## Hydrophobic zeolite modification for in situ peroxide for methanol

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Citation Report

#	Article	IF	CITATIONS
1	One-step synthesis of bi-functional zeolite catalyst with highly exposed octahedral Co for efficient epoxidation of bulky cycloalkenes. Materials Letters, 2020, 280, 128549.	1.3	8
2	Catalysis for Selected C1 Chemistry. CheM, 2020, 6, 2497-2514.	5.8	148
3	Metal@Zeolite Hybrid Materials for Catalysis. ACS Central Science, 2020, 6, 1685-1697.	5.3	146
4	Phase-Selective Epitaxial Growth of Heterophase Nanostructures on Unconventional 2H-Pd Nanoparticles. Journal of the American Chemical Society, 2020, 142, 18971-18980.	6.6	111
5	Applications of Zeolites to C1 Chemistry: Recent Advances, Challenges, and Opportunities. Advanced Materials, 2020, 32, e2002927.	11.1	165
6	A generalized formula for two-dimensional diffusion of CO in graphene nanoslits with different Pt loadings. Green Energy and Environment, 2020, 5, 322-332.	4.7	10
7	Carbon-based materials for photo- and electrocatalytic synthesis of hydrogen peroxide. Nanoscale, 2020, 12, 16008-16027.	2.8	63
8	Facile synthesis of a porous polynorbornene with an azobenzene subunit: selective adsorption of 4-nitrophenol over 4-aminophenol in water. Polymer Chemistry, 2020, 11, 6429-6434.	1.9	4
9	Cu single-atoms embedded in porous carbon nitride for selective oxidation of methane to oxygenates. Chemical Communications, 2020, 56, 14677-14680.	2.2	37
10	Single-Atom Catalysts for Thermal Heterogeneous Catalysis in Liquid: Recent Progress and Future Perspective. , 2020, 2, 1653-1661.		13
11	Some Critical Insights into the Synthesis and Applications of Hydrophobic Solid Catalysts. Catalysts, 2020, 10, 1337.	1.6	23
12	Direct and Efficient Synthesis of Clean H <sub>2</sub> O <sub>2</sub> from CO-Assisted Aqueous O <sub>2</sub> Reduction. ACS Catalysis, 2020, 10, 13993-14005.	5.5	9
13	Waterâ€Induced Structural Dynamic Process in Molecular Sieves under Mild Hydrothermal Conditions: Shipâ€Inâ€aâ€Bottle Strategy for Acidity Identification and Catalyst Modification. Angewandte Chemie - International Edition, 2020, 59, 20672-20681.	7.2	26
14	Waterâ€Induced Structural Dynamic Process in Molecular Sieves under Mild Hydrothermal Conditions: Shipâ€inâ€aâ€Bottle Strategy for Acidity Identification and Catalyst Modification. Angewandte Chemie, 2020, 132, 20853-20862.	1.6	5
15	Catalytic pyrolysis of poplar sawdust: Excellent hydrocarbon selectivity and activity of hollow zeolites. Bioresource Technology, 2020, 317, 123954.	4.8	23
16	Decoupling the role of carbon counterparts in Pickering emulsifier for an enhanced selective oxidation of benzyl alcohol. Green Chemistry, 2020, 22, 5711-5721.	4.6	14
17	Design of Organic/Inorganic Hybrid Catalysts for Energy and Environmental Applications. ACS Central Science, 2020, 6, 1916-1937.	5.3	38
18	Recent progress in synthesis and application of zeolite-encapsulated metal catalysts. Advances in Catalysis, 2020, 67, 91-133.	0.1	6

#	Article	IF	CITATIONS
19	Methanol-dependent Escherichia coli strains with a complete ribulose monophosphate cycle. Nature Communications, 2020, 11, 5403.	5.8	31
20	Ultrastable Perovskite–Zeolite Composite Enabled by Encapsulation and Inâ€Situ Passivation. Angewandte Chemie - International Edition, 2020, 59, 23100-23106.	7.2	75
21	High-Entropy Alloys as a Platform for Catalysis: Progress, Challenges, and Opportunities. ACS Catalysis, 2020, 10, 11280-11306.	5.5	308
22	Catalytic Hydrogen Production from Methane: A Review on Recent Progress and Prospect. Catalysts, 2020, 10, 858.	1.6	183
23	Quantum-confined superfluid reactions. Chemical Science, 2020, 11, 10035-10046.	3.7	30
24	Ultrastable Perovskite–Zeolite Composite Enabled by Encapsulation and Inâ€Situ Passivation. Angewandte Chemie, 2020, 132, 23300-23306.	1.6	7
25	Acid Catalysis in Confined Channels of Metal–Organic Frameworks: Boosting Orthoformate Hydrolysis in Basic Solutions. Journal of the American Chemical Society, 2020, 142, 14848-14853.	6.6	31
26	Cooperative Catalysis by Multiple Active Centers in Nonoxidative Conversion of Methane. Journal of Physical Chemistry C, 2020, 124, 13656-13663.	1.5	18
27	Methane Utilization to Methanol by a Hybrid Zeolite@Metal–Organic Framework. ACS Applied Materials & Interfaces, 2020, 12, 23812-23821.	4.0	32
28	Recent advances in organotemplate-free synthesis of zeolites. Current Opinion in Green and Sustainable Chemistry, 2020, 25, 100363.	3.2	4
29	Selectivity Control in Tandem Catalytic Furfural Upgrading on Zeolite-Encapsulated Pt Nanoparticles through Site and Solvent Engineering. ACS Catalysis, 2020, 10, 4770-4779.	5.5	40
30	How to make use of methanol in green catalytic hydrogen production?. Nano Select, 2020, 1, 12-29.	1.9	60
31	Generalized Methodology for Inserting Metal Heteroatoms into the Layered Zeolite Precursor RUB-36 by Interlayer Expansion. Crystals, 2020, 10, 530.	1.0	6
32	C(sp <sup>3</sup> )–H functionalizations of light hydrocarbons using decatungstate photocatalysis in flow. Science, 2020, 369, 92-96.	6.0	263
33	Direct synthesis of oxygenates via partial oxidation of methane in the presence of O2 and H2 over a combination of Fe-ZSM-5 and Pd supported on an acid-functionalized porous polymer. Applied Catalysis A: General, 2020, 602, 117711.	2.2	19
34	Selective Oxidation of Methane over Fe-Zeolites by In Situ Generated H2O2. Catalysts, 2020, 10, 299.	1.6	18
35	Hierarchical zeolite enveloping Pd-CeO2 nanowires: An efficient adsorption/catalysis bifunctional catalyst for low temperature propane total degradation. Chemical Engineering Journal, 2020, 393, 124717.	6.6	62
36	Selective activation of methane C H bond in the presence of methanol. Journal of Catalysis, 2020, 386, 12-18.	3.1	6

#	Article	IF	CITATIONS
37	Energy pooling mechanism for catalyst-free methane activation in nanosecond pulsed non-thermal plasmas. Chemical Engineering Journal, 2020, 396, 125185.	6.6	41
38	High H2O2 Utilization Promotes Selective Oxidation of Methane to Methanol at Low Temperature. Frontiers in Chemistry, 2020, 8, 252.	1.8	15
39	Constructing a Local Hydrophobic Cage in Dye-Doped Fluorescent Silica Nanoparticles to Enhance the Photophysical Properties. ACS Central Science, 2020, 6, 747-759.	5.3	47
40	Encapsulated Metal Nanoparticles for Catalysis. Chemical Reviews, 2021, 121, 834-881.	23.0	426
41	Incorporation of Active Metal Species in Crystalline Porous Materials for Highly Efficient Synergetic Catalysis. Small, 2021, 17, e2003971.	5.2	31
42	Highly Active and Stable Palladium Catalysts Supported on Surfaceâ€modified Ceria Nanowires for Lean Methane Combustion. ChemCatChem, 2021, 13, 664-673.	1.8	13
43	Electro-conversion of methane to alcohols on "capsule-like―binary metal oxide catalysts. Applied Catalysis B: Environmental, 2021, 282, 119572.	10.8	26
44	PdAg alloy nanoparticles encapsulated in N-doped microporous hollow carbon spheres for hydrogenation of CO2 to formate. Applied Catalysis B: Environmental, 2021, 283, 119628.	10.8	54
45	Electrochemical and Photoelectrochemical Water Oxidation for Hydrogen Peroxide Production. Angewandte Chemie, 2021, 133, 10561-10572.	1.6	2
46	Paired Copper Monomers in Zeolite Omega: The Active Site for Methaneâ€ŧoâ€Methanol Conversion. Angewandte Chemie, 2021, 133, 5918-5922.	1.6	8
47	Paired Copper Monomers in Zeolite Omega: The Active Site for Methaneâ€ŧoâ€Methanol Conversion. Angewandte Chemie - International Edition, 2021, 60, 5854-5858.	7.2	27
48	Catalytic conversion of C1 molecules under mild conditions. EnergyChem, 2021, 3, 100050.	10.1	42
49	Nitrogen reduction through confined electro-catalysis with carbon nanotube inserted metal–organic frameworks. Journal of Materials Chemistry A, 2021, 9, 1480-1486.	5.2	27
50	Direct conversion of methane to oxygenates catalyzed by iron( <scp>III</scp> ) chloride in water at near ambient temperature. International Journal of Energy Research, 2021, 45, 2581-2592.	2.2	7
51	Recent advances and perspective on heterogeneous catalysis using metals and oxide nanocrystals. Materials Chemistry Frontiers, 2021, 5, 151-222.	3.2	18
52	Electrochemical and Photoelectrochemical Water Oxidation for Hydrogen Peroxide Production. Angewandte Chemie - International Edition, 2021, 60, 10469-10480.	7.2	152
53	Coreâ€shell structured <scp>HZSM</scp> â€5@ <scp>mesoSiO<sub>2</sub></scp> catalysts with tunable shell thickness for efficient <i>n</i> â€butane catalytic cracking. AICHE Journal, 2021, 67, e17130.	1.8	15
54	Science-based environmental conservation to answer the risk of pandemic, with a focus on the Republic of Korea. Pacific Conservation Biology, 2021, , .	0.5	1

#	Article	IF	CITATIONS
55	Direct Synthesis of Pure Aqueous H <sub>2</sub> O <sub>2</sub> Solution within Aluminosilicate Zeolite Crystals. ACS Catalysis, 2021, 11, 1946-1951.	5.5	28
56	Direct Partial Oxidation of Methane Catalyzed by an In Situ Generated Active Au(III) Complex at Low Temperature in Ionic Liquids. Organometallics, 2021, 40, 370-382.	1.1	6
57	Highly selective photocatalytic conversion of methane to liquid oxygenates over silicomolybdic-acid/TiO <sub>2</sub> under mild conditions. Journal of Materials Chemistry A, 2021, 9, 1713-1719.	5.2	33
58	Acidity as Descriptor for Methanol Desorption in B-, Ga- and Ti-MFI Zeotypes. Catalysts, 2021, 11, 97.	1.6	5
59	Powerful and New Chemical Synthesis Reactions from CO2 and C1 Chemistry Innovated by Tailor-Made Core–Shell Catalysts. Nanostructure Science and Technology, 2021, , 105-120.	0.1	0
60	Hydrogen production from bioinspired methanol reforming at room temperature. Green Chemistry, 2021, 23, 5618-5624.	4.6	14
61	Activation and conversion of alkanes in the confined space of zeolite-type materials. Chemical Society Reviews, 2021, 50, 8511-8595.	18.7	87
62	The inner heterogeneity of ZSM-5 zeolite crystals. Journal of Materials Chemistry A, 2021, 9, 4203-4212.	5.2	21
63	Enormous passivation effects of a surrounding zeolitic framework on Pt clusters for the catalytic dehydrogenation of propane. Catalysis Science and Technology, 0, , .	2.1	10
64	Unveiling the catalytic potential of the Fe( <scp>iv</scp> )oxo species for the oxidation of hydrocarbons in the solid state. Catalysis Science and Technology, 2021, 11, 4560-4569.	2.1	5
65	Amphiphilic confined Pt-based nanocatalysts produced by atomic layer deposition with enhanced catalytic performance for biphasic reactions. Green Chemistry, 2021, 23, 8116-8123.	4.6	11
66	Oxidation of methane to methanol over Pd@Pt nanoparticles under mild conditions in water. Catalysis Science and Technology, 2021, 11, 3493-3500.	2.1	23
68	The role of surface hydroxyl groups on a single-atomic Rh <sub>1</sub> /ZrO <sub>2</sub> catalyst for direct methane oxidation. Chemical Communications, 2021, 57, 1671-1674.	2.2	15
69	Zeolite catalyzed hydroarylation of alkenes with aromatic amines under organic ligand-free conditions. Journal of Catalysis, 2021, 394, 18-29.	3.1	6
70	Catalytic Conversion of Carbon Dioxide to Methanol: Current Status and Future Perspective. Frontiers in Energy Research, 2021, 8, .	1.2	36
71	IrFe/ZSM-5 Synergistic Catalyst for Selective Oxidation of Methane to Formic Acid. Energy & Fuels, 2021, 35, 4418-4427.	2.5	19
72	Water enables mild oxidation of methane to methanol on gold single-atom catalysts. Nature Communications, 2021, 12, 1218.	5.8	138
73	A hydrophobic FeMn@Si catalyst increases olefins from syngas by suppressing C1 by-products. Science, 2021, 371, 610-613.	6.0	204

#	Article	IF	CITATIONS
74	Recent Advances in Catalytic Confinement Effect within Micro/Mesoâ€Porous Crystalline Materials. Small, 2021, 17, e2005334.	5.2	62
75	One-step non-templating synthesis of hybrid zeolite catalyst for Knoevenagel condensation at room temperature efficiently. Journal of Porous Materials, 2021, 28, 1041-1048.	1.3	4
76	Constructing the Support as a Microreactor and Regenerator for Highly Active and In Situ Regenerative Hydrogenation Catalyst. Advanced Functional Materials, 2021, 31, 2100971.	7.8	11
77	Partial Oxidation of Methane to Syngas via Formate Intermediate Found for a Ruthenium–Rhenium Bimetallic Catalyst. ACS Catalysis, 2021, 11, 3782-3789.	5.5	26
78	Enhancing stability by trapping palladium inside N-heterocyclic carbene-functionalized hypercrosslinked polymers for heterogeneous C-C bond formations. Nature Communications, 2021, 12, 1875.	5.8	41
79	Impregnating Subnanometer Metallic Nanocatalysts into Self-Pillared Zeolite Nanosheets. Journal of the American Chemical Society, 2021, 143, 6905-6914.	6.6	124
80	Highly efficient conversion of methane to formic acid under mild conditions at ZSM-5-confined Fe-sites. Nano Energy, 2021, 82, 105718.	8.2	47
81	Efficient Photooxidation of Methane to Liquid Oxygenates over ZnO Nanosheets at Atmospheric Pressure and Near Room Temperature. Nano Letters, 2021, 21, 4122-4128.	4.5	60
82	Supported noble metal catalyst with a core-shell structure for enhancing hydrogenation performance. Molecular Catalysis, 2021, 506, 111543.	1.0	9
83	Versatile Hollow ZSM-5 Nanoreactors Loaded with Tailorable Metal Catalysts for Selective Hydrogenation Reactions. ACS Applied Materials & Interfaces, 2021, 13, 20524-20538.	4.0	22
84	Zeolite-Encapsulated Ultrasmall Cu/ZnO <i><sub>x</sub></i> Nanoparticles for the Hydrogenation of CO <sub>2</sub> to Methanol. ACS Applied Materials & Interfaces, 2021, 13, 18693-18703.	4.0	46
85	Deciphering the oxygen activation mechanism at the CuC site of particulate methane monooxygenase. Nature Catalysis, 2021, 4, 266-273.	16.1	47
86	Zeolite Fixed Metal Nanoparticles: New Perspective in Catalysis. Accounts of Chemical Research, 2021, 54, 2579-2590.	7.6	117
87	<scp>PtZn</scp> intermetallic nanoalloy encapsulated in silicaliteâ€1 for propane dehydrogenation. AICHE Journal, 2021, 67, e17295.	1.8	34
88	Methane to Methanol through Heterogeneous Catalysis and Plasma Catalysis. Catalysts, 2021, 11, 590.	1.6	13
89	Imidazolium-type ionic liquid-assisted formation of the MFI zeolite loaded with metal nanoparticles for hydrogenation reactions. Chemical Engineering Journal, 2021, 412, 128599.	6.6	11
89 90	Imidazolium-type ionic liquid-assisted formation of the MFI zeolite loaded with metal nanoparticles	6.6 1.3	11 5

#	Article	IF	CITATIONS
92	Catalytic Light Alkanes Conversion through Anaerobic Ammodehydrogenation. ACS Catalysis, 2021, 11, 7987-7995.	5.5	8
93	H <sub>2</sub> Oâ€Built Proton Transfer Bridge Enhances Continuous Methane Oxidation to Methanol over Cuâ€BEA Zeolite. Angewandte Chemie - International Edition, 2021, 60, 16634-16640.	7.2	29
94	Low-temperature conversion of methane to oxygenates by supported metal catalysts: From nanoparticles to single atoms. Chinese Journal of Chemical Engineering, 2021, 38, 18-29.	1.7	16
95	Critical Role of Al Pair Sites in Methane Oxidation to Methanol on Cu-Exchanged Mordenite Zeolites. Catalysts, 2021, 11, 751.	1.6	4
96	Amphiphilic Pd@micro-organohydrogels with controlled wettability for enhancing gas-liquid-solid triphasic catalytic performance. Nano Research, 2022, 15, 557-563.	5.8	15
97	Confinement in a Zeolite and Zeolite Catalysis. Accounts of Chemical Research, 2021, 54, 2894-2904.	7.6	159
98	Engineering PdAu Nanowires for Highly Efficient Direct Methane Conversion to Methanol under Mild Conditions. Journal of Physical Chemistry C, 2021, 125, 12713-12720.	1.5	17
99	H 2 Oâ€Built Proton Transfer Bridge Enhances Continuous Methane Oxidation to Methanol over Cuâ€BEA Zeolite. Angewandte Chemie, 2021, 133, 16770-16776.	1.6	5
100	Gripper-like Silicon Species for Efficient Synthesis of Crystalline Metallosilicates with Spatially Homogeneous Heteroatoms in the Framework. Chemistry of Materials, 2021, 33, 4988-5001.	3.2	22
101	Heterogeneously Catalyzed Aerobic Oxidation of Methane to a Methyl Derivative. Angewandte Chemie, 2021, 133, 18286-18291.	1.6	2
102	Research progress on methane conversion coupling photocatalysis and thermocatalysis. , 2021, 3, 519-540.		67
103	Breaking the Selectivity-Conversion Limit of Partial Methane Oxidation with Tandem Heterogeneous Catalysts. ACS Catalysis, 2021, 11, 9262-9270.	5.5	8
104	Heterogeneously Catalyzed Aerobic Oxidation of Methane to a Methyl Derivative. Angewandte Chemie - International Edition, 2021, 60, 18138-18143.	7.2	21
105	Shale gas revolution: Catalytic conversion of C1–C3 light alkanes to value-added chemicals. CheM, 2021, 7, 1755-1801.	5.8	57
107	Methane oxidation by green oxidant to methanol over zeolite-based catalysts. Chinese Chemical Letters, 2022, 33, 1757-1762.	4.8	8
108	Methane oxidation by N2O over Fe-FER catalysts prepared by different methods: Nature of active iron species, stability of surface oxygen species and selectivity to products. Journal of Catalysis, 2021, 400, 10-19.	3.1	17
109	Nature of the Active Sites on Ni/CeO <sub>2</sub> Catalysts for Methane Conversions. ACS Catalysis, 2021, 11, 10604-10613.	5.5	37
110	Microwave synthesis of zeolites and their related applications. Microporous and Mesoporous Materials, 2021, 323, 111262.	2.2	41

#	Article	IF	CITATIONS
111	Emerging applications of zeolites in catalysis, separation and host–guest assembly. Nature Reviews Materials, 2021, 6, 1156-1174.	23.3	209
112	Direct conversion of methane into methanol and ethanol via spherical Au@Cs2[closo-B12H12]and Pd@Cs2[closo-B12H12] nanoparticles. International Journal of Hydrogen Energy, 2021, 46, 30750-30761.	3.8	7
113	A reliable protocol for fast and facile constructing multi-hollow silicalite-1 and encapsulating metal nanoparticles within the hierarchical zeolite. Chemical Engineering Journal, 2021, 419, 129641.	6.6	15
114	Isolated metal atoms and clusters for alkane activation: Translating knowledge from enzymatic and homogeneous to heterogeneous systems. CheM, 2021, 7, 2347-2384.	5.8	25
115	Single-step selective oxidation of methane to methanol in the aqueous phase on iridium-based catalysts. Applied Catalysis B: Environmental, 2021, 292, 120124.	10.8	26
116	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
117	Thermodynamics of molybdenum trioxide encapsulated in zeolite Y. AICHE Journal, 2021, 67, e17464.	1.8	2
118	Heterogeneous Catalysis in Water. Jacs Au, 2021, 1, 1834-1848.	3.6	31
119	Ni Hollow Fiber Encapsulated Bi@Zeolite for Efficient CO <sub>2</sub> Electroreduction. ACS Applied Energy Materials, 2021, 4, 8933-8940.	2.5	7
120	Steam reforming of methane: Current states of catalyst design and process upgrading. Renewable and Sustainable Energy Reviews, 2021, 149, 111330.	8.2	120
121	Boosting the selectivity of aromatic hydrocarbons via ex-situ catalytic fast pyrolysis of cellulose over Pt–Sn–Ce/lî³-Al2O3 catalyst. Journal of the Energy Institute, 2021, 98, 144-152.	2.7	9
122	Meso-scale simulation on mechanism of Na+-gated water-conducting nanochannels in zeolite NaA. Journal of Membrane Science, 2021, 635, 119462.	4.1	5
123	Selective oxidation of methane to methanol using AuPd@ZIF-8. Catalysis Communications, 2021, 158, 106338.	1.6	13
124	Selective oxidation of CH4 to CH3OH through plasma catalysis: Insights from catalyst characterization and chemical kinetics modelling. Applied Catalysis B: Environmental, 2021, 296, 120384.	10.8	32
125	Graphene oxide-assisted fast synthesis of hierarchical ZSM-11 with superior performance for benzene alkylation. Chemical Engineering Journal, 2021, 425, 131598.	6.6	8
126	Selective and leaching-resistant palladium catalyst on a porous polymer support for phenol hydrogenation. Journal of Colloid and Interface Science, 2021, 604, 876-884.	5.0	15
127	Amino acid-assisted synthesis of TS-1 zeolites containing highly catalytically active TiO6 species. Chinese Journal of Catalysis, 2021, 42, 2189-2196.	6.9	27
128	Defective C3N4 frameworks coordinated diatomic copper catalyst: Towards mild oxidation of methane to C1 oxygenates. Applied Catalysis B: Environmental, 2021, 299, 120682.	10.8	32

ARTICLE IF CITATIONS Confined alkali metal ions in two-dimensional aluminum phosphate promoted activity for the 129 1.4 1 condensation of lactic acid to 2,3-pentanedione. New Journal of Chemistry, 2021, 45, 13806-13813. Metal Containing Nanoclusters in Zeolites., 2021, , . Lewis acid (Ni<sup>2+</sup>, Co<sup>2+/3+</sup> or Zn<sup>2+</sup>) modified electron-deficient Ir<sup>4+</sup> in IrO<sub>2</sub>/CuO for promoting methane oxidation to ethanol and methanol. 131 5.2 13 Journal of Materials Chemistry A, 2021, 9, 7094-7101. Atmosphere-Pressure Methane Oxidation to Methyl Trifluoroacetate Enabled by a Porous Organic 5.5 Polymer-Supported Single-Site Palladium Catalyst. ACS Catalysis, 2021, 11, 1008-1013. Rational construction of hierarchical SAPO-34 with enhanced MTO performance without an 133 5.2 19 additional meso/macropore template. Journal of Materials Chemistry A, 2021, 9, 1859-1867. Continuous Synthesis of Methanol from Methane and Steam over Copper-Mordenite. ACS Catalysis, 5.5 2021, 11, 1065-1070. Iron phosphate nanoparticle catalyst for direct oxidation of methane into formaldehyde: effect of 135 2.1 16 surface redox and acidâ€"base properties. Catalysis Science and Technology, 2021, 11, 6987-6998. In-situ confinement of ultrasmall palladium nanoparticles in silicalite-1 for methane combustion with 10.8 excellent activity and hydrothermal stability. Applied Catalysis B: Environmental, 2020, 276, 119142. 137 Palladium-Nanoparticles Biohybrids in Applied Chemistry. Applied Nano, 2021, 2, 1-13. 0.9 14 Cu-embedded porous Al2O3 bifunctional catalyst derived from metal–organic framework for 4.8 syngas-to-dimethyl ether. Chinese Chemical Letters, 2022, 33, 2906-2910. Recent Investigation on Epoxidation of Styrene with Hydrogen Peroxide by Heterogeneous Catalysis. 139 0.7 6 ChemistrySelect, 2021, 6, 9735-9768. Seeded Synthesis of Unconventional 2H-Phase Pd Alloy Nanomaterials for Highly Efficient Oxygen 6.6 59 Reduction. Journal of the American Chemical Society, 2021, 143, 17292-17299. Theoretical Insights into Dual-Metal-Site Catalysts for the Nonoxidative Coupling of Methane. ACS 141 5.5 16 Catalysis, 2021, 11, 13149-13159. Advances in Catalytic Applications of Zeoliteâ€Supported Metal Catalysts. Advanced Materials, 2021, 33, 142 11.1 e2104442. 143 Inorganic Catalysis for Methane Conversion to Chemicals., 2021, , . 0 Construction of Inverse Metalâ€"Zeolite Interfaces via Area-Selective Atomic Layer Deposition. ACS 144 Applied Materials & amp; Interfaces, 2021, 13, 51759-51766. Identifying the crucial role of water and chloride for efficient mild oxidation of methane to 145 3.119 methanol over a [Cu2(μ-O)]2+-ZSM-5 catalyst. Journal of Catalysis, 2022, 405, 1-14. Lanthanum modified Fe-ZSM-5 zeolites for selective methane oxidation with 146 2.1 H<sub>2</sub>O<sub>2</sub>. Catalysis Science and Technology, 2021, 11, 8052-8064.

#	Article	IF	CITATIONS
147	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
148	Indirect Electrooxidation of Methane to Methyl Bisulfate on a Boronâ€Đoped Diamond Electrode. ChemElectroChem, 2022, 9, e202101253.	1.7	4
149	Morphology Effects of Ferrierite on Bifunctional Cu–ZnO–Al <sub>2</sub> O <sub>3</sub> /Ferrierite for Direct Syngas Conversion to Dimethyl Ether. ACS Catalysis, 2021, 11, 14210-14223.	5.5	13
150	Direct synthesis of Cu-containing Beta zeolite without template for selective oxidation of cyclohexane. Journal of Porous Materials, 2022, 29, 371-380.	1.3	5
151	Introducing Methane Activation. , 2022, , 23-41.		3
152	Rate enhancement of phenol hydrogenation on Pt by hydronium ions in the aqueous phase. Journal of Catalysis, 2021, 404, 579-593.	3.1	16
153	Au-ZSM-5 catalyses the selective oxidation of CH4 to CH3OH and CH3COOH using O2. Nature Catalysis, 2022, 5, 45-54.	16.1	95
154	Fabrication of superhydrophobic & catalytic bifunctional MnO2 @ÂAl2O3 composite ceramic membrane for oxidation of desulfurization waste solution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 635, 128067.	2.3	4
155	Precise regulation of the wettability of Pt/CNTs by atomic layer deposition-based ozone pulse strategy for enhanced catalytic hydrogenation performance in aqueous phase. Carbon, 2022, 188, 385-392.	5.4	3
156	Activation and catalytic transformation of methane under mild conditions. Chemical Society Reviews, 2022, 51, 376-423.	18.7	45
157	Rational design of ZSM-5 zeolite containing a high concentration of single Fe sites capable of catalyzing the partial oxidation of methane with high turnover frequency. Catalysis Science and Technology, 2022, 12, 542-550.	2.1	11
158	Selective Oxidation of Methane into Methanol Under Mild Conditions. Chemical Research in Chinese Universities, 2022, 38, 671-676.	1.3	11
159	Improvement of adsorption and catalytic properties of zeolites by precisely controlling their particle morphology. Chemical Communications, 2022, 58, 2041-2054.	2.2	10
160	A nucleation-tuned mechanism to prepare centre-crossed zeolite lamellas by the rotating/static switch crystallization strategy. Inorganic Chemistry Frontiers, 2022, 9, 889-901.	3.0	3
161	Intra-crystalline mesoporous zeolite encapsulation-derived thermally robust metal nanocatalyst in deep oxidation of light alkanes. Nature Communications, 2022, 13, 295.	5.8	54
162	Highly Enhanced Aromatics Selectivity by Coupling of Chloromethane and Carbon Monoxide over Hâ€ZSMâ€5. Angewandte Chemie, 0, , .	1.6	2
163	Highly Enhanced Aromatics Selectivity by Coupling of Chloromethane and Carbon Monoxide over Hâ€ZSMâ€5. Angewandte Chemie - International Edition, 2022, 61, .	7.2	10
164	Preparation of Ni-Co/SiO2 catalyst by ammonia reflux impregnation and its CH4-CO2 reforming reaction performance. Fuel, 2022, 316, 123337.	3.4	17

#	Article	IF	CITATIONS
165	Uniform single atomic Cu1-C4 sites anchored in graphdiyne for hydroxylation of benzene to phenol. National Science Review, 2022, 9, .	4.6	22
166	Selective Hydrogenation of 1,4-Butynediol to 1,4-Butenediol Over Platinum Encapsulated in Zsm-48 with One-Pot Synthesis Method. SSRN Electronic Journal, 0, , .	0.4	0
167	The oxidative degradation of phenol <i>via in situ</i> H <sub>2</sub> O <sub>2</sub> synthesis using Pd supported Fe-modified ZSM-5 catalysts. Catalysis Science and Technology, 2022, 12, 2943-2953.	2.1	7
168	Porous nanographene formation on γ-alumina nanoparticles <i>via</i> transition-metal-free methane activation. Chemical Science, 2022, 13, 3140-3146.	3.7	8
169	Catalytic properties of the ferryl ion in the solid state: a computational review. Catalysis Science and Technology, 2022, 12, 3069-3087.	2.1	1
170	Partial Methane Oxidation in Fuel Cell-Type Reactors for Co-Generation of Energy and Chemicals: A Short Review. Catalysts, 2022, 12, 217.	1.6	14
171	Satisfactory Anti-Interference and High Performance of the 1Co–1Ce/Mn@ZSM-5 Catalyst for Simultaneous Removal of NO and Hg <sup>0</sup> in Abominable Flue Gas. Environmental Science & Technology, 2022, 56, 3596-3603.	4.6	10
172	The Direct Synthesis of Hydrogen Peroxide Over Supported Pd-Based Catalysts: An Investigation into the Role of the Support and Secondary Metal Modifiers. Catalysis Letters, 2023, 153, 32-40.	1.4	6
173	Overall photosynthesis of H2O2 by an inorganic semiconductor. Nature Communications, 2022, 13, 1034.	5.8	105
174	Methane transformation by photocatalysis. Nature Reviews Materials, 2022, 7, 617-632.	23.3	114
174 175	Methane transformation by photocatalysis. Nature Reviews Materials, 2022, 7, 617-632. Ammonia pools in zeolites for direct fabrication of catalytic centers. Nature Communications, 2022, 13, 935.	23.3 5.8	114
	Ammonia pools in zeolites for direct fabrication of catalytic centers. Nature Communications, 2022,		
175	Ammonia pools in zeolites for direct fabrication of catalytic centers. Nature Communications, 2022, 13, 935. Regulating the Spin State of Single Noble Metal Atoms by Hydroxyl for Selective Dehydrogenation of CH <sub>4</sub> Direct Conversion to CH <sub>3</sub> OH. ACS Applied Materials & amp; Interfaces,	5.8	12
175 176	Ammonia pools in zeolites for direct fabrication of catalytic centers. Nature Communications, 2022, 13, 935. Regulating the Spin State of Single Noble Metal Atoms by Hydroxyl for Selective Dehydrogenation of CH <sub>4</sub> Direct Conversion to CH <sub>3</sub> OH. ACS Applied Materials & amp; Interfaces, 2022, 14, 13344-13351. Selective Catalytic Oxidation of Methane to Methanol in Aqueous Medium over Copper Cations	5.8 4.0	12 10
175 176 177	Ammonia pools in zeolites for direct fabrication of catalytic centers. Nature Communications, 2022, 13, 935. Regulating the Spin State of Single Noble Metal Atoms by Hydroxyl for Selective Dehydrogenation of CH <sub>4</sub> Direct Conversion to CH <sub>3</sub> OH. ACS Applied Materials & amp; Interfaces, 2022, 14, 13344-13351. Selective Catalytic Oxidation of Methane to Methanol in Aqueous Medium over Copper Cations Promoted by Atomically Dispersed Rhodium on TiO <sub>2</sub> . Angewandte Chemie, 0, , . Highâ€Performance Heterogeneous Thermocatalysis Caused by Catalyst Wettability Regulation.	5.8 4.0 1.6	12 10 3
175 176 177 178	Ammonia pools in zeolites for direct fabrication of catalytic centers. Nature Communications, 2022, 13, 935.   Regulating the Spin State of Single Noble Metal Atoms by Hydroxyl for Selective Dehydrogenation of CH <sub>4</sub> Direct Conversion to CH <sub>3</sub> OH. ACS Applied Materials & amp; Interfaces, 2022, 14, 13344-13351.   Selective Catalytic Oxidation of Methane to Methanol in Aqueous Medium over Copper Cations Promoted by Atomically Dispersed Rhodium on TiO <sub>2</sub> . Angewandte Chemie, 0, , .   Highâ€Performance Heterogeneous Thermocatalysis Caused by Catalyst Wettability Regulation. Chemistry - A European Journal, 2022,   Ultraâ€stable Molecular Interface SiW <sub>12</sub> O <sub>x</sub> /TiO <sub>2</sub> Catalyst Derived from Kegginâ€type Polyoxometalates for Photocatalytic Conversion of Methane to Oxygenates.	5.8 4.0 1.6 1.7	12 10 3 2
175 176 177 178 179	Ammonia pools in zeolites for direct fabrication of catalytic centers. Nature Communications, 2022, 13, 935.   Regulating the Spin State of Single Noble Metal Atoms by Hydroxyl for Selective Dehydrogenation of CH <sub>4</sub> Direct Conversion to CH <sub>3</sub> OH. ACS Applied Materials & amp; Interfaces, 2022, 14, 13344-13351.   Selective Catalytic Oxidation of Methane to Methanol in Aqueous Medium over Copper Cations Promoted by Atomically Dispersed Rhodium on TiO <sub>2</sub> . Angewandte Chemie, 0, , .   Highâ€Performance Heterogeneous Thermocatalysis Caused by Catalyst Wettability Regulation. Chemistry - A European Journal, 2022,   Ultraâ€stable Molecular Interface SiW <sub>12</sub> O <sub>x</sub> /TiO <sub>2</sub> Catalyst Derived from Kegginâ€type Polyoxometalates for Photocatalytic Conversion of Methane to Oxygenates. ChemCatChem, 2022, 14, .	5.8 4.0 1.6 1.7 1.8	12 10 3 2 7

#	Article	IF	CITATIONS
183	Efficient Photocatalytic Conversion of Methane into Ethanol over P-Doped g-C <sub>3</sub> N <sub>4</sub> under Ambient Conditions. Energy & Fuels, 2022, 36, 3929-3937.	2.5	12
184	Crystalâ€size–dependent external surface diffusion barriers in Pt/ <scp>ZSM</scp> â€5 catalyzed <i>n</i> â€pentane isomerization. AICHE Journal, 2022, 68, .	1.8	3
185	Oxo dicopper anchored on carbon nitride for selective oxidation of methane. Nature Communications, 2022, 13, 1375.	5.8	98
186	Selective Catalytic Oxidation of Methane to Methanol in Aqueous Medium over Copper Cations Promoted by Atomically Dispersed Rhodium on TiO <sub>2</sub> . Angewandte Chemie - International Edition, 2022, 61, e202201540.	7.2	29
187	Gold nanoparticles selectively convert CH4 to oxygenates by using O2. Chem Catalysis, 2022, 2, 436-438.	2.9	1
188	New progress in zeolite synthesis and catalysis. National Science Review, 2022, 9, .	4.6	43
189	<scp>Lowâ€temperature</scp> total oxidation of methane by pore―and vacancyâ€engineered <scp>NiO</scp> catalysts. AICHE Journal, 2022, 68, .	1.8	10
190	Tandem Catalysis for Selective Oxidation of Methane to Oxygenates Using Oxygen over PdCu/Zeolite. Angewandte Chemie, 2022, 134, .	1.6	2
191	Au decorated Pd nanowires for methane oxidation to liquid C1 products. Applied Catalysis B: Environmental, 2022, 308, 121223.	10.8	20
192	Rational design ternary platinum based electrocatalysts for effective methanol oxidation reaction. Journal of Energy Chemistry, 2022, 70, 230-235.	7.1	75
193	Space-confined growth of lead-free halide perovskite Cs3Bi2Br9 in MCM-41 molecular sieve as an efficient photocatalyst for CO2 reduction at the gasâ^'solid condition under visible light. Applied Catalysis B: Environmental, 2022, 310, 121375.	10.8	43
194	Binary Au–Cu Reaction Sites Decorated ZnO for Selective Methane Oxidation to C1 Oxygenates with Nearly 100% Selectivity at Room Temperature. Journal of the American Chemical Society, 2022, 144, 740-750.	6.6	102
195	Kâ€Chabazite Zeolite Nanocrystal Aggregates for Highly Efficient Methane Separation. Angewandte Chemie - International Edition, 2022, 61, e202116850.	7.2	12
196	Synthesis of atomic platinum with high loading on metal-organic sulfide. Science China Materials, 2022, 65, 1294-1302.	3.5	6
197	Selective CH <sub>4</sub> Partial Photooxidation by Positively Charged Metal Clusters Anchored on Carbon Aerogel under Mild Conditions. Nano Letters, 2021, 21, 10368-10376.	4.5	21
198	Direct conversion of methane to methanol by electrochemical methods. Green Energy and Environment, 2022, 7, 1132-1142.	4.7	12
199	K habazite Zeolite Nanocrystal Aggregates for Highly Efficient Methane Separation. Angewandte Chemie, 2022, 134, .	1.6	9
200	Promotion Effect of the X-Zeolite Host on Encapsulated Platinum Clusters for Selective Hydrogenation of Phenylacetylene to Styrene. Inorganic Chemistry, 2021, 60, 19120-19127.	1.9	9

#	Article	IF	CITATIONS
201	Interfacial wettability and mass transfer characterizations for gas–liquid–solid tripleâ€phase catalysis. Exploration, 2022, 2, .	5.4	21
202	Insights into Fe Species Structureâ€Performance Relationship for Direct Methane Conversion toward Oxygenates over Feâ€MOR Catalysts. ChemCatChem, 2022, 14, .	1.8	4
203	Synthesis, characterization, and function of Au nanoparticles within TS-1 zeotypes as catalysts for alkene epoxidation using O2/H2O reactants. Journal of Catalysis, 2022, 410, 206-220.	3.1	12
204	Sulfoneâ€Decorated Conjugated Organic Polymers Activate Oxygen for Photocatalytic Methane Conversion. Angewandte Chemie, 0, , .	1.6	1
205	Sulfoneâ€Decorated Conjugated Organic Polymers Activate Oxygen for Photocatalytic Methane Conversion. Angewandte Chemie - International Edition, 2022, 61, .	7.2	30
207	Construction of Ti-containing zeolite with highly enhanced catalytic activity by active species surface implanting strategy. Catalysis Today, 2022, 405-406, 285-298.	2.2	3
208	Enhancing the adsorption function of F- by iron and zirconium doped zeolite: Characterization and parameter optimization. Environmental Engineering Research, 2023, 28, 220010-0.	1.5	2
209	Fabrication of superhydrophobic Enteromorpha-derived carbon aerogels via NH4H2PO4 modification for multi-behavioral oil/water separation. Science of the Total Environment, 2022, 837, 155869.	3.9	14
210	Reduction-Controlled Atomic Migration for Single Atom Alloy Library. Nano Letters, 2022, 22, 4232-4239.	4.5	20
211	Pickering Emulsion Catalysis: Interfacial Chemistry, Catalyst Design, Challenges, and Perspectives. Angewandte Chemie, 2022, 134, .	1.6	10
212	Tandem catalysis: A sustainable alternative for direct hydrogenation of CO2 to light olefins. Applied Catalysis A: General, 2022, 641, 118658.	2.2	23
213	Highly efficient catalytic production of oximes from ketones using in situ–generated H <sub>2</sub> O <sub>2</sub> . Science, 2022, 376, 615-620.	6.0	63
214	Pickering Emulsion Catalysis: Interfacial Chemistry, Catalyst Design, Challenges, and Perspectives. Angewandte Chemie - International Edition, 2022, 61, .	7.2	60
215	Confinement of halide ions in Mg-Beta zeolites enables synergistic catalysis for CO2 cycloaddition. Fuel, 2022, 323, 124389.	3.4	11
216	Rational Regulation of Crystalline/Amorphous Microprismsâ€Nanochannels Based on Molecular Sieve (VSBâ€5) for Electrochemical Overall Water Splitting. Small, 2022, 18, e2200832.	5.2	15
217	Zeolite-confined subnanometric PtSn mimicking mortise-and-tenon joinery for catalytic propane dehydrogenation. Nature Communications, 2022, 13, 2716.	5.8	33
218	Synergy of Pd atoms and oxygen vacancies on In2O3 for methane conversion under visible light. Nature Communications, 2022, 13, .	5.8	105
219	Unveiling the highly disordered NbO6 units as electron-transfer sites in Nb2O5 photocatalysis with N-hydroxyphthalimide under visible light irradiation. Chinese Journal of Catalysis, 2022, 43, 1894-1905.	6.9	9

#	Article	IF	CITATIONS
220	Single Atom Catalysts for Selective Methane Oxidation to Oxygenates. ACS Nano, 2022, 16, 8557-8618.	7.3	48
221	Silicalite-1 encapsulated rhodium nanoparticles for hydroformylation of 1-hexene. Catalysis Today, 2023, 410, 150-156.	2.2	3
222	Fabrication of FeO3 sites in FeO /ZnO for efficient and selective photo-catalytic oxidation of methane to liquid oxygenates. Cell Reports Physical Science, 2022, 3, 100909.	2.8	2
223	Surface modification of metallic catalysts for the design of selective processes. Catalysis Reviews - Science and Engineering, 0, , 1-47.	5.7	6
224	Elucidation of the reaction mechanism of indirect oxidative carbonylation of methanol to dimethyl carbonate on Pd/NaY catalyst: Direct identification of reaction intermediates. Journal of Catalysis, 2022, 412, 30-41.	3.1	16
225	Emerging Dual-Functional 2D transition metal oxides for carbon capture and Utilization: A review. Fuel, 2022, 324, 124706.	3.4	15
226	Synthesis and performance of Pd <sub>Multi</sub> @HCS catalysts with Pd nanoparticles partially embedded in the inner wall of hollow carbon spheres for the direct synthesis of hydrogen peroxide from hydrogen and oxygen. New Journal of Chemistry, 2022, 46, 13315-13324.	1.4	4
227	Partial oxidation of methane to methanol on boron nitride at near critical acetonitrile. Scientific Reports, 2022, 12, .	1.6	3
228	Does in-situ-generated H2O2 promote important industrial reactions?. CheM, 2022, 8, 1548-1550.	5.8	5
229	Graphdiyne Nanospheres as a Wettability and Electron Modifier for Enhanced Hydrogenation Catalysis. Angewandte Chemie - International Edition, 2022, 61, .	7.2	22
230	Highly Selective Carbonylation of CH <sub>3</sub> Cl to Acetic Acid Catalyzed by Pyridineâ€Treated MOR Zeolite. Angewandte Chemie - International Edition, 0, , .	7.2	3
231	Highly Selective Carbonylation of CH <sub>3</sub> Cl to Acetic Acid Catalyzed by Pyridineâ€Treated MOR Zeolite. Angewandte Chemie, 2022, 134, .	1.6	1
232	Low-temperature aerobic oxidation of thiophenic sulfides over atomic Mo hosted by cobalt hydroxide sub-nanometer sheets. CheM, 2022, 8, 2460-2471.	5.8	26
233	Editorial: Heterogeneous Catalysis for Methane Activation. Frontiers in Chemistry, 0, 10, .	1.8	0
234	Graphdiyne Nanospheres as a Wettability and Electron Modifier for Enhanced Hydrogenation Catalysis. Angewandte Chemie, 0, , .	1.6	8
235	Acidic Zeolite HBeta Catalyzed Friedel-Crafts Alkenylation Reaction. Chinese Journal of Organic Chemistry, 2022, 42, 1792.	0.6	0
236	Tailoring trimetallic CoNiFe oxide nanostructured catalysts for the efficient electrochemical conversion of methane to methanol. Journal of Materials Chemistry A, 2022, 10, 15012-15025.	5.2	4
237	Direct photo-oxidation of methane to methanol over a mono-iron hydroxyl site. Nature Materials, 2022, 21, 932-938.	13.3	77

#	Article	IF	CITATIONS
238	Maximizing noble metal utilization in solid catalysts by control of nanoparticle location. Science, 2022, 377, 204-208.	6.0	73
239	Homogeneity of Supported Singleâ€Atom Active Sites Boosting the Selective Catalytic Transformations. Advanced Science, 2022, 9, .	5.6	47
240	<i>cis</i> -[6-(Pyridin-2-yl)-1,3,5-triazine-2,4-diamine](dichloride) Palladium(II)-Based Electrolyte Membrane Reactors for Partial Oxidation Methane to Methanol. ACS Omega, 2022, 7, 24249-24255.	1.6	1
241	W Singleâ€Atom Catalyst for CH <sub>4</sub> Photooxidation in Water Vapor. Advanced Materials, 2022, 34, .	11.1	31
242	Highly Selective Semihydrogenation via a Wettability-Regulated Mass Transfer Process. ACS Catalysis, 2022, 12, 8494-8502.	5.5	4
243	Recent Development of Bio-inspired Porous Materials for Catalytic Applications. Chemical Research in Chinese Universities, 0, , .	1.3	0
244	Enhanced photocatalytic degradation of lignin by In2S3 with hydrophobic surface and metal defects. Applied Surface Science, 2022, 600, 154110.	3.1	14
245	Selective hydrogenation of 1,4-butynediol to 1,4-butenediol over platinum encapsulated in ZSM-48 with one-pot synthesis method. Fuel, 2022, 327, 125201.	3.4	2
246	Mechanisms for direct methane conversion to oxygenates at low temperature. Coordination Chemistry Reviews, 2022, 470, 214691.	9.5	1
247	NiyCo2-yP alloy catalysts with assistance of Y for boosting Low-pressure hydrogenation transformation of Biomass-derived levulinic acid or furfural in water. Applied Surface Science, 2022, 601, 154142.	3.1	5
248	Elucidating the effect of oxides on the zeolite catalyzed alkylation of benzene with 1-dodecene. Chinese Journal of Chemical Engineering, 2023, 56, 126-135.	1.7	4
249	Physical mixing of a catalyst and a hydrophobic polymer promotes CO hydrogenation through dehydration. Science, 2022, 377, 406-410.	6.0	72
250	Recent Advances in the Seed-Directed Synthesis of Zeolites without Addition of Organic Templates. Nanomaterials, 2022, 12, 2873.	1.9	3
251	Electrochemically Initiated Synthesis of Methanesulfonic Acid. Angewandte Chemie, 0, , .	1.6	0
252	Electrochemically Initiated Synthesis of Methanesulfonic Acid. Angewandte Chemie - International Edition, 0, , .	7.2	3
253	Boosting room-temperature conversion of methane via confining Cu atoms in ultrathin Ru nanosheets. Chem Catalysis, 2022, 2, 2253-2261.	2.9	14
254	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
255	Oxidation of methane and ethylene over Al incorporated N-doped graphene: A comparative mechanistic DFT study. Journal of Molecular Graphics and Modelling, 2022, 117, 108284.	1.3	1

#	Article	IF	CITATIONS
256	Constructing hollow porous Pd/H-TiO2 photocatalyst for highly selective photocatalytic oxidation of methane to methanol with O2. Applied Catalysis B: Environmental, 2023, 320, 121961.	10.8	13
257	Water-Free Surface Silanization on Composite Zeolite 13x/Mgso4 in a Direct-Contact Adsorption Heat Pump for Stable Steam Generation. SSRN Electronic Journal, 0, , .	0.4	0
258	Selective Oxidation of Methane into Formic Acid Over Zif-8-Encapsulated Mononuclear Fe Species Under Mild Conditions. SSRN Electronic Journal, 0, , .	0.4	0
259	Zeolites in catalysis: sustainable synthesis and its impact on properties and applications. Catalysis Science and Technology, 2022, 12, 6024-6039.	2.1	17
260	Selective oxidation of CH <sub>4</sub> to valuable HCHO over a defective rTiO <sub>2</sub> /GO metal-free photocatalyst. Catalysis Science and Technology, 2022, 12, 5869-5878.	2.1	0
261	Cyclohexanone ammoximation <i>via in situ</i> H <sub>2</sub> O <sub>2</sub> production using TS-1 supported catalysts. Green Chemistry, 2022, 24, 9496-9507.	4.6	11
262	Metal Sites in Zeolites: Synthesis, Characterization, and Catalysis. Chemical Reviews, 2023, 123, 6039-6106.	23.0	95
263	Controllable Constructing Janus Homologous Heterostructures of Transition Metal Alloys/Sulfides for Efficient Oxygen Electrocatalysis. Advanced Energy Materials, 2022, 12, .	10.2	36
264	Catalysis of Alloys: Classification, Principles, and Design for a Variety of Materials and Reactions. Chemical Reviews, 2023, 123, 5859-5947.	23.0	63
265	Direct photocatalytic conversion of methane to value-added chemicals. Trends in Chemistry, 2022, 4, 1094-1105.	4.4	14
266	Crystalline MoS <sub>2</sub> -enhanced conductive black titania for efficient solar to chemical energy conversion: photocatalytic CO <sub>2</sub> reduction and CH <sub>4</sub> oxidation. Journal of Materials Chemistry A, 2022, 10, 23854-23862.	5.2	7
267	Two-stage electrolysis of H <sub>2</sub> O and CO <sub>2</sub> to methanol: CO <sub>2</sub> -to-methane reduction at the cathode and subsequent methane-to-methanol oxidation at the anode. Journal of Materials Chemistry A, 2022, 10, 22718-22729.	5.2	3
268	Position Control of Catalytic Elements in Zeolites. , 2022, , 167-196.		1
269	Microenvironment engineering of supported metal nanoparticles for chemoselective hydrogenation. Chemical Science, 2022, 13, 13291-13302.	3.7	9
270	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
271	One-step direct conversion of methane to methanol with water in non-thermal plasma. Communications Chemistry, 2022, 5, .	2.0	5
272	Impact of Nickel Phosphides Over Ni/SiO2 Catalysts in Dry Methane Reforming. Catalysis Letters, 2023, 153, 2787-2802.	1.4	4
273	Recent Insights into Cu-Based Catalytic Sites for the Direct Conversion of Methane to Methanol. Molecules, 2022, 27, 7146.	1.7	5

#	Article	IF	CITATIONS
274	Direct Conversion of Methane to Methanol on LaCo0.5Fe0.5O3 Anode in Aqueous Ionic Liquid. International Journal of Electrochemical Science, 2022, 17, 221161.	0.5	2
275	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
276	Catalytic performances in methane combustion over Pd nanoparticles supported on pure silica zeolites with different structures. Microporous and Mesoporous Materials, 2022, 346, 112298.	2.2	4
277	Transformation of thiols to disulfides <i>via</i> an oxidant-free radical pathway on the zeolite ETS-10. Green Chemistry, 2022, 24, 9033-9039.	4.6	3
278	Selective oxidation of methane into formic acid over ZIFâ€8â€encapsulated mononuclear Fe species under mild conditions. ChemCatChem, 0, , .	1.8	1
279	Improving Catalytic Activity towards the Direct Synthesis of H2O2 through Cu Incorporation into AuPd Catalysts. Catalysts, 2022, 12, 1396.	1.6	7
280	Molecular oxygen enhances H2O2 utilization for the photocatalytic conversion of methane to liquid-phase oxygenates. Nature Communications, 2022, 13, .	5.8	30
281	Possible Fine-Tuning of Methane Activation toward C2 Oxygenates by 3d-Transition Metal-Ions Doped Nano-Ceria-Zirconia. Inorganic Chemistry, 2022, 61, 19577-19587.	1.9	0
282	Axial nitrogen-coordination engineering over Fe-Nx active species for enhancing Fenton-like reaction performance. Chemical Engineering Journal, 2023, 454, 140382.	6.6	5
283	Recent advances in reducible metal oxide catalysts for C1 reactions. Catalysis Science and Technology, 0, , .	2.1	1
284	MoOx nanoclusters decorated on spinel-type transition metal oxide porous nanosheets for aerobic oxidative desulfurization of fuels. Fuel, 2023, 334, 126753.	3.4	6
285	Epitaxial growth of surface-passivated core-shell ferrierite. Journal of Crystal Growth, 2023, 603, 126992.	0.7	0
286	Elucidating water's place in catalytic C3H6 combustion over Pt@TiO /TiO2 with super-hydrophilic silica-modified surface. Applied Catalysis B: Environmental, 2023, 324, 122234.	10.8	2
287	Coordination unsaturation of vanadium nitride quantum dots boosts low-temperature aerobic oxidation of thiophenic sulfides. Chemical Science, 2022, 13, 14063-14069.	3.7	11
288	Simultaneous Production of Aromatics and COx-Free Hydrogen via Methane Dehydroaromatization in Membrane Reactors: A Simulation Study. Membranes, 2022, 12, 1175.	1.4	0
289	Current Progress on Methods and Technologies for Catalytic Methane Activation at Low Temperatures. Advanced Science, 2023, 10, .	5.6	10
290	Bioinspired Hydrophobic Single-Atom Catalyst with Flexible Sulfur Motif for Aqueous-Phase Hydrogenative Transformation. ACS Catalysis, 2023, 13, 530-539.	5.5	8
291	Methane Oxidation to Methanol. Chemical Reviews, 2023, 123, 6359-6411.	23.0	50

#	Article	IF	CITATIONS
292	Selective Oxidation of Methane to Oxygenates Using Oxygen via Tandem Catalysis. Chemistry - A European Journal, 0, , .	1.7	1
293	Boosting Benzene Oxidation with a Spinâ€Stateâ€Controlled Nuclearity Effect on Iron Subâ€Nanocatalysts. Angewandte Chemie, 0, , .	1.6	0
294	Boosting Benzene Oxidation with a Spinâ€Stateâ€Controlled Nuclearity Effect on Iron Subâ€Nanocatalysts. Angewandte Chemie - International Edition, 2023, 62, .	7.2	4
295	Thermal steam methane reforming over bimetal-loaded hemp-derived activated carbon-based catalyst for hydrogen production. Research on Chemical Intermediates, 2023, 49, 3181-3203.	1.3	4
297	Enabling Specific Photocatalytic Methane Oxidation by Controlling Free Radical Type. Journal of the American Chemical Society, 2023, 145, 2698-2707.	6.6	69
298	Editorial: Heterogeneous catalysts for C1 molecules conversion. Frontiers in Chemistry, 0, 10, .	1.8	1
299	Functional confinement of a zinc-oxide-supported gold catalyst enhances the direct synthesis of hydrogen peroxide. Cell Reports Physical Science, 2023, 4, 101236.	2.8	0
300	Mesopore engineering in Al-rich mordenite zeolites by a tandem top-down protocol: a comparative study between fluoride leaching and fluorination. New Journal of Chemistry, 2023, 47, 2548-2555.	1.4	1
301	Geometric and Electronic Effects in Hydrogenation Reactions. ACS Catalysis, 2023, 13, 974-1019.	5.5	11
302	Transport Mediating Core–Shell Photocatalyst Architecture for Selective Alkane Oxidation. Nano Letters, 2023, 23, 2039-2045.	4.5	8
303	Chemical looping-based energy transformation via lattice oxygen modulated selective oxidation. Progress in Energy and Combustion Science, 2023, 96, 101045.	15.8	47
304	Direct oxidation of methane to methanol using CuMoO <sub>4</sub> . RSC Advances, 2023, 13, 5393-5404.	1.7	1
305	Partial oxidation of methane by photocatalysis. Chinese Chemical Letters, 2024, 35, 108418.	4.8	2
306	Hydrophobic modification for CO photo-hydrogenation to olefins with low CO2 selectivity. Nano Energy, 2023, 110, 108350.	8.2	3
307	Recent advance of atomically dispersed catalysts for direct methane oxidation under mild aqueous conditions. Materials Today Sustainability, 2023, 22, 100351.	1.9	2
308	Oxidative carbonylation of methane to acetic acid on an Fe-modified ZSM-5 zeolite. Applied Catalysis B: Environmental, 2023, 329, 122549.	10.8	7
309	Thermodynamic analysis of methane to methanol through a two-step process driven by concentrated solar energy. Energy, 2023, 273, 127284.	4.5	1
310	Boosting methane catalytic combustion by confining PdO-Pd interfaces in zeolite nanosheets. Fuel, 2023, 344, 127693.	3.4	0

#	Article	IF	CITATIONS
311	Singleâ€Step Oxidation of Lowâ€Concentration Methane to Methanol in the Gaseous Phase Using Ceriaâ€Based Iridiumâ€Copper Catalysts. ChemistrySelect, 2023, 8, .	0.7	0
312	Nonclassical Approaches and Behaviors in Synthesis, Structure Characterization, and Catalysis of Zeolites. Journal of Physical Chemistry C, 2023, 127, 3377-3388.	1.5	1
313	Insights into elusive and cooperative multi-oxidant mechanisms in enabling catalytic methane-to-methanol conversion over atomically dispersed metals. Inorganic Chemistry Frontiers, 2023, 10, 1838-1851.	3.0	2
314	Maximizing Active Fe Species in ZSM-5 Zeolite Using Organic-Template-Free Synthesis for Efficient Selective Methane Oxidation. Journal of the American Chemical Society, 2023, 145, 5888-5898.	6.6	13
315	A General and Scalable Approach to Sulfur-Doped Mono-/Bi-/Trimetallic Nanoparticles Confined in Mesoporous Carbon. ACS Nano, 2023, 17, 3889-3900.	7.3	8
316	Mild Oxidation of Methane to Oxygenates with O2 and CO on Fluorine Modified TS-1 Supported Rh Single-Atom Catalyst in a Flow Reactor. Catalysis Letters, 2024, 154, 259-269.	1.4	0
317	Electrocatalytic methane direct conversion to methanol in electrolyte of ionic liquid. Electrochimica Acta, 2023, 445, 142065.	2.6	5
318	Facile design of <scp>oxideâ€derived Cu</scp> nanosheet electrocatalyst for <scp>CO<sub>2</sub></scp> reduction reaction. EcoMat, 2023, 5, .	6.8	8
319	Aqueousâ€Phase Partial Oxidation of Methane over Pdâ^'Fe/ZSMâ€5 with O <sub>2</sub> in the Presence of H <sub>2</sub> . ChemCatChem, 2023, 15, .	1.8	5
320	Ru single-atom catalyst anchored on sulfated zirconia for direct methane conversion to methanol. Chinese Journal of Catalysis, 2023, 46, 64-71.	6.9	3
321	Efficient catalysts of surface hydrophobic Cu-BTC with coordinatively unsaturated Cu(I) sites for the direct oxidation of methane. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	3.3	8
322	Superhydrophobic and Conductive Wire Membrane for Enhanced CO <sub>2</sub> Electroreduction to Multicarbon Products. Angewandte Chemie, 2023, 135, .	1.6	1
323	Superhydrophobic and Conductive Wire Membrane for Enhanced CO <sub>2</sub> Electroreduction to Multicarbon Products. Angewandte Chemie - International Edition, 2023, 62, .	7.2	20
324	Boosting Direct Oxidation of Methane with Molecular Oxygen at Low Temperature over Rh/ZSMâ ${\in}5$ Catalyst. ChemCatChem, 2023, 15, .	1.8	1
325	The hydrophobic microenvironment boosting isotope exchange between hydrogen and tritium water. Catalysis Communications, 2023, 177, 106632.	1.6	2
326	Mathematical Model for a Three-Phase Enzymatic Reaction System. Industrial & Engineering Chemistry Research, 2023, 62, 4337-4343.	1.8	1
327	Insight into the Evolution Track for the Metathesis of Alkenes within Hierarchical Zeoliteâ€Based Catalysts. Chemistry - A European Journal, 2023, 29, .	1.7	2
328	Methane Photooxidation with Nearly 100 % Selectivity Towards Oxygenates: Proton Rebound Ensures the Regeneration of Methanol. Angewandte Chemie - International Edition, 2023, 62, .	7.2	4

#	Article	IF	CITATIONS
329	Methane Photooxidation with Nearly 100 % Selectivity Towards Oxygenates: Proton Rebound Ensures the Regeneration of Methanol. Angewandte Chemie, 2023, 135, .	1.6	1
330	Atomic dispersion of bulk/nano metals to atomic-sites catalysts and their application in thermal catalysis. Nano Research, 2023, 16, 6380-6401.	5.8	5
331	Direct Catalytic Oxidation of Low-Concentration Methane to Methanol in One Step on Ni-Promoted BiOCl Catalysts. ACS Omega, 2023, 8, 11220-11232.	1.6	2
332	Adsorption of Molecules on Defective CeO <sub>2</sub> for Advanced Catalysis. ACS Catalysis, 2023, 13, 4629-4645.	5.5	15
333	Role of Catalyst Domain Size in the Hydrogenation of CO <sub>2</sub> to Aromatics over ZnZrO <sub><i>x</i></sub> /ZSM-5 Catalysts. Journal of Physical Chemistry C, 2023, 127, 6356-6370.	1.5	2
334	Hyperloop-like diffusion of long-chain molecules under confinement. Nature Communications, 2023, 14, .	5.8	5
335	Selective methane oxidation by molecular iron catalysts in aqueous medium. Nature, 2023, 616, 476-481.	13.7	18
336	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
337	Hydrophobic regulation promotes CO hydrogenation to move towards positive reaction direction. Chinese Science Bulletin, 2023, , .	0.4	0
338	Research progress in catalytic oxidation of methane to methanol under mild conditions. Scientia Sinica Chimica, 2023, , .	0.2	0
339	Selective Oxidation of Methane to Methanol via In Situ H <sub>2</sub> O <sub>2</sub> Synthesis. ACS Organic & Inorganic Au, 2023, 3, 177-183.	1.9	4
348	Zeolite-based catalysts for oxidative upgrading of methane: design and control of active sites. Catalysis Science and Technology, 0, , .	2.1	1
362	Acid-Promoted Selective Oxidation of Methane to Formic Acid over Dispersed Rhodium Catalysts under Mild Conditions. ACS Catalysis, 2023, 13, 9509-9514.	5.5	2
370	Progress and perspectives of Pd-based catalysts for direct synthesis of hydrogen peroxide. , 2024, 2, 7-29.		1
380	Methane dehydroaromatization catalyzed by Mo/ZSM-5: location-steered activity and mechanism. Chemical Communications, 2023, 59, 10932-10935.	2.2	1
385	Recent trends, current challenges and future prospects for syngas-free methane partial oxidation. Nature Catalysis, 2023, 6, 748-762.	16.1	5
388	Ammonia-assisted reforming and dehydrogenation toward efficient light alkane conversion. Green Chemistry, 2023, 25, 7904-7915.	4.6	1
410	Methane oxidation by catalyst reduction. Nature Catalysis, 2023, 6, 866-867.	16.1	0

#	Article	IF	CITATIONS
453	Methanol Production From Agriculture Wastes in China. , 2024, , .		0