Catalytic aromatization of methane

Chemical Society Reviews
43, 792-803
DOI: 10.1039/c3cs60259a

#	Article	IF	Citations
3	Catalytic Membrane Reactors â€" Lab Curiosity or Key Enabling Technology?. Chemie-Ingenieur-Technik, 2014, 86, 1901-1905.	0.4	12
4	Effect of Ni(111) surface alloying by Pt on partial oxidation of methane to syngas: A DFT study. Surface Science, 2014, 630, 236-243.	0.8	43
6	C to H effective ratio as a descriptor for co-processing light oxygenates and CH₄on Mo/H-ZSM-5. RSC Advances, 2014, 4, 49446-49448.	1.7	9
7	Thermal Nonâ€Oxidative Aromatization of Light Alkanes Catalyzed by Gallium Nitride. Angewandte Chemie - International Edition, 2014, 53, 14106-14109.	7.2	58
8	Renewable energy based catalytic CH4 conversion to fuels. Catalysis Science and Technology, 2014, 4, 2397.	2.1	66
9	Tailoring the physicochemical properties of zeolite catalysts. Catalysis Science and Technology, 2014, 4, 3762-3771.	2.1	62
10	Mechanism of Fe additive improving the activity stability of microzeolite-based Mo/HZSM-5 catalyst in non-oxidative methane dehydroaromatization at 1073 K under periodic CH₄â€"H₂switching modes. Catalysis Science and Technology, 2014, 4, 3644-3656.	2.1	13
12	Real time chemical imaging of a working catalytic membrane reactor during oxidative coupling of methane. Chemical Communications, 2015, 51, 12752-12755.	2.2	63
13	Effect of addition of a second metal in Mo/ZSM-5 catalyst for methane aromatization reaction under elevated pressures. Catalysis Today, 2015, 256, 269-275.	2.2	37
14	Zeolites and Zeotypes for Oil and Gas Conversion. Advances in Catalysis, 2015, 58, 143-314.	0.1	65
15	The effect of Fe on Pt particle states in Pt/KL catalysts. Applied Catalysis A: General, 2015, 492, 31-37.	2.2	32
16	Solar thermal catalytic reforming of natural gas: a review on chemistry, catalysis and system design. Catalysis Science and Technology, 2015, 5, 1991-2016.	2.1	78
17	Effect of pore geometries on the catalytic properties of NiOâ€"Al₂O₃ catalysts in CO₂ reforming of methane. RSC Advances, 2015, 5, 21090-21098.	1.7	19
18	Carbonâ€"Carbon Bond Formation by Activation of CH₃F on Alumina. Journal of Physical Chemistry C, 2015, 119, 7156-7163.	1.5	28
19	Catalytic bi-reforming of methane: from greenhouse gases to syngas. Current Opinion in Chemical Engineering, 2015, 9, 8-15.	3.8	105
20	The distribution of coke formed over a multilayer Mo/HZSM-5 fixed bed in H2 co-fed methane aromatization at 1073 K: Exploration of the coking pathway. Journal of Catalysis, 2015, 330, 261-272.	3.1	61
21	Reactions of ethane with CO2 over supported Au. Journal of Catalysis, 2015, 330, 1-5.	3.1	31
22	Surface Science Studies of Selective Deoxygenation on Bulk Molybdenum Carbide. Topics in Catalysis, 2015, 58, 232-239.	1.3	11

#	Article	IF	Citations
23	A synthetic Mn ₄ Ca-cluster mimicking the oxygen-evolving center of photosynthesis. Science, 2015, 348, 690-693.	6.0	428
24	Identification of molybdenum oxide nanostructures on zeolites for natural gas conversion. Science, 2015, 348, 686-690.	6.0	310
25	Methane Conversion to Syngas for Gas-to-Liquids (GTL): Is Sustainable CO₂ Reuse via Dry Methane Reforming (DMR) Cost Competitive with SMR and ATR Processes?. ACS Sustainable Chemistry and Engineering, 2015, 3, 2100-2111.	3.2	80
26	Non-oxidative dehydroaromatization of methane: an effective reactionâ€“regeneration cyclic operation for catalyst life extension. Catalysis Science and Technology, 2015, 5, 3806-3821.	2.1	55
27	Improved benzene production from methane dehydroaromatization over Mo/HZSM-5 catalysts via hydrogen-permselective palladium membrane reactors. Catalysis Science and Technology, 2015, 5, 5023-5036.	2.1	38
28	Effect of the particle size of MoO₃ on the catalytic activity of Mo/ZSM-5 in methane non-oxidative aromatization. New Journal of Chemistry, 2015, 39, 5459-5469.	1.4	34
29	Methane Activation by Heterogeneous Catalysis. Catalysis Letters, 2015, 145, 23-39.	1.4	512
30	Effect of Fe and Zn promoters on Mo/HZSM-5 catalyst for methane dehydroaromatization. Fuel, 2015, 139, 401-410.	3.4	96
31	Molybdenum Speciation and its Impact on Catalytic Activity during Methane Dehydroaromatization in Zeolite ZSMâ€5 as Revealed by Operando Xâ€Ray Methods. Angewandte Chemie, 2016, 128, 5301-5305.	1.6	37
32	Methane dehydroaromatisation and methanol activation over zeolite catalysts: an overview. Applied Petrochemical Research, 2016, 6, 183-190.	1.3	0
33	NGU: Development of a twoâ€bed circulating fluidized bed reactor system for nonoxidative aromatization of methane over Mo/HZSMâ€5 catalyst. Environmental Progress and Sustainable Energy, 2016, 35, 325-333.	1.3	13
34	Study of Zn and Ga Exchange in H-[Fe]ZSM-5 and H-[B]ZSM-5 Zeolites. Industrial & Engineering Chemistry Research, 2016, 55, 12795-12805.	1.8	14
35	Features of non-oxidative conversion of methane into aromatic hydrocarbons over Mo-containing zeolite catalysts. IOP Conference Series: Earth and Environmental Science, 2016, 43, 012064.	0.2	1
36	Strategies for the Direct Catalytic Valorization of Methane Using Heterogeneous Catalysis: Challenges and Opportunities. ACS Catalysis, 2016, 6, 2965-2981.	5.5	438
37	Molybdenum Speciation and its Impact on Catalytic Activity during Methane Dehydroaromatization in Zeolite ZSMâ€5 as Revealed by Operando Xâ€Ray Methods. Angewandte Chemie - International Edition, 2016, 55, 5215-5219.	7.2	133
38	Selective aromatization of biomass derived diisobutylene to p-xylene over supported non-noble metal catalysts. Catalysis Today, 2016, 276, 105-111.	2.2	10
39	Progress in the direct catalytic conversion of methane to fuels and chemicals. Progress in Energy and Combustion Science, 2016, 55, 60-97.	15.8	265
40	Direct conversion of methane to aromatics in a catalytic co-ionic membrane reactor. Science, 2016, 353, 563-566.	6.0	341

#	Article	IF	Citations
41	A kinetic study of the selective production of difluoromethoxymethane from chlorodifluoromethane. Journal of the Taiwan Institute of Chemical Engineers, 2016, 66, 70-79.	2.7	0
42	Thermal Stability of Aluminum-Rich ZSM-5 Zeolites and Consequences on Aromatization Reactions. Journal of Physical Chemistry C, 2016, 120, 20103-20113.	1.5	53
43	Integration of biomass catalytic pyrolysis and methane aromatization over Mo/HZSM-5 catalysts. Journal of Analytical and Applied Pyrolysis, 2016, 120, 484-492.	2.6	46
44	Promotional Effects of In on Non-Oxidative Methane Transformation Over Mo-ZSM-5. Catalysis Letters, 2016, 146, 1903-1909.	1.4	10
45	Hydrogenâ€Permeable Tubular Membrane Reactor: Promoting Conversion and Product Selectivity for Nonâ€Oxidative Activation of Methane over an FeÂ©SiO₂ Catalyst. Angewandte Chemie, 2016, 128, 16383-16386.	1.6	27
46	Hydrogenâ€Permeable Tubular Membrane Reactor: Promoting Conversion and Product Selectivity for Nonâ€Oxidative Activation of Methane over an FeÂ©SiO₂ Catalyst. Angewandte Chemie - International Edition, 2016, 55, 16149-16152.	7.2	64
47	Efficient Conversion of Methane to Aromatics by Coupling Methylation Reaction. ACS Catalysis, 2016, 6, 5366-5370.	5.5	64
48	Selective Coke Combustion by Oxygen Pulsing During Mo/ZSMâ€5â€Catalyzed Methane Dehydroaromatization. Angewandte Chemie - International Edition, 2016, 55, 15086-15090.	7.2	94
49	Selective Coke Combustion by Oxygen Pulsing During Mo/ZSMâ€5â€Catalyzed Methane Dehydroaromatization. Angewandte Chemie, 2016, 128, 15310-15314.	1.6	18
50	Effect of Bed Height on the Performance of a Fixed Mo/HZSMâ€5 Bed in Direct Aromatization of Methane. Chemical Engineering and Technology, 2016, 39, 2059-2065.	0.9	8
51	Znâ€HZSMâ€5 catalysts for methane dehydroaromatization. Environmental Progress and Sustainable Energy, 2016, 35, 334-344.	1.3	8
52	Advances in the study of coke formation over zeolite catalysts in the methanol-to-hydrocarbon process. Applied Petrochemical Research, 2016, 6, 209-215.	1.3	45
53	CH 4 conversion to value added products: Potential, limitations and extensions of a single step heterogeneous catalysis. Applied Catalysis B: Environmental, 2016, 198, 525-547.	10.8	185
54	Disruptive catalysis by zeolites. Catalysis Science and Technology, 2016, 6, 2485-2501.	2.1	68
55	Evolution of Câ€“H Bond Functionalization from Methane to Methodology. Journal of the American Chemical Society, 2016, 138, 2-24.	6.6	632
56	Revisiting the oxidative coupling of methane to ethylene in the golden period of shale gas: A review. Journal of Industrial and Engineering Chemistry, 2016, 37, 1-13.	2.9	174
57	Gas to Liquids: Natural Gas Conversion to Aromatic Fuels and Chemicals in a Hydrogen-Permeable Ceramic Hollow Fiber Membrane Reactor. ACS Catalysis, 2016, 6, 2448-2451.	5.5	70
58	Non-oxidative methane dehydroaromatization on Mo/HZSM-5 catalysts: Tuning the acidic and catalytic properties through partial exchange of zeolite protons with alkali and alkaline-earth cations. Applied Catalysis A: General, 2016, 515, 32-44.	2.2	46

#	Article	IF	Citations
59	Active phase, catalytic activity, and induction period of Fe/zeolite material in nonoxidative aromatization of methane. Journal of Catalysis, 2016, 338, 21-29.	3.1	216
60	Process intensification in the catalytic conversion of natural gas to fuels and chemicals. Proceedings of the Combustion Institute, 2017, 36, 51-76.	2.4	47
61	Template-free preparation of bimetallic mesoporous Ni-Co-CaO-ZrO2 catalysts and their synergetic effect in dry reforming of methane. Catalysis Today, 2017, 281, 268-275.	2.2	62
62	A binder-free fluidizable Mo/HZSM-5 catalyst for non-oxidative methane dehydroaromatization in a dual circulating fluidized bed reactor system. Catalysis Today, 2017, 279, 115-123.	2.2	16
63	Stable Mo/HZSM-5 methane dehydroaromatization catalysts optimized for high-temperature calcination-regeneration. Journal of Catalysis, 2017, 346, 125-133.	3.1	147
64	Catalytic Oxychlorination versus Oxybromination for Methane Functionalization. ACS Catalysis, 2017, 7, 1805-1817.	5.5	50
66	Enhanced Methane Dehydroaromatization via Coupling with Chemical Looping. ACS Catalysis, 2017, 7, 3924-3928.	5.5	33
67	Direct Conversion of Methane to Value-Added Chemicals over Heterogeneous Catalysts: Challenges and Prospects. Chemical Reviews, 2017, 117, 8497-8520.	23.0	961
68	Co-aromatization of olefin and methane over Ag-Ga/ZSM-5 catalyst at low temperature. Applied Catalysis B: Environmental, 2017, 211, 275-288.	10.8	61
69	Methane Dehydroaromatization by Mo/HZSM-5: Mono- or Bifunctional Catalysis?. ACS Catalysis, 2017, 7, 520-529.	5.5	155
70	Co-Pyrolysis of torrefied biomass and methane over molybdenum modified bimetallic HZSM-5 catalyst for hydrocarbons production. Green Chemistry, 2017, 19, 757-768.	4.6	35
71	Experimental and Theoretical Evaluation of the Stability of True MOF Polymorphs Explains Their Mechanochemical Interconversions. Journal of the American Chemical Society, 2017, 139, 7952-7957.	6.6	93
72	Reply to Comment on â€œEfficient Conversion of Methane to Aromatics by Coupling Methylation Reactionâ€. ACS Catalysis, 2017, 7, 4488-4490.	5.5	3
73	Advances and trends in two-zone fluidized-bed reactors. Current Opinion in Chemical Engineering, 2017, 17, 15-21.	3.8	14
74	Techno-economic analysis of a process for CO2-free coproduction of iron and hydrocarbon chemical products. Chemical Engineering Journal, 2017, 313, 136-143.	6.6	9
75	Coke accumulation and deactivation behavior of microzeolite-based Mo/HZSM-5 in the non-oxidative methane aromatization under cyclic CH 4 -H 2 feed switch mode. Applied Catalysis A: General, 2017, 530, 12-20.	2.2	45
76	High performance fuel electrodes fabricated by electroless plating of copper on BaZr 0.8 Ce 0.1 Y 0.1 O 3-Î´ proton-conducting ceramic. Journal of Power Sources, 2017, 365, 399-407.	4.0	4
79	Non-oxidative Ethane Dehydroaromatization on Co/H-ZSM-5 Catalyst. Chemistry Letters, 2017, 46, 1646-1649.	0.7	8

#	Article	IF	Citations
80	Periodic density functional theory analysis of direct methane conversion into ethylene and aromatic hydrocarbons catalyzed by Mo₄C₂/ZSM-5. Physical Chemistry Chemical Physics, 2017, 19, 22243-22255.	1.3	14
81	Bifunctional Catalysts for One-Step Conversion of Syngas into Aromatics with Excellent Selectivity and Stability. CheM, 2017, 3, 334-347.	5.8	377
83	A research into the thermodynamics of methanol to hydrocarbon (MTH): conflictions between simulated product distribution and experimental results. Applied Petrochemical Research, 2017, 7, 55-66.	1.3	2
84	Fabrication of reducing atmosphere electrodes (fuel electrodes) by electroless plating of copper on BaZr0.9â^’xCexY0.1O3â^’Î´ â€“ A proton-conducting ceramic. International Journal of Hydrogen Energy, 2017, 42, 16911-16919.	3.8	7
85	Zeolite-Encapsulated Catalysts. , 2017, , 335-386.		9
86	Direct combination of hydrogen evolution from water and methane conversion in a photocatalytic system over Pt/TiO2. Applied Catalysis B: Environmental, 2017, 204, 216-223.	10.8	130
87	Techno-Economic Assessment of Benzene Production from Shale Gas. Processes, 2017, 5, 33.	1.3	32
88	3.1 Basic Aspects of Membrane Reactors. , 2017, , 1-29.		1
89	Highly Selective Nonoxidative Coupling of Methane over Pt-Bi Bimetallic Catalysts. ACS Catalysis, 2018, 8, 2735-2740.	5.5	89
90	Vacuum Ultraviolet Ionization-Induced Reaction of Neutral Au₂Al₂O₃ Clusters with Methane. Journal of Physical Chemistry C, 2018, 122, 6159-6165.	1.5	6
91	Co-aromatization of methane with olefins: The role of inner pore and external surface catalytic sites. Applied Catalysis B: Environmental, 2018, 234, 234-246.	10.8	30
92	Metal Catalysts for Heterogeneous Catalysis: From Single Atoms to Nanoclusters and Nanoparticles. Chemical Reviews, 2018, 118, 4981-5079.	23.0	3,103
93	Effects of Controlled Crystalline Surface of Hydroxyapatite on Methane Oxidation Reactions. ACS Catalysis, 2018, 8, 4493-4507.	5.5	30
94	A General Framework for the Evaluation of Direct Nonoxidative Methane Conversion Strategies. Joule, 2018, 2, 349-365.	11.7	86
95	Selective methane chlorination to methyl chloride by zeolite Y-based catalysts. Solid State Sciences, 2018, 77, 74-80.	1.5	15
96	Thermal activation of methane by vanadium boride cluster cations VB_n⁺ (<i>n</i> = 3â€“6). Physical Chemistry Chemical Physics, 2018, 20, 4641-4645.	1.3	17
97	Progress in Nonoxidative Dehydroaromatization of Methane in the Last 6 Years. Industrial & Engineering Chemistry Research, 2018, 57, 1768-1789.	1.8	97
98	Effect of Si/Al 2 ratios in Mo/H-MCM-22 on methane dehydroaromatization. Applied Catalysis A: General, 2018, 552, 11-20.	2.2	31

#	Article	IF	Citations
99	On the dynamic nature of Mo sites for methane dehydroaromatization. Chemical Science, 2018, 9, 4801-4807.	3.7	65
100	Impact of the presence of Mo carbide species prepared ex situ in Mo/HZSM-5 on the catalytic properties in methane aromatization. Applied Catalysis A: General, 2018, 558, 67-80.	2.2	50
101	Deactivation Mechanism and Regeneration Study of Gaâ€"Pt Promoted HZSM-5 Catalyst in Ethane Dehydroaromatization. Industrial & Engineering Chemistry Research, 2018, 57, 4505-4513.	1.8	31
102	Galvanic hydrogen pumping performance of copper electrodes fabricated by electroless plating on a BaZr0.9-Ce Y0.1O3- proton-conducting ceramic membrane. Solid State Ionics, 2018, 317, 256-262.	1.3	9
103	Catalytic dehydrofluorination of 1,1,1,3,3-pentafluoropropane to 1,3,3,3-tetrafluoropropene over fluorinated NiO/Cr 2 O 3 catalysts. Applied Surface Science, 2018, 433, 904-913.	3.1	34
104	Heat capacity and thermodynamic functions of crystalline and amorphous forms of the metal organic framework zinc 2-ethylimidazolate, Zn(EtIm)2. Journal of Chemical Thermodynamics, 2018, 116, 341-351.	1.0	19
105	Preferential dealumination of Zn/H-ZSM-5 and its high and stable activity for ethane dehydroaromatization. Applied Catalysis A: General, 2018, 549, 76-81.	2.2	44
106	Direct non-oxidative methane aromatization over gallium nitride catalyst in a continuous flow reactor. Catalysis Communications, 2018, 106, 16-19.	1.6	23
107	Investigation of CHx (xâ€‰=â€‰2â€"4) Adsorption on Mo2C and Mo4C2 Sites Incorporated in ZSM-5 Zeolite Using Periodic-DFT Approach. Catalysis Letters, 2018, 148, 68-78.	1.4	9
109	QENS study of methane diffusion in Mo/H-ZSM-5 used for the methane dehydroaromatisation reaction. AIP Conference Proceedings, 2018, , .	0.3	2
110	Coke distribution determines the lifespan of a hollow Mo/HZSM-5 capsule catalyst in CH₄ dehydroaromatization. Catalysis Science and Technology, 2018, 8, 5740-5749.	2.1	42
111	Bio-Oil Upgrading Using Methane: A Mechanistic Study of Reactions of Model Compound Guaiacol over Ptâ€"Bi Bimetallic Catalysts. ACS Sustainable Chemistry and Engineering, 2018, 6, 17368-17375.	3.2	6
112	Mechanistic Insights into the Activity of Mo-Carbide Clusters for Methane Dehydrogenation and Carbonâ€"Carbon Coupling Reactions To Form Ethylene in Methane Dehydroaromatization. Journal of Physical Chemistry C, 2018, 122, 11754-11764.	1.5	29
113	Catalytic co-aromatization of methane and heptane as an alkane model compound over Zn-Ga/ZSM-5: A mechanistic study. Applied Catalysis B: Environmental, 2018, 236, 13-24.	10.8	46
114	Tuning Morphology of Zn/HZSMâ€5 for Catalytic Performance in Methanol Aromatization. Energy Technology, 2018, 6, 1986-1993.	1.8	6
115	A novel route to improve methane aromatization by using a simple composite catalyst. Chemical Communications, 2018, 54, 10343-10346.	2.2	37
116	Impact of Al sites on the methane co-aromatization with alkanes over Zn/HZSM-5. Catalysis Today, 2019, 323, 94-104.	2.2	29
117	Progress in Developing a Structureâ€Activity Relationship for the Direct Aromatization of Methane. ChemCatChem, 2019, 11, 39-52.	1.8	74

#	Article	IF	Citations
118	Non-oxidative methane conversion in microwave-assisted structured reactors. Chemical Engineering Journal, 2019, 377, 119764.	6.6	85
119	Structure and Reactivity of the Mo/ZSM-5 Dehydroaromatization Catalyst: An Operando Computational Study. ACS Catalysis, 2019, 9, 8731-8737.	5.5	52
120	Molybdenum Oxide, Oxycarbide, and Carbide: Controlling the Dynamic Composition, Size, and Catalytic Activity of Zeolite-Supported Nanostructures. Journal of Physical Chemistry C, 2019, 123, 22281-22292.	1.5	46
121	Recent Advances in Intensified Ethylene Productionâ€”A Review. ACS Catalysis, 2019, 9, 8592-8621.	5.5	227
122	Process, reactor and catalyst design: Towards application of direct conversion of methane to aromatics under nonoxidative conditions. Carbon Resources Conversion, 2019, 2, 157-174.	3.2	27
123	Metamorphosis-like Transformation during Activation of In/SiO₂ Catalyst for Non-oxidative Coupling of Methane: <i>In Situ</i> X-ray Absorption Fine Structure Analysis. Chemistry Letters, 2019, 48, 1145-1147.	0.7	13
124	New trends in tailoring active sites in zeolite-based catalysts. Chemical Society Reviews, 2019, 48, 1095-1149.	18.7	330
125	Quantifying the impact of dispersion, acidity and porosity of Mo/HZSM-5 on the performance in methane dehydroaromatization. Applied Catalysis A: General, 2019, 574, 144-150.	2.2	28
126	Methane dehydroaromatization over molybdenum supported on sulfated zirconia catalysts. Applied Catalysis A: General, 2019, 575, 25-37.	2.2	30
127	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
128	Increasing the catalytic stability by optimizing the formation of zeolite-supported Mo carbide species ex situ for methane dehydroaromatization. Journal of Catalysis, 2019, 375, 314-328.	3.1	29
129	Single Ru Sites-Embedded Rutile TiO2 Catalyst for Non-Oxidative Direct Conversion of Methane: A First-Principles Study. Journal of Physical Chemistry C, 2019, 123, 14391-14397.	1.5	13
130	Non-oxidative aromatization and ethylene formation over Ga/HZSM-5 catalysts using a mixed feed of methane and ethane. Fuel, 2019, 253, 449-459.	3.4	40
131	Ammonia-basified 10 wt% Mo/HZSM-5 material with enhanced dispersion of Mo and performance for catalytic aromatization of methane. Applied Catalysis A: General, 2019, 580, 111-120.	2.2	28
132	Enhanced yield of benzene, toulene, and xylene from the co-aromatization of methane and propane over gallium supported on mesoporous ZSM-5 and ZSM-11. Fuel, 2019, 251, 404-412.	3.4	33
133	Synergy of Single-Atom Ni₁ and Ru₁ Sites on CeO₂ for Dry Reforming of CH₄. Journal of the American Chemical Society, 2019, 141, 7283-7293.	6.6	272
134	Reversible Nature of Coke Formation on Mo/ZSMâ€5 Methane Dehydroaromatization Catalysts. Angewandte Chemie - International Edition, 2019, 58, 7068-7072.	7.2	65
135	Direct Nonâ€Oxidative Methane Conversion in a Millisecond Catalytic Wall Reactor. Angewandte Chemie - International Edition, 2019, 58, 7083-7086.	7.2	38

#	Article	IF	Citations
136	Direct Nonâ€Oxidative Methane Conversion in a Millisecond Catalytic Wall Reactor. Angewandte Chemie, 2019, 131, 7157-7160.	1.6	20
137	Dehydrofluorination of 1, 1, 1, 3, 3-pentafluoropropane over C-AlF3 composite catalysts: Improved catalyst stability by the presence of pre-deposited carbon. Applied Catalysis A: General, 2019, 576, 39-46.	2.2	25
138	Selective Generation of Free Hydrogen Atoms in the Reaction of Methane with Diatomic Gold Boride Cations. Zeitschrift Fur Physikalische Chemie, 2019, 233, 785-797.	1.4	5
139	Co-aromatization of methane with propane over Zn/HZSM-5: The methane reaction pathway and the effect of Zn distribution. Applied Catalysis B: Environmental, 2019, 250, 99-111.	10.8	42
140	Advances in Catalyst Design for the Conversion of Methane to Aromatics: A Critical Review. Catalysis Surveys From Asia, 2019, 23, 149-170.	1.0	35
141	Characteristics of Mn/H-ZSM-5 catalysts for methane dehydroaromatization. Applied Catalysis A: General, 2019, 577, 10-19.	2.2	15
142	Effects of promoters on the performance of a VO /SiO2 catalyst for the oxidation of methane to formaldehyde. Applied Catalysis A: General, 2019, 577, 44-51.	2.2	19
143	Selective Activation of the Câ^ˆH Bond in Methane by Single Platinum Atomic Anions. Angewandte Chemie - International Edition, 2019, 58, 7773-7777.	7.2	27
144	Mechanisms of Transforming CHx to CO on Ni(111) Surface by Density Functional Theory. Transactions of Tianjin University, 2019, 25, 330-339.	3.3	2
145	Selective Activation of the Câˆ'H Bond in Methane by Single Platinum Atomic Anions. Angewandte Chemie, 2019, 131, 7855-7859.	1.6	11
146	Reversible Nature of Coke Formation on Mo/ZSMâ€5 Methane Dehydroaromatization Catalysts. Angewandte Chemie, 2019, 131, 7142-7146.	1.6	4
147	In situ UV-Raman spectroscopy of the coking-caused deactivation mechanism over an Mo/HMCM-22 catalyst in methane dehydroaromatization. Catalysis Science and Technology, 2019, 9, 6552-6555.	2.1	10
148	Effect of the Si/Al ratio in Ga/mesoporous HZSM-5 on the production of benzene, toluene, and xylene <i>via</i> coaromatization of methane and propane. Catalysis Science and Technology, 2019, 9, 6285-6296.	2.1	15
149	Polyoxometalates as alternative Mo precursors for methane dehydroaromatization on Mo/ZSM-5 and Mo/MCM-22 catalysts. Catalysis Science and Technology, 2019, 9, 5927-5942.	2.1	36
150	Non-oxidative dehydroaromatization of methane over Mo/H-ZSM-5 catalysts: A detailed analysis of the reaction-regeneration cycle. Applied Catalysis B: Environmental, 2019, 241, 305-318.	10.8	76
151	Determination of Molybdenum Species Evolution during Nonâ€Oxidative Dehydroaromatization of Methane and its Implications for Catalytic Performance. ChemCatChem, 2019, 11, 473-480.	1.8	48
152	Heat capacities and thermodynamic functions of the ZIF organic linkers imidazole, 2-methylimidazole, and 2-ethylimidazole. Journal of Chemical Thermodynamics, 2019, 132, 129-141.	1.0	8
153	Techno-economic evaluation of a process for direct conversion of methane to aromatics. Fuel Processing Technology, 2019, 183, 55-61.	3.7	28

#	Article	IF	Citations
154	Methane reforming to valuable products by an atmospheric pressure direct current discharge. Journal of Cleaner Production, 2019, 209, 655-664.	4.6	17
155	Sulfated hafnia as a support for Mo oxide: A novel catalyst for methane dehydroaromatization. Catalysis Today, 2020, 343, 8-17.	2.2	14
156	The Comparison between Single Atom Catalysis and Surface Organometallic Catalysis. Chemical Reviews, 2020, 120, 734-813.	23.0	201
157	Dual utilization of greenhouse gases to produce C2+ hydrocarbons and syngas in a hydrogen-permeable membrane reactor. Journal of Membrane Science, 2020, 595, 117557.	4.1	16
158	Promotional Effect of Cr in Sulfated Zirconiaâ€Based Mo Catalyst for Methane Dehydroaromatization. Energy Technology, 2020, 8, 1900555.	1.8	9
159	Supercritical solvothermal synthesis under reducing conditions to increase stability and durability of Mo/ZSM-5 catalysts in methane dehydroaromatization. Applied Catalysis B: Environmental, 2020, 263, 118360.	10.8	47
160	Pathways of Methane Transformation over Copperâ€Exchanged Mordenite as Revealed by Inâ€…Situ NMR and IR Spectroscopy. Angewandte Chemie - International Edition, 2020, 59, 910-918.	7.2	50
161	Pathways of Methane Transformation over Copperâ€Exchanged Mordenite as Revealed by Inâ€…Situ NMR and IR Spectroscopy. Angewandte Chemie, 2020, 132, 920-928.	1.6	34
162	Photoionization Mass Spectrometry for Online Detection of Reactive and Unstable Gasâ€Phase Intermediates in Heterogeneous Catalytic Reactions. ChemCatChem, 2020, 12, 675-688.	1.8	14
163	Implications of the Molybdenum Coordination Environment in MFI Zeolites on Methane Dehydroaromatisation Performance. ChemCatChem, 2020, 12, 294-304.	1.8	29
164	Synthesis and Analysis of Nonoxidative Methane Aromatization Strategies. Energy Technology, 2020, 8, 1900650.	1.8	3
165	Bimetallic Mo-Co/ZSM-5 and Mo-Ni/ZSM-5 catalysts for methane dehydroaromatization: A study of the effect of pretreatment and metal loadings on the catalytic behavior. Applied Catalysis A: General, 2020, 589, 117247.	2.2	61
166	Pyrolysis of mixtures of methane and ethane: activation of methane with the aid of radicals generated from ethane. Reaction Chemistry and Engineering, 2020, 5, 145-153.	1.9	19
167	Methane dehydroaromatization over Fe-M/ZSM-5 catalysts (M= Zr, Nb, Mo). Microporous and Mesoporous Materials, 2020, 295, 109961.	2.2	17
168	Direct Nonoxidative Methane Coupling to Ethylene over Gallium Nitride: A Catalyst Regeneration Study. Industrial & Engineering Chemistry Research, 2020, 59, 4245-4256.	1.8	19
169	Experimental investigation of the promotion effect of CO on catalytic behavior of Mo/HZSM-5 catalyst in CH4 dehydroaromatization at 1073ÂK. Fuel, 2020, 262, 116674.	3.4	15
170	A critical literature review of the advances in methane dehydroaromatization over multifunctional metal-promoted zeolite catalysts. Applied Catalysis A: General, 2020, 608, 117870.	2.2	55
171	Conversion of Methane Facilitated by Solid Oxide Electrolysis Cells. Chemical Engineering and Technology, 2020, 43, 2007-2014.	0.9	5

#	Article	IF	Citations
172	Direct conversion of methane to C2 hydrocarbons using W supported on sulfated zirconia solid acid catalyst. SN Applied Sciences, 2020, 2, 1.	1.5	3
173	Understanding the Deactivation Phenomena of Small-Pore Mo/H-SSZ-13 during Methane Dehydroaromatisation. Molecules, 2020, 25, 5048.	1.7	4
174	Decentralized methanol feed in a two-stage fluidized bed for process intensification of methanol to aromatics. Chemical Engineering and Processing: Process Intensification, 2020, 154, 108049.	1.8	9
175	Cooperative Catalysis by Multiple Active Centers in Nonoxidative Conversion of Methane. Journal of Physical Chemistry C, 2020, 124, 13656-13663.	1.5	18
176	Catalytic conversion of ethane to valuable products through non-oxidative dehydrogenation and dehydroaromatization. RSC Advances, 2020, 10, 21427-21453.	1.7	81
177	Controlling the Evolution of Active Molybdenum Carbide by Moderating the Acidity of Mo/HMCM-22 Catalyst in Methane Dehydroaromatization. Catalysis Letters, 2020, 150, 3653-3666.	1.4	16
178	Boric acid treated HZSM-5 for improved catalyst activity in non-oxidative methane dehydroaromatization. Catalysis Science and Technology, 2020, 10, 3857-3867.	2.1	22
179	Nonâ€oxidative Methane Coupling over Silica versus Silicaâ€Supported Iron(II) Single Sites. Chemistry - A European Journal, 2020, 26, 8012-8016.	1.7	21
180	Studies on molybdenum carbide supported HZSM-5 (Si/AlÂ=Â23, 30, 50 and 80) catalysts for aromatization of methane. Arabian Journal of Chemistry, 2020, 13, 5199-5207.	2.3	5
181	Structural and surface considerations on Mo/ZSM-5 systems for methane dehydroaromatization reaction. Molecular Catalysis, 2020, 486, 110787.	1.0	15
182	Non-thermal plasma induced photocatalytic conversion of light alkanes into high value-added liquid chemicals under near ambient conditions. Chemical Communications, 2020, 56, 5263-5266.	2.2	4
183	Mo oxide supported on sulfated hafnia: Novel solid acid catalyst for direct activation of ethane & propane. Applied Catalysis A: General, 2020, 602, 117696.	2.2	13
184	Unravelling the Enigma of Nonoxidative Conversion of Methane on Iron Singleâ€Atom Catalysts. Angewandte Chemie, 2020, 132, 18745-18749.	1.6	12
185	Unravelling the Enigma of Nonoxidative Conversion of Methane on Iron Singleâ€Atom Catalysts. Angewandte Chemie - International Edition, 2020, 59, 18586-18590.	7.2	44
186	Reactivity, Selectivity, and Stability of Zeoliteâ€Based Catalysts for Methane Dehydroaromatization. Advanced Materials, 2020, 32, e2002565.	11.1	86
187	Strong synergy in a lichen-like RuCu nanosheet boosts the direct methane oxidation to methanol. Nano Energy, 2020, 71, 104566.	8.2	45
188	Hierarchical Galloaluminosilicate MFI Catalysts for Ethane Nonoxidative Dehydroaromatization. Energy & Fuels, 2020, 34, 3100-3109.	2.5	18
189	High-efficiency direct methane conversion to oxygenates on a cerium dioxide nanowires supported rhodium single-atom catalyst. Nature Communications, 2020, 11, 954.	5.8	152

#	Article	IF	Citations
190	Chemical looping beyond combustion â€“ a perspective. Energy and Environmental Science, 2020, 13, 772-804.	15.6	325
191	Solid-state NMR for metal-containing zeolites: From active sites to reaction mechanism. Frontiers of Chemical Science and Engineering, 2020, 14, 159-187.	2.3	18
192	Methane conversion to ethylene over GaN catalysts. Effect of catalyst nitridation. Applied Catalysis A: General, 2020, 595, 117430.	2.2	29
193	Direct Dehydrogenative Conversion of Methane to Hydrogen, Nanocarbons, Ethane, and Ethylene on Pd/SiO₂ Catalysts. Chemistry Letters, 2020, 49, 236-239.	0.7	7
194	Promoting Mechanism of MCAR/MDA Coupling Reaction Under Oxygen-Rich Condition to Avoid Rapid Deactivation of MDA Reaction. Catalysis Letters, 2020, 150, 2115-2131.	1.4	3
195	Promotional effect of Au on Fe/HZSM-5 catalyst for methane dehydroaromatization. Fuel, 2020, 274, 117852.	3.4	16
196	Nonthermal Plasma-Assisted Photocatalytic Conversion of Simulated Natural Gas for High-Quality Gasoline Production near Ambient Conditions. Journal of Physical Chemistry Letters, 2020, 11, 3877-3881.	2.1	18
197	Probing cobalt localization on HZSM-5 for efficient methane dehydroaromatization catalysts. Journal of Catalysis, 2020, 387, 102-118.	3.1	43
198	Effect of the Postâ€Treatment of HZSMâ€5â€‰on Catalytic Performance for Methanol to Aromatics. ChemistrySelect, 2020, 5, 3413-3419.	0.7	8
199	Catalysis and the Mechanism of Methane Conversion to Chemicals. , 2020, , .		6
200	Non-oxidative coupling of methane over Pd-loaded gallium oxide photocatalysts in a flow reactor. Catalysis Today, 2021, 375, 264-272.	2.2	43
201	Methane dehydroaromatization using Mo supported on sulfated zirconia catalyst: Effect of promoters. Catalysis Today, 2021, 365, 71-79.	2.2	11
202	An integrated methane dehydroaromatization and chemical looping process. Chemical Engineering Journal, 2021, 406, 127168.	6.6	8
203	Confining isolated atoms and clusters in crystalline porous materials forÂcatalysis. Nature Reviews Materials, 2021, 6, 244-263.	23.3	219
204	Innovative nonâ€“oxidative methane dehydroaromatization via solar membrane reactor. Energy, 2021, 216, 119265.	4.5	21
205	Direct Catalytic Low-Temperature Conversion of CO2 and Methane to Oxygenates. , 2021, , 227-250.		1
206	Status and prospects of the decentralised valorisation of natural gas into energy and energy carriers. Chemical Society Reviews, 2021, 50, 2984-3012.	18.7	40
207	Highly selective photocatalytic conversion of methane to liquid oxygenates over silicomolybdic-acid/TiO₂under mild conditions. Journal of Materials Chemistry A, 2021, 9, 1713-1719.	5.2	33

#	Article	IF	Citations
208	Activation and conversion of alkanes in the confined space of zeolite-type materials. Chemical Society Reviews, 2021, 50, 8511-8595.	18.7	87
209	Probing the Catalytic Active Sites of Mo/HZSM-5 and Their Deactivation during Methane Dehydroaromatization. Cell Reports Physical Science, 2021, 2, 100309.	2.8	17
210	Recent advances in heterogeneous catalysis for the nonoxidative conversion of methane. Chemical Science, 2021, 12, 12529-12545.	3.7	35
211	Synthesis and application of (nano) zeolites. , 2021, , .		2
212	Heterogeneous catalysts for the non-oxidative conversion of methane to aromatics and olefins. , 2021, , .		4
213	Ultrasound-Assisted Preparation of Mo/ZSM-5 Zeolite Catalyst for Non-Oxidative Methane Dehydroaromatization. Catalysts, 2021, 11, 313.	1.6	7
214	Modification of acidity in HZSM-5 zeolite for methane-methanol co-reaction. Journal of Zhejiang University: Science A, 2021, 22, 106-115.	1.3	0
215	Nonoxidative Methane Conversion on Granulated Mo/ZSM-5 Catalysts. Petroleum Chemistry, 2021, 61, 370-377.	0.4	4
216	From bench scale to pilot plant: A 150x scaled-up configuration of a microwave-driven structured reactor for methane dehydroaromatization. Catalysis Today, 2022, 383, 21-30.	2.2	19
217	Dual Active Sites on Molybdenum/ZSMâ€5 Catalyst for Methane Dehydroaromatization: Insights from Solidâ€State NMR Spectroscopy. Angewandte Chemie, 2021, 133, 10804-10810.	1.6	2
218	Dual Active Sites on Molybdenum/ZSMâ€5 Catalyst for Methane Dehydroaromatization: Insights from Solidâ€State NMR Spectroscopy. Angewandte Chemie - International Edition, 2021, 60, 10709-10715.	7.2	39
219	Water-involved methane-selective catalytic oxidation by dioxygen over copper zeolites. CheM, 2021, 7, 1557-1568.	5.8	63
220	Influence of Preparation Conditions on the Catalytic Performance of Mo/H-ZSM-5 for Methane Dehydroaromatization. Applied Sciences (Switzerland), 2021, 11, 5465.	1.3	4
221	Realization of rapid synthesis of H-ZSM-5 zeolite by seed-assisted method for aromatization reactions of methanol or methane. Canadian Journal of Chemistry, 2021, 99, 874-880.	0.6	4
222	Major routes in the photocatalytic methane conversion into chemicals and fuels under mild conditions. Applied Catalysis B: Environmental, 2021, 286, 119913.	10.8	78
223	Electrocatalytic Methane Oxidation to Ethanol via Rh/ZnO Nanosheets. Journal of Physical Chemistry C, 2021, 125, 13324-13330.	1.5	24
224	Mechanochemical Route for Preparation of MFI-Type Zeolites Containing Highly Dispersed and Small Ce Species and Catalytic Application to Low-Temperature Oxidative Coupling of Methane. Industrial & Engineering Chemistry Research, 2021, 60, 10101-10111.	1.8	6
225	Assessment of the current state of research and achievements in the field of catalytic processing of natural gas into valuable chemical products. Kataliz V Promyshlennosti, 2021, 21, 197-217.	0.2	0

#	Article	IF	Citations
226	Study of the Hydrogen Pretreatment of Gallium and Platinum Promoted ZSM-5 for the Ethane Dehydroaromatization Reaction. Industrial & Engineering Chemistry Research, 2021, 60, 11421-11431.	1.8	10
227	Direct conversion of natural gases in solid oxide cells: A mini-review. Electrochemistry Communications, 2021, 128, 107068.	2.3	9
228	Topological Transformation of Mgâ€Containing Layered Double Hydroxide Nanosheets for Efficient Photodriven CH₄ Coupling. Chemistry - A European Journal, 2021, 27, 13211-13220.	1.7	14
229	Preparation of a hollow HZSM-5 zeolite supported molybdenum catalyst by desilication-recrystallization for enhanced catalytic properties in propane aromatization. Journal of Solid State Chemistry, 2021, 300, 122238.	1.4	15
230	A core-shell structured Zn/SiO2@ZSM-5 catalyst: Preparation and enhanced catalytic properties in methane co-aromatization with propane. Applied Catalysis B: Environmental, 2021, 293, 120241.	10.8	35
231	Microwave-assisted conversion of methane over H-(Fe)-ZSM-5: Evidence for formation of hot metal sites. Chemical Engineering Journal, 2021, 420, 129670.	6.6	18
232	Methane aromatization study on M-Mo2C/HZSM-5 (M = Ce or Pd or Nb) nano materials. Journal of Materials Research and Technology, 2021, 14, 363-373.	2.6	6
233	Direct Evidence on the Mechanism of Methane Conversion under Nonâ€oxidative Conditions over Ironâ€modified Silica: The Role of Propargyl Radicals Unveiled. Angewandte Chemie - International Edition, 2021, 60, 24002-24007.	7.2	29
234	Direct Evidence on the Mechanism of Methane Conversion under Nonâ€oxidative Conditions over Ironâ€modified Silica: The Role of Propargyl Radicals Unveiled. Angewandte Chemie, 2021, 133, 24204-24209.	1.6	5
235	Formation Energetics and Guestâ€"Host Interactions of Molybdenum Carbide Confined in Zeolite Y. Industrial & Engineering Chemistry Research, 2021, 60, 13991-14003.	1.8	3
236	Visible-Light-Driven Methane Conversion with Oxygen Enabled by Atomically Precise Nickel Catalyst. CCS Chemistry, 2021, 3, 2509-2519.	4.6	7
237	High-Performance Binary Moâ€"Ni Catalysts for Efficient Carbon Removal during Carbon Dioxide Reforming of Methane. ACS Catalysis, 2021, 11, 12087-12095.	5.5	61
238	Selective oxidation of methane to methanol using AuPd@ZIF-8. Catalysis Communications, 2021, 158, 106338.	1.6	13
239	Coaromatization of methane and propane over Ga supported on HZSM-5 catalysts: The effect of mesoporosity on deactivation behavior. Fuel, 2021, 304, 121497.	3.4	5
240	Enhanced reactivity and stability in methane dehydro-aromatization over Mo/HZSM-5 physically mixed with NiO. Applied Catalysis B: Environmental, 2021, 296, 120377.	10.8	20
241	Oxidative coupling of methane (OCM): An overview of the challenges and opportunities for developing new technologies. Journal of Natural Gas Science and Engineering, 2021, 96, 104254.	2.1	29
242	Coupling CO2 reduction with ethane aromatization for enhancing catalytic stability of iron-modified ZSM-5. Journal of Energy Chemistry, 2022, 66, 210-217.	7.1	9
243	Thermocatalytic Conversion of Natural Gas to Petrochemical Feedstocks Via Non-oxidative Methods: Theoretical and Experimental Approaches. , 2021, , 229-252.		0

#	Article	IF	Citations
244	Methane activation by ZSM-5-supported transition metal centers. Chemical Society Reviews, 2021, 50, 1251-1268.	18.7	77
245	Resistance against Carbon Deposition via Controlling Spatial Distance of Catalytic Components in Methane Dehydroaromatization. Catalysts, 2021, 11, 148.	1.6	3
246	Synthetic natural gas production from CO2 over Ni-x/CeO2-ZrO2 (x = Fe, Co) catalysts: Influence of promoters and space velocity. Catalysis Today, 2018, 317, 108-113.	2.2	64
247	Direct methane activation by atomically thin platinum nanolayers on two-dimensional metal carbides. Nature Catalysis, 2021, 4, 882-891.	16.1	63
248	Direct Nonoxidative Methane Conversion in an Autothermal Hydrogenâ€Permeable Membrane Reactor. Advanced Energy Materials, 2021, 11, 2102782.	10.2	11
249	Reaction paths of methane activation and oxidation of surface intermediates over NiO on Ceria-Zirconia catalysts studied by In-situ FTIR spectroscopy. Journal of Catalysis, 2021, 404, 334-347.	3.1	12
250	Conversion of Methane to Aromatic Hydrocarbons. , 2020, , 127-163.		0
251	A novel approach of methane dehydroaromatization using group VIB metals (Cr, Mo, W) supported on sulfated zirconia. MRS Advances, 2020, 5, 3407-3417.	0.5	1
252	Inorganic Catalysis for Methane Conversion to Chemicals. , 2021, , .		0
254	Challenges for the utilization of methane as a chemical feedstock. Mendeleev Communications, 2021, 31, 584-592.	0.6	18
255	Upgrading spent battery separator into syngas and hydrocarbons through CO2-Assisted thermochemical platform. Energy, 2022, 242, 122552.	4.5	4
256	Understanding the Preparation and Reactivity of Mo/ZSMâ€5 Methane Dehydroaromatization Catalysts. Chemistry - A European Journal, 2022, 28, .	1.7	13
257	Nonthermal Plasma (NTP)-Assisted Catalytic Conversion of Methane and Other Hydrocarbons. , 2022, , 133-162.		1
258	Understanding the Impact of Hydrogen Activation by SrCe0.8Zr0.2O3â^'Î´ Perovskite Membrane Material on Direct Non-Oxidative Methane Conversion. Frontiers in Chemistry, 2021, 9, 806464.	1.8	3
259	A combined experimental and modeling study of Microwave-assisted methane dehydroaromatization process. Chemical Engineering Journal, 2022, 433, 134445.	6.6	14
260	APPROVAL OF ZEOLITE OPERATING CONDITIONS WITH HARRINGTON APPROVAL FUNCTION. , 2020, , .		0
261	Direct Non-Oxidative Conversion of Methane over Metal-Containing Zeolites: Main Strategies for Shifting the Thermodynamic Equilibrium (A Review). Petroleum Chemistry, 2022, 62, 280-290.	0.4	4
262	Development of catalysts for direct non-oxidative methane aromatization. , 2022, 1, 80-92.		2

#	Article	IF	Citations
263	Nonoxidative coupling of methane to olefins and aromatics over molten W-In bimetal catalyst. Fuel, 2022, 316, 123333.	3.4	2
264	Propertyâ€"activity relations of multifunctional reactive ensembles in cation-exchanged zeolites: a case study of methane activation on Zn²⁺-modified zeolite BEA. Physical Chemistry Chemical Physics, 2022, 24, 6492-6504.	1.3	5
265	Gas-Phase Selective Oxidation of Methane into Methane Oxygenates. Catalysts, 2022, 12, 314.	1.6	8
266	Is it time to stop searching for better catalysts for oxidative coupling of methane?. Journal of Catalysis, 2022, 408, 173-178.	3.1	3
267	Promoters for Improvement of the Catalyst Performance in Methane Valorization Processes. Eurasian Chemico-Technological Journal, 2021, 23, 147.	0.3	4
268	Techno-Economic Analysis of a Process to Convert Methane to Olefins, Featuring a Combined Reformer via the Methanol Intermediate Product. Hydrogen, 2022, 3, 1-27.	1.7	0
269	In situ Generation of Molybdenum Carbide in Zeolite for Methane Dehydroaromatization. Kinetics and Catalysis, 2021, 62, S48-S59.	0.3	1
270	Unraveling the Mo/HZSM-5 reduction pre-treatment effect on methane dehydroaromatization reaction. Applied Catalysis B: Environmental, 2022, 312, 121382.	10.8	10
271	State-of-the-Art and Achievements in the Catalytic Conversion of Natural Gas into Valuable Chemicals. Catalysis in Industry, 2022, 14, 11-30.	0.3	1
272	In Situ Studies of Methane Activation Using Synchrotron-Based Techniques: Guiding the Conversion of Câ€"H Bonds. ACS Catalysis, 2022, 12, 5470-5488.	5.5	8
274	Enhancement of bioaromatics production from food waste through catalytic pyrolysis over Zn and Mo-loaded HZSM-5 under an environment of decomposed methane. Chemical Engineering Journal, 2022, 446, 137215.	6.6	12
275	Improved Benzene Selectivity for Methane Dehydroaromatization Via Modifying the Zeolitic Pores by Dual-Templating Approach. SSRN Electronic Journal, 0, , .	0.4	0
276	Improvement of Catalytic Activity of Ce-MFI-Supported Pd Catalysts for Low-Temperature Methane Oxidation by Creation of Concerted Active Sites. Industrial & Engineering Chemistry Research, 2022, 61, 9686-9694.	1.8	3
277	W Singleâ€Atom Catalyst for CH₄ Photooxidation in Water Vapor. Advanced Materials, 2022, 34, .	11.1	31
278	Hierarchically modified Mo/HZSM-5 via alkali treatment for improved activity in methane dehydroaromatization. Fuel Processing Technology, 2022, 235, 107387.	3.7	7
279	Direct non-oxidative methane coupling on vitreous silica supported iron catalysts. Catalysis Today, 2023, 416, 113873.	2.2	2
280	The investigation into the dehydroaromatization of ethane over cobalt-modified ZSM-5 catalyst. Microporous and Mesoporous Materials, 2022, 343, 112159.	2.2	7
281	Mg and Zn co-doped mesoporous ZSM-5 as an ideal catalyst for ethane dehydroaromatization reaction. Catalysis Science and Technology, 2022, 12, 7010-7017.	2.1	8

#	Article	IF	Citations
282	Oxidative Addition of Methane and Reductive Elimination of Ethane and Hydrogen on Surfaces: From Pure Metals to Single Atom Alloys. Journal of the American Chemical Society, 2022, 144, 18650-18671.	6.6	5
283	Quantified Database for Methane Dehydroaromatization Reaction. ChemCatChem, 2022, 14, .	1.8	5
284	Improved benzene selectivity for methane dehydroaromatization via modifying the zeolitic pores by dual-templating approach. Microporous and Mesoporous Materials, 2022, 344, 112172.	2.2	4
285	Position Control of Catalytic Elements in Zeolites. , 2022, , 167-196.		1
286	Reaction regeneration cycle of Mo/HZSM-5 catalyst in methane dehydroaromatization with the addition of oxygen-containing components. Applied Catalysis A: General, 2022, 647, 118916.	2.2	4
288	Low temperature catalytic conversion of CH4, CO2, and C2H4 to value-added C3 oxygenates and olefins via C1-C2 coupling on Pd-Au/CeO2. Applied Catalysis B: Environmental, 2023, 322, 122107.	10.8	7
289	Size-dependent catalytic hydrogen production<i>via</i>methane decomposition and aromatization at a low-temperature using Co, Ni, Cu, Mo, and Ru nanometals. Physical Chemistry Chemical Physics, 2022, 24, 28794-28803.	1.3	3
290	A Convenient Synthesis of Coreâ€"shell ZSMâ€"5@MoO ₃ Catalyst for Enhanced Catalytic Properties in Methane Aromatization. ChemistrySelect, 2022, 7, .	0.7	0
291	Catalytic Routes for Direct Methane Conversion to Hydrocarbons and Hydrogen: Current State and Opportunities. ACS Catalysis, 2022, 12, 14533-14558.	5.5	19
292	Silica-encapsulated Fe2O3 oxygen carriers for selective chemical looping combustion of hydrogen. Chemical Engineering Journal, 2023, 455, 140919.	6.6	4
293	Simultaneous Production of Aromatics and COx-Free Hydrogen via Methane Dehydroaromatization in Membrane Reactors: A Simulation Study. Membranes, 2022, 12, 1175.	1.4	0
294	Understanding the Structureâ€"Activity Relationships in Catalytic Conversion of Polyolefin Plastics by Zeolite-Based Catalysts: A Critical Review. ACS Catalysis, 2022, 12, 14882-14901.	5.5	39
295	Catalytic Hydropyrolysis of Lignin for the Preparation of Cyclic Hydrocarbon-Based Biofuels. Catalysts, 2022, 12, 1651.	1.6	4
296	Transition-Metal Catalysts for Methane Dehydroaromatization (Mo, Re, Fe): Activity, Stability, Active Sites, and Carbon Deposits. ACS Catalysis, 2023, 13, 1-10.	5.5	7
297	Direct non-oxidative conversion of shale gas to aromatics over active metal-modified ZSM-5 catalysts. Fuel, 2023, 339, 126946.	3.4	8
298	Improving the methane aromatization activity and anti-carbon deposition on MCM-22 through nano Î±-MoO₃ modification. New Journal of Chemistry, 2023, 47, 2949-2956.	1.4	3
299	Protonic Ceramic Electrochemical Cells for Synthesizing Sustainable Chemicals and Fuels. Advanced Science, 2023, 10, .	5.6	25
300	Improved methane dehydroaromatization reaction over Mo and Cr co-doped ZSM-5 catalyst. New Journal of Chemistry, 2023, 47, 6054-6057.	1.4	1

#	Article	IF	Citations
301	Dual-Bed Plasma/Catalytic Synergy for Methane Transformation into Aromatics. Industrial & Engineering Chemistry Research, 2023, 62, 2516-2524.	1.8	3
302	Roadmap to the sustainable synthesis of polymers: From the perspective of CO2 upcycling. Progress in Materials Science, 2023, 135, 101103.	16.0	5
303	Hydrogen-permeable DDR zeolite membrane packed with Zn/HZSM-5 catalyst for methane co-aromatization with ethylene. Journal of Membrane Science, 2023, 676, 121588.	4.1	0
304	Mobile electrified plants for decentralized wasted gas valorization: A solution to face the challenges of the new energy era. Energy Conversion and Management, 2023, 285, 117008.	4.4	1
305	Cooperative External Acidity and Surface Barriers of HZSM-5 in the Coupling Reaction of CH₃Cl and CO to Aromatics. ACS Sustainable Chemistry and Engineering, 2023, 11, 2275-2282.	3.2	0
306	Aqueousâ€Phase Partial Oxidation of Methane over Pdâ^’Fe/ZSMâ€5 with O₂ in the Presence of H₂. ChemCatChem, 2023, 15, .	1.8	5
308	Methane Oxidation over the Zeolites-Based Catalysts. Catalysts, 2023, 13, 604.	1.6	7
311	Zeolite-based catalysts for oxidative upgrading of methane: design and control of active sites. Catalysis Science and Technology, 0, , .	2.1	1
325	Time-, space- and energy-resolved <i>in situ</i> characterization of catalysts by X-ray absorption spectroscopy. Chemical Communications, 2023, 59, 12120-12123.	2.2	0
329	Process Intensification Opportunities for Direct Methane Valorisation. , 2023, , 243-278.		0
333	Study of the Effect of the Template Nature on the Physicochemical and Catalytic Properties of ZSM-5 Zeolites and Mo/ZSM-5 Catalysts. Reviews and Advances in Chemistry, 2023, 13, 53-59.	0.2	0
334	Methane Valorization Processes: Challenges and Achievements. , 2023, , 1-33.		0