bridge Ligand for Acceptorless and Base-Free Dehydrogenation of Secondary Alcohols. Organometallics, 2020, 39, 2719-2731.	1.1	14
116	Rational design of metalâ€“ligands for the conversion of CH₄ and CO₂ to acetates: role of acids and Lewis acids. Journal of Materials Chemistry A, 2020, 8, 14671-14679.	5.2	7
117	Unravelling the Enigma of Nonoxidative Conversion of Methane on Iron Singleâ€Atom Catalysts. Angewandte Chemie, 2020, 132, 18745-18749.	1.6	12
118	Unravelling the Enigma of Nonoxidative Conversion of Methane on Iron Singleâ€Atom Catalysts. Angewandte Chemie - International Edition, 2020, 59, 18586-18590.	7.2	44
119	Cå^'H Activation and Olefin Insertion in d⁸ and d⁰ Complexes: Same Elementary Steps, Different Electronics. Helvetica Chimica Acta, 2020, 103, e1900278.	1.0	8
120	Enhancing the catalytic properties of well-defined electrophilic platinum complexes. Chemical Communications, 2020, 56, 5333-5349.	2.2	10
121	S_N2 and E2 Branching of Main-Group-Metal Alkyl Intermediates in Alkane CH Oxidation: Mechanistic Investigation Using Isotopically Labeled Main-Group-Metal Alkyls. Organometallics, 2020, 39, 1907-1916.	1.1	6
122	Efficient methane electrocatalytic conversion over a Ni-based hollow fiber electrode. Chinese Journal of Catalysis, 2020, 41, 1067-1072.	6.9	23
123	Feâ€O Clusters Anchored on Nodes of Metalâ€Organic Frameworks for Direct Methane Oxidation. Angewandte Chemie - International Edition, 2021, 60, 5811-5815.	7.2	66
124	Electrochemical Methods for Pdâ€catalyzed Cå^'H Functionalization. Asian Journal of Organic Chemistry, 2021, 10, 50-60.	1.3	12
125	Lightâ€Promoted Organic Transformations Utilizing Carbonâ€Based Gas Molecules as Feedstocks. Angewandte Chemie, 2021, 133, 19098-19128.	1.6	7
126	Lightâ€Promoted Organic Transformations Utilizing Carbonâ€Based Gas Molecules as Feedstocks. Angewandte Chemie - International Edition, 2021, 60, 18950-18980.	7.2	56
127	Control of methane plasma oxidative pathways by altering the contribution of oxygen species. Fuel, 2021, 284, 118944.	3.4	14
128	Metal phenanthroline-based porous polymeric hybrid catalysts for direct conversion of methane. Journal of Porous Materials, 2021, 28, 487-493.	1.3	0
129	A review on dry reforming of methane over perovskite derived catalysts. Catalysis Today, 2021, 365, 2-23.	2.2	108

#	Article	IF	Citations
130	Mn-corrolazine-based 2D-nanocatalytic material with single Mn atoms for catalytic oxidation of alkane to alcohol. Chinese Journal of Catalysis, 2021, 42, 1030-1039.	6.9	14
131	Feâ€O Clusters Anchored on Nodes of Metalâ€“Organic Frameworks for Direct Methane Oxidation. Angewandte Chemie, 2021, 133, 5875-5879.	1.6	3
132	Designing perovskite catalysts for controlled active-site exsolution in the microwave dry reforming of methane. Applied Catalysis B: Environmental, 2021, 284, 119711.	10.8	37
133	Photocatalytic and electrocatalytic transformations of C1 molecules involving Câ€“C coupling. Energy and Environmental Science, 2021, 14, 37-89.	15.6	110
134	Mechanistic insights into the Câ€“H activation of methane mediated by the unsupported and silica-supported VO₂OH and CrOOH: a DFT study. RSC Advances, 2021, 11, 11295-11303.	1.7	3
135	Catalytic oxidation of methane to methanol over Cu-CHA with molecular oxygen. Catalysis Science and Technology, 2021, 11, 6217-6224.	2.1	16
136	Homogeneous catalytic C(sp³)â€“H functionalization of gaseous alkanes. Chemical Communications, 2021, 57, 9956-9967.	2.2	21
137	Convenient C(sp³)â€“H bond functionalisation of light alkanes and other compounds by iron photocatalysis. Green Chemistry, 2021, 23, 6984-6989.	4.6	95
138	Mechanistic understanding of methane-to-methanol conversion on graphene-stabilized single-atom iron centers. Catalysis Science and Technology, 2021, 11, 6390-6400.	2.1	9
139	Selective Chlorination of Methane Photochemically Mediated by Ferric Chloride at Ambient Temperature. Chinese Journal of Organic Chemistry, 2021, 41, 1683.	0.6	4
140	Metal-Organic Frameworks for Catalytic Applications. , 2021, , 228-259.		2
141	KF-Promoted copper-catalyzed highly efficient and selective oxidation of methane and other alkanes with a dramatic additive effect. Catalysis Science and Technology, 2021, 11, 4962-4968.	2.1	4
142	Role of Axial Ligation in Gating the Reactivity of Dimethylplatinum(III) Diimine Radical Cations. Organometallics, 2021, 40, 333-345.	1.1	0
143	Câ€“H bond activation in light alkanes: a theoretical perspective. Chemical Society Reviews, 2021, 50, 4299-4358.	18.7	144
144	Reversible PtIIâ€“CH3 deuteration without methane loss: metalâ€“ligand cooperation vs. ligand-assisted PtII-protonation. Chemical Science, 2021, 12, 2960-2969.	3.7	5
145	A Tutorial on Selectivity Determination in C(sp²)â€“H Oxidative Addition of Arenes by Transition Metal Complexes. Organometallics, 2021, 40, 813-831.	1.1	23
147	Facile synthesis of N-doped carbon supported iron species for highly efficient methane conversion with H2O2 at ambient temperature. Applied Catalysis A: General, 2021, 615, 118052.	2.2	5
148	Bifunctional activation of methane by bioinspired transition metal complexes. A simple methane protease model. Computational and Theoretical Chemistry, 2021, 1198, 113180.	1.1	0

#	Article	IF	Citations
149	Photocatalytic Câ€“H activation and the subtle role of chlorine radical complexation in reactivity. Science, 2021, 372, 847-852.	6.0	144
150	Importance of Lattice Constants in QM/MM Calculations on Metalâ€“Organic Frameworks. Journal of Physical Chemistry B, 2021, 125, 5786-5793.	1.2	5
151	Rhodium chemistry: A gas phase cluster study. Journal of Chemical Physics, 2021, 154, 180901.	1.2	18
152	Methane Coupling to Ethylene and Longer-Chain Hydrocarbons by Low-Energy Electrical Discharge in Microstructured Reactors. Industrial & Engineering Chemistry Research, 2021, 60, 6950-6958.	1.8	6
153	Timing and Structures of Ïƒ-Bond Metathesis Câ€“H Activation Reactions from Quasiclassical Direct Dynamics Simulations. Organometallics, 2021, 40, 1454-1465.	1.1	6
154	Functionalization of RhIIIâ€“Me Bonds: Use of â€œCapping Areneâ€•Ligands to Facilitate Meâ€“X Reductive Elimination. Organometallics, 2021, 40, 1889-1906.	1.1	3
155	Direct oxidation of methane to oxygenates on supported single Cu atom catalyst. Applied Catalysis B: Environmental, 2021, 285, 119827.	10.8	72
156	On the mechanism of homogeneous Pt-catalysis: A theoretical view. Coordination Chemistry Reviews, 2021, 437, 213863.	9.5	17
157	Electrocatalytic Methane Oxidation to Ethanol via Rh/ZnO Nanosheets. Journal of Physical Chemistry C, 2021, 125, 13324-13330.	1.5	24
158	Harnessing the reactivity of borenium for methane activation. CheM, 2021, 7, 1691-1693.	5.8	0
159	Conversion of Methane to Methanol on Cobalt-Embedded Graphene: A Theoretical Perspective. Catalysis Letters, 0, , 1.	1.4	5
160	Bioinspired methane oxidation in a zeolite. Science, 2021, 373, 277-278.	6.0	7
161	Methane activation by a borenium complex. CheM, 2021, 7, 1843-1851.	5.8	31
162	Ag^{II}â€Mediated Electrocatalytic Ambient CH₄ Functionalization Inspired by HSAB Theory. Angewandte Chemie - International Edition, 2021, 60, 18152-18161.	7.2	10
163	Synthesis of Methanesulfonic Acid Directly from Methane: The Cation Mechanism or the Radical Mechanism?. Journal of Physical Chemistry Letters, 2021, 12, 6486-6491.	2.1	2
164	Platinum complexes from pyridine-imine ligands with pendent functional groups. Inorganica Chimica Acta, 2021, 522, 120387.	1.2	5
165	How does the defect ZnO@Au surface activate the methane via the precursor-mediated mechanism?. Applied Surface Science, 2021, 555, 149728.	3.1	3
166	Ag II â€Mediated Electrocatalytic Ambient CH 4 Functionalization Inspired by HSAB Theory. Angewandte Chemie, 2021, 133, 18300-18309.	1.6	2

#	Article	IF	Citations
167	Electrocatalytic Oxyesterification of Hydrocarbons by Tetravalent Lead. ACS Catalysis, 2021, 11, 10494-10501.	5.5	0
168	Goldâ€Catalyzed Direct C(sp³)â^'H Acetoxylation of Saturated Hydrocarbons. ChemCatChem, 2021, 13, 4087-4091.	1.8	6
169	Cooperative Coupling of Oxidative Organic Synthesis and Hydrogen Production over Semiconductor-Based Photocatalysts. Chemical Reviews, 2021, 121, 13051-13085.	23.0	426
170	Strategies towardÂthe sustainable electrochemical oxidation of methane to methanol. Current Opinion in Green and Sustainable Chemistry, 2021, 30, 100489.	3.2	21
171	Heterogenized homogeneous catalytic systems for the oxidation of carbon monoxide and propane. Russian Chemical Bulletin, 2021, 70, 1489-1498.	0.4	0
172	Rational Development of a Metalâ€Free Bifunctional System for the Câ^'H Activation of Methane: A Density Functional Theory Investigation. ChemPhysChem, 2021, 22, 1958-1966.	1.0	7
173	Silver carbenoids derived from diazo compounds: A historical perspective on challenges and opportunities. Chem Catalysis, 2021, 1, 599-630.	2.9	34
174	Room-temperature catalyst-free methane chlorination. Cell Reports Physical Science, 2021, 2, 100545.	2.8	2
175	Quadruple Câ€“H Bond Activations of Methane by Dinuclear Rhodium Carbide Cation [Rh₂C₃]⁺. Jacs Au, 2021, 1, 1631-1638.	3.6	6
176	Aqueous-phase partial oxidation of methane with H2O2 over Fe-ZSM-5 catalysts prepared from different iron precursors. Microporous and Mesoporous Materials, 2021, 324, 111278.	2.2	10
177	Isomerization-Induced Multiple Reaction Pathways in Platinum-Catalyzed Câ€“H Acylation Reaction of 2-Aryloxypyridines. Organometallics, 2021, 40, 3158-3169.	1.1	3
178	Intramolecular Alkeneâ€“Alkene Coupling via Rh(III)-Catalyzed Alkenyl sp² Câ€“H Functionalization: Divergent Pathways to Indene or Î±-Naphthol Derivatives. ACS Catalysis, 2021, 11, 11494-11500.	5.5	6
179	Automated Construction and Optimization Combined with Machine Learning to Generate Pt(II) Methane Câ€“H Activation Transition States. Topics in Catalysis, 2022, 65, 312-324.	1.3	11
180	Selective oxidation of methane to methanol using AuPd@ZIF-8. Catalysis Communications, 2021, 158, 106338.	1.6	13
181	Mechanism investigation and product selectivity control on CO-assisted direct conversion of methane into C1 and C2 oxygenates catalyzed by zeolite-supported Rh. Applied Catalysis B: Environmental, 2022, 300, 120742.	10.8	18
182	Atmosphere-Pressure Methane Oxidation to Methyl Trifluoroacetate Enabled by a Porous Organic Polymer-Supported Single-Site Palladium Catalyst. ACS Catalysis, 2021, 11, 1008-1013.	5.5	27
183	Continuous Synthesis of Methanol from Methane and Steam over Copper-Mordenite. ACS Catalysis, 2021, 11, 1065-1070.	5.5	28
184	Selective C(sp³)â€“H activation of simple alkanes: visible light-induced metal-free synthesis of phenanthridines with H₂O₂ as a sustainable oxidant. Green Chemistry, 2021, 23, 6926-6930.	4.6	32

#	Article	IF	Citations
185	Molecularly Controlled Catalysis â€“ Targeting Synergies Between Local and Nonâ€local Environments. ChemCatChem, 2021, 13, 1659-1682.	1.8	20
186	Osmium- and Iridium-Promoted Câ€“H Bond Activation of 2,2â€²-Bipyridines and Related Heterocycles: Kinetic and Thermodynamic Preferences. Organometallics, 2020, 39, 2102-2115.	1.1	19
187	A chemiresistive methane sensor. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	28
189	Communicationâ€"Electrocatalytic Coupling of Methane at Platinum Oxide Electrodes in Superacids. Journal of the Electrochemical Society, 2020, 167, 155503.	1.3	5
190	Evoked Methane Photocatalytic Conversion to C2 Oxygenates over Ceria with Oxygen Vacancy. Catalysts, 2020, 10, 196.	1.6	24
191	On the origin of reactivity variation upon sequential ligation: the [Re(Cl)_x]⁺/CH₄ (x = 1â€“3) couples. Physical Chemistry Chemical Physics, 2021, 23, 24319-24327.	1.3	1
192	Electrocatalytic Methane Functionalization with d⁰ Early Transition Metals Under Ambient Conditions. Angewandte Chemie - International Edition, 2021, 60, 26630-26638.	7.2	5
193	Methane Activation by (MoO₃)₅O^{â^'}Cluster Anions: The Importance of Orbital Orientation. Chemistry - A European Journal, 2022, 28, .	1.7	6
194	Theory and Experiment Demonstrate that Sb(V)-Promoted Methane Câ€“H Activation and Functionalization Outcompete Superacid Protonolysis in Sulfuric Acid. Journal of the American Chemical Society, 2021, 143, 18242-18250.	6.6	8
195	Electrocatalytic Methane Functionalization with d⁰ Early Transition Metals Under Ambient Conditions. Angewandte Chemie, 2021, 133, 26834-26842.	1.6	1
196	Tetrylenes: Electronic Structure, Stability, Reactivity, and Ligand Propertiesâ€"A Comparative DFT Study. Organometallics, 2021, 40, 3408-3423.	1.1	11
197	Overview of Direct Methane Conversion to Chemicals with Câ€“O and Câ€“C Bonds. , 2020, , 1-21.		0
198	A Pd-Bi Dual-Cocatalyst-Loaded Gallium Oxide Photocatalyst for Selective and Stable Nonoxidative Coupling of Methane. ACS Catalysis, 2021, 11, 13768-13781.	5.5	28
200	Inorganic Catalysis for Methane Conversion to Chemicals. , 2021, , .		0
201	Direct Photocatalytic Oxidation of Methane to Liquid Oxygenates with Molecular Oxygen over Nanometals/ZnO Catalysts. Springer Theses, 2020, , 93-117.	0.0	1
202	Theoretical Approach to Homogeneous Catalyst of Methane Hydroxylation: Collaboration with Computation and Experiment. , 2020, , 151-165.		0
204	Gas-phase oxidative carbonylation of methane to acetic acid over zeolites. Mendeleev Communications, 2021, 31, 712-714.	0.6	7
205	Identifying the crucial role of water and chloride for efficient mild oxidation of methane to methanol over a [Cu2(Î¼-O)]2+-ZSM-5 catalyst. Journal of Catalysis, 2022, 405, 1-14.	3.1	19

#	Article	IF	Citations
206	A Metalâ€“Organic Framework as a Multiphoton Excitation Regulator for the Activation of Inert C(sp³)â^'H Bonds and Oxygen. Angewandte Chemie, 2022, 134, .	1.6	6
207	A Metalâ€“Organic Framework as a Multiphoton Excitation Regulator for the Activation of Inert C(sp³)â^'H Bonds and Oxygen. Angewandte Chemie - International Edition, 2022, 61, .	7.2	26
208	Direct methane conversion with oxygen and CO over hydrophobic dB-ZSM-5 supported Rh single-atom catalyst. Catalysis Communications, 2022, 162, 106374.	1.6	8
209	Indirect Electrooxidation of Methane to Methyl Bisulfate on a Boronâ€Doped Diamond Electrode. ChemElectroChem, 2022, 9, e202101253.	1.7	4
210	Bromo Radicalâ€Mediated Photoredox Aldehyde Decarbonylation towards Transitionâ€Metalâ€Free Hydroalkylation of Acrylamides at Room Temperature. Advanced Synthesis and Catalysis, 2022, 364, 453-458.	2.1	11
211	A Metal-Free, Photocatalytic Method for Aerobic Alkane Iodination. Journal of the American Chemical Society, 2021, 143, 19262-19267.	6.6	17
212	Photo-induced direct alkynylation of methane and other light alkanes by iron catalysis. Green Chemistry, 2021, 23, 9406-9411.	4.6	40
213	Synthesisâ€“Structureâ€“Activity Relationship in Cu-MOR for Partial Methane Oxidation: Al Siting via Inorganic Structure-Directing Agents. ACS Catalysis, 2022, 12, 2166-2177.	5.5	11
214	Mechanistic Insight into Ethanol Dehydration over SAPO-34 Zeolite by Solid-state NMR Spectroscopy. Chemical Research in Chinese Universities, 2022, 38, 155-160.	1.3	8
215	Activation and catalytic transformation of methane under mild conditions. Chemical Society Reviews, 2022, 51, 376-423.	18.7	45
217	Role of quantum-size effects in the dehydrogenation of CH₄ on 3d TM_n clusters: DFT calculations combined with data mining. Catalysis Science and Technology, 2022, 12, 916-926.	2.1	3
218	Bisulfate as a redox-active ligand in vanadium-based electrocatalysis for CH₄functionalization. Chemical Communications, 2022, 58, 2524-2527.	2.2	1
219	Modern Methods for Producing Acetic Acid from Methane: New Trends (A Review). Petroleum Chemistry, 2022, 62, 40-61.	0.4	5
220	Recent advances in catalyst design for the electrochemical and photoelectrochemical conversion of methane to value-added products. Electrochemistry Communications, 2022, 135, 107220.	2.3	13
221	Relationships among the Catalytic Performance, Redox Activity, and Structure of Cu-CHA Catalysts for the Direct Oxidation of Methane to Methanol Investigated Using In Situ XAFS and UVâ€“Vis Spectroscopies. ACS Catalysis, 2022, 12, 2454-2462.	5.5	17
222	Green Carbon Science: Efficient Carbon Resource Processing, Utilization, and Recycling towards Carbon Neutrality. Angewandte Chemie, 2022, 134, .	1.6	11
223	Green Carbon Science: Efficient Carbon Resource Processing, Utilization, and Recycling towards Carbon Neutrality. Angewandte Chemie - International Edition, 2022, 61, .	7.2	146
224	Methane conversion into C2 hydrocarbons promoted by N2 over MoP (001) surface: A DFT investigation. Materials Chemistry and Physics, 2022, 281, 125800.	2.0	3

#	Article	IF	Citations
225	Increase the number of active sites in Cu-MOR through NO/NH3 pretreatment for catalytic oxidation of methane to methanol. Catalysis Communications, 2022, 163, 106411.	1.6	1
226	Rational design of nickelâ€“borane complexes for methane activation and functionalization. Molecular Systems Design and Engineering, 0, , .	1.7	0
227	Methane transformation by photocatalysis. Nature Reviews Materials, 2022, 7, 617-632.	23.3	114
228	Regulating the Spin State of Single Noble Metal Atoms by Hydroxyl for Selective Dehydrogenation of CH₄ Direct Conversion to CH₃OH. ACS Applied Materials & Interfaces, 2022, 14, 13344-13351.	4.0	10
229	Iron-Catalyzed Photoredox Functionalization of Methane and Heavier Gaseous Alkanes: Scope, Kinetics, and Computational Studies. Organic Letters, 2022, 24, 1901-1906.	2.4	34
230	Gas-Phase Selective Oxidation of Methane into Methane Oxygenates. Catalysts, 2022, 12, 314.	1.6	8
231	Low temperature conversion of methane to syngas using lattice oxygen over NiO-MgO. Chinese Chemical Letters, 2022, 33, 4687-4690.	4.8	9
232	Aerobic Partial Oxidation of Alkanes Using Photodriven Iron Catalysis. Inorganic Chemistry, 2022, 61, 759-766.	1.9	9
233	Recent progress in rare-earth metal-catalyzed sp² and sp³ Câ€“H functionalization to construct Câ€“C and Câ€“heteroelement bonds. Organic Chemistry Frontiers, 2022, 9, 3102-3141.	2.3	20
234	Insights into Fe Species Structureâ€Performance Relationship for Direct Methane Conversion toward Oxygenates over Feâ€MOR Catalysts. ChemCatChem, 2022, 14, .	1.8	4
235	Manganese Catalyzed Partial Oxidation of Light Alkanes. ACS Catalysis, 2022, 12, 5356-5370.	5.5	9
236	Conversion of CH₄ Catalyzed by Gas Phase Ions Containing Metals. Chemistry - A European Journal, 2022, 28, e202200062.	1.7	5
237	Oxidation of methane to methanol with hydrogen peroxide in situ in the presence of glutathione-stabilized gold nanoclusters under mild conditions. Russian Chemical Bulletin, 2022, 71, 665-674.	0.4	2
239	Hydroxylation of Aliphatic and Aromatic C-H Bonds Catalyzed by Biomimetic Transition-metal Complexes. Yuki Gosei Kagaku Kyokaishi/Journal of Synthetic Organic Chemistry, 2022, 80, 506-516.	0.0	0
240	Photo-splitting of water toward hydrogen production and active oxygen species for methane activation to methanol on Co-SrTiO. Chem Catalysis, 2022, 2, 1440-1449.	2.9	15
241	Understanding (photo)electrocatalysis for the conversion of methane to valuable chemicals through partial oxidation processes. Journal of Materials Chemistry A, 2022, 10, 19107-19128.	5.2	9
242	Photocatalytic Chlorination of Methane Using Alkali Chloride Solution. ACS Catalysis, 2022, 12, 7004-7013.	5.5	9
243	Single Atom Catalysts for Selective Methane Oxidation to Oxygenates. ACS Nano, 2022, 16, 8557-8618.	7.3	48

#	Article	IF	Citations
244	Voltage-Gated Electrocatalysis of Efficient and Selective Methane Oxidation by Tricopper Clusters under Ambient Conditions. Journal of the American Chemical Society, 2022, 144, 9695-9706.	6.6	7
246	2D FeNi-LDO nanosheets for photocatalytic non-oxidative coupling of methane. Research on Chemical Intermediates, 2022, 48, 2903-2913.	1.3	2
247	Electrochemical collective synthesis of labeled pyrroloindoline alkaloids with Freon-type methanes as functional C1 synthons. Chemical Communications, 2022, 58, 9230-9233.	2.2	4
248	Homogeneity of Supported Singleâ€Atom Active Sites Boosting the Selective Catalytic Transformations. Advanced Science, 2022, 9, .	5.6	47
249	Ab Initio Investigation of CH₄ Dehydrogenation on a (CeO₂)₁₀ Cluster. Journal of Physical Chemistry C, 2022, 126, 11937-11948.	1.5	1
250	Mechanisms for direct methane conversion to oxygenates at low temperature. Coordination Chemistry Reviews, 2022, 470, 214691.	9.5	1
251	Metalâ€“Ligandâ€“Anion Cooperation in Câ€“H Bond Formation at Platinum(II). Journal of the American Chemical Society, 2022, 144, 14446-14451.	6.6	1
252	Rhodium-Promoted Câ€“H Bond Activation of Quinoline, Methylquinolines, and Related Mono-Substituted Quinolines. Organometallics, 2022, 41, 2317-2326.	1.1	2
253	Methane oxidation to methyl trifluoroacetate by simple anionic palladium catalyst: Comprehensive understanding of K2S2O8-based methane oxidation in CF3CO2H. Journal of Catalysis, 2022, 413, 803-811.	3.1	10
254	Selective oxidation of CH₄ to valuable HCHO over a defective rTiO₂/GO metal-free photocatalyst. Catalysis Science and Technology, 2022, 12, 5869-5878.	2.1	0
255	Metalâ€“Organic Framework-Encaged Monomeric Cobalt(III) Hydroperoxides Enable Chemoselective Methane Oxidation to Methanol. ACS Catalysis, 2022, 12, 11159-11168.	5.5	12
256	Oxidation of Methylplatinum(II) Complexes K[(L)Pt^{II}Me] with O₂ and C(sp³)-X (X = O and C) Reductive Elimination Reactivity of Methylplatinum(IV) Products (L)Pt^{IV}Me(OH): The Effect of Structure of Sulfonated CNN-Pincer Ligands L. Organometallics, 2022, 41, 2764-2783.	1.1	1
257	Methane Activation by Vanadium Oxide Cluster Anions (V₂O₅)_NO^{â^’} (N = 1â^’18). Journal of Chemical Physics, 0, , .	1.2	4
258	Niâ€•and Pdâ€based homogeneous catalyst systems for direct oxygenation of C(sp³)â€H groups. Applied Organometallic Chemistry, 2023, 37, .	1.7	2
261	Plasmaâ€Assisted Reforming of Methane. Advanced Science, 2022, 9, .	5.6	20
262	Effects of Cu Species on Liquid-Phase Partial Oxidation of Methane with H2O2 over Cu-Fe/ZSM-5 Catalysts. Catalysts, 2022, 12, 1224.	1.6	4
263	Assessing the Effect of Dopants on the Câ€H Activation Activity of Î³â€Al2O3 using Firstâ€Principles Calculations. ChemPhysChem, 0, , .	1.0	0
264	Selective conversion of methane to cyclohexane and hydrogen via efficient hydrogen transfer catalyzed by GaN supported platinum clusters. Scientific Reports, 2022, 12, .	1.6	6

#	Article	IF	Citations
265	Rhodium(III)â€catalyzed Construction of Dâ€A Type Polyheteroaromatics with Fluorinated Benzothiadiazole as a Modifiable Acceptor Block. Asian Journal of Organic Chemistry, 0, , .	1.3	2
266	Bayesian-Optimization-Based Improvement of Cu-CHA Catalysts for Direct Partial Oxidation of CH₄. Journal of Physical Chemistry C, 2022, 126, 19660-19666.	1.5	7
267	High-Throughput Experimentation for Resource-Efficient Discovery of Methane Functionalization Catalysts. ACS Symposium Series, 0, , 123-145.	0.5	0
268	Variable Kinetic Isotope Effect Reveals a Multistep Pathway for Protonolysis of a Ptâ€“Me Bond. Organometallics, 2022, 41, 3770-3780.	1.1	1
269	Direct Coupling of Methane and Carbon Dioxide on Tantalum Cluster Cations. Chemistry - A European Journal, 2023, 29, .	1.7	2
270	Recent advances in reducible metal oxide catalysts for C1 reactions. Catalysis Science and Technology, 0, , .	2.1	1
271	Methane Oxidation to Methanol. Chemical Reviews, 2023, 123, 6359-6411.	23.0	50
272	Silica Supported Organometallic Ir^I Complexes Enable Efficient Catalytic Methane Borylation. Journal of the American Chemical Society, 2023, 145, 7992-8000.	6.6	6
273	Agostic interaction versus small molecule binding in [RuH(CO)(PPhNiPrPPh)]BAr4F complex. Journal of Organometallic Chemistry, 2023, 992, 122693.	0.8	0
274	NaCl-Promoted Cobalt-Catalyzed Dioxygen-Mediated Methane Oxidation to Methylene Bis(trifluoroacetate) with a Dramatic Salt Effect. ACS Catalysis, 2023, 13, 2396-2402.	5.5	4
275	Stepwise conversion of methane to methanol on Cu and Fe/zeolites prepared in solid state: the effect of zeolite type and activation temperature. Journal of Chemical Technology and Biotechnology, 2023, 98, 2716-2725.	1.6	2
276	Aqueousâ€Phase Partial Oxidation of Methane over Pdâ^'Fe/ZSMâ€5 with O₂ in the Presence of H₂. ChemCatChem, 2023, 15, .	1.8	5
277	C_(sp3)â€“H Oxidative Addition at Tantalocene Hydrides. Organometallics, 0, , .	1.1	0
278	How Doping Affects the Activity of the Aluminum Oxide Support. ChemPhysChem, 2023, 24, .	1.0	0
279	Selective Methane Oxidation to Acetic Acid Using Molecular Oxygen over a Mono-Copper Hydroxyl Catalyst. Journal of the American Chemical Society, 2023, 145, 6156-6165.	6.6	11
280	Analysis of the Scale of Global Human Needs and Opportunities for Sustainable Catalytic Technologies. Topics in Catalysis, 2023, 66, 338-374.	1.3	6
281	Continuous partial oxidation of methane to methanol over Cu-SSZ-39 catalysts. Journal of Catalysis, 2023, 421, 300-308.	3.1	6
282	Methane Oxidation over the Zeolites-Based Catalysts. Catalysts, 2023, 13, 604.	1.6	7

#	Article	IF	Citations
283	Electrochemical Oxidation of Methane to Methanol on Electrodeposited Transition Metal Oxides. Journal of the American Chemical Society, 2023, 145, 6927-6943.	6.6	10
284	Co-Conversion of CO2 and CH4 to High Value-Added Oxygenated Chemicals. Russian Journal of Physical Chemistry A, 2022, 96, 3049-3069.	0.1	0
285	Highly Selective Photocatalytic Methane Oxidation to Methanol Using CO₂ as a Soft Oxidant. ACS Sustainable Chemistry and Engineering, 2023, 11, 5537-5546.	3.2	4
286	Selective, Aerobic Oxidation of Methane to Formaldehyde over Platinum â€•a Perspective. ChemCatChem, 2023, 15, .	1.8	2
287	Selective methane oxidation by molecular iron catalysts in aqueous medium. Nature, 2023, 616, 476-481.	13.7	18
288	Selective Cleavage of Chemical Bonds in Targeted Intermediates for Highly Selective Photooxidation of Methane to Methanol. Journal of the American Chemical Society, 0, , .	6.6	2
289	Visible-light-driven and selective methane conversion to oxygenates with air on a halide-perovskite-based photocatalyst under mild conditions. Journal of Materials Chemistry A, 2023, 11, 9989-9999.	5.2	4
290	Research Progress in Electrocatalytic Oxidation of Methane into Value-Added Chemicals. Material Sciences, 2023, 13, 282-296.	0.0	0
291	Photoâ€Driven Ironâ€Induced Nonâ€Oxidative Coupling of Methane to Ethane. Angewandte Chemie, 2023, 135, .	1.6	1
292	Photoâ€Driven Ironâ€Induced Nonâ€Oxidative Coupling of Methane to Ethane. Angewandte Chemie - International Edition, 2023, 62, .	7.2	6
297	Zeolite-based catalysts for oxidative upgrading of methane: design and control of active sites. Catalysis Science and Technology, 0, , .	2.1	1
304	Resurgence and advancement of photochemical hydrogen atom transfer processes in selective alkane functionalizations. Chemical Science, 2023, 14, 6841-6859.	3.7	13