Catalytic steam reforming of biomass tar: Prospects and

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Citation Report

#	Article	IF	Citations
1	Experimental study on catalytic cracking of model tar compounds in a dual layer granular bed filter. Applied Energy, 2016, 170, 47-57.	5.1	23
2	Catalytic Cracking of Toluene as a Tar Model Compound Using Sewage-Sludge-Derived Char. Energy & Fuels, 2016, 30, 8327-8334.	2.5	31
3	Catalytic decomposition of biomass tar compound by calcined coal gangue: A kinetic study. International Journal of Hydrogen Energy, 2016, 41, 13380-13389.	3.8	23
4	Deactivation characteristics of Ni and Ru catalysts in tar steam reforming. Renewable Energy, 2017, 105, 76-83.	4.3	64
5	Hydrogen-rich syngas production and tar removal from biomass gasification using sacrificial tyre pyrolysis char. Applied Energy, 2017, 190, 501-509.	5.1	173
6	The influence of catalysts in biomass steam gasification and catalytic potential of coal bottom ash in biomass steam gasification: A review. Renewable and Sustainable Energy Reviews, 2017, 73, 468-476.	8.2	209
7	Steam reforming of different biomass tar model compounds over Ni/Al2O3 catalysts. Energy Conversion and Management, 2017, 136, 119-126.	4.4	147
8	Enhancement of hydrogen production in a modified moving bed downdraft gasifier â€“ÂAÂthermodynamic study by including tar. International Journal of Hydrogen Energy, 2017, 42, 10971-10985.	3.8	37
9	Application of Brazilian dolomites and mixed oxides as catalysts in tar removal system. Applied Catalysis A: General, 2017, 536, 1-8.	2.2	30
10	Non-isothermal kinetics of biomass-pyrolysis-derived-tar (BPDT) thermal decomposition via thermogravimetric analysis. Energy Conversion and Management, 2017, 138, 452-460.	4.4	41
11	Ceria-stabilized meso-Al2O3: synthesis, characterization and desorption kinetics. Journal of Porous Materials, 2017, 24, 1343-1352.	1.3	14
12	Catalytic abatement of biomass tar: a technological perspective of Ni-based catalysts. Rendiconti Lincei, 2017, 28, 69-85.	1.0	11
14	Experimental study on catalytic effect of biomass pyrolysis volatile over nickel catalyst supported by waste iron slag. International Journal of Energy Research, 2017, 41, 2063-2073.	2.2	17
15	Two-step steam pyrolysis of biomass for hydrogen production. International Journal of Hydrogen Energy, 2017, 42, 17000-17008.	3.8	70
16	Polygeneration as a future sustainable energy solution â€“ A comprehensive review. Applied Energy, 2017, 202, 88-111.	5.1	166
17	Iron Oxide over Silica-Doped Alumina Catalyst for Catalytic Steam Reforming of Toluene as a Surrogate Tar Biomass Species. Energy & Fuels, 2017, 31, 7471-7481.	2.5	54
18	Fates of Chemical Elements in Biomass during Its Pyrolysis. Chemical Reviews, 2017, 117, 6367-6398.	23.0	399
19	Production of a Clean Hydrogen-Rich Gas by the Staged Gasification of Biomass and Plastic Waste. , 2017, , 363-384.		0

#	Article	IF	Citations
20	Hydrogen production on alumina-supported platinum catalysts. Molecular Catalysis, 2017, 429, 1-9.	1.0	12
21	Valorisation of post-sorption materials: Opportunities, strategies, and challenges. Advances in Colloid and Interface Science, 2017, 242, 35-58.	7.0	85
22	Recent advances on the utilization of layered double hydroxides (LDHs) and related heterogeneous catalysts in a lignocellulosic-feedstock biorefinery scheme. Green Chemistry, 2017, 19, 5269-5302.	4.6	87
23	Plasma-assisted catalytic reforming of toluene to hydrogen rich syngas. Catalysis Science and Technology, 2017, 7, 4216-4231.	2.1	55
24	CO₂-looping in biomass pyrolysis or gasification. Sustainable Energy and Fuels, 2017, 1, 1700-1729.	2.5	98
25	Pyrolytic toluene conversion to benzene and coke over activated carbon in a fixed-bed reactor. Fuel, 2017, 207, 283-292.	3.4	27
26	Alkali-thermal gasification and hydrogen generation potential of biomass. Frontiers of Chemical Science and Engineering, 2017, 11, 369-378.	2.3	17
27	Encapsulating Ni/CeO2-ZrO2 with SiO2 layer to improve it catalytic activity for steam reforming of toluene. Catalysis Communications, 2017, 101, 138-141.	1.6	32
28	Catalytic characteristics of pyrolysis volatile matter from biomass/biomass components on a novel Ni-based catalyst supported by iron slag. Journal of Renewable and Sustainable Energy, 2017, 9, 063101.	0.8	11
29	A Highâ€Performance, Lowâ€Tortuosity Woodâ€Carbon Monolith Reactor. Advanced Materials, 2017, 29, 1604257.	11.1	110
30	Chemical looping reforming of toluene as a biomass tar model compound over two types of oxygen carriers: 2CuO-2NiO/Al2O3 and CaFe2O4. Fuel, 2018, 222, 375-384.	3.4	35
31	Highly stable barium zirconate supported nickel oxide catalyst for dry reforming of methane: From powders toward shaped catalysts. International Journal of Hydrogen Energy, 2018, 43, 11355-11362.	3.8	19
32	Investigation on model compound of biomass gasification tar cracking in microwave furnace: Comparative research. Applied Energy, 2018, 217, 249-257.	5.1	40
33	Gasification performance of various microalgae biomass â€“ A thermodynamic study by considering tar formation using Aspen plus. Energy Conversion and Management, 2018, 165, 783-793.	4.4	54
34	Evaluation of thermochemical routes for hydrogen production from biomass: A review. Energy Conversion and Management, 2018, 165, 696-719.	4.4	341
35	Metataxonomy and functionality of wood-tar degrading microbial consortia. Journal of Hazardous Materials, 2018, 353, 108-117.	6.5	9
36	Type of contribution: Research article catalytic activity of sewage sludge char supported Re-Ni bimetallic catalyst toward cracking/reforming of biomass tar. Renewable Energy, 2018, 121, 644-651.	4.3	45
37	Fluidizable NiOâ€“Fe 2 O 3 /SiO 2 â€“Î³Al 2 O 3 for tar (toluene) conversion in biomass gasification. Chemical Engineering Research and Design, 2018, 116, 754-762.	2.7	27

#	Article	IF	Citations
38	Sustainable hydrogen production options from food wastes. International Journal of Hydrogen Energy, 2018, 43, 10595-10604.	3.8	58
39	Methanol Production and Applications: An Overview. , 2018, , 3-28.		111
40	Advances in in situ and ex situ tar reforming with biochar catalysts for clean energy production. Sustainable Energy and Fuels, 2018, 2, 326-344.	2.5	73
41	Reduction of tar generated during biomass gasification: A review. Biomass and Bioenergy, 2018, 108, 345-370.	2.9	384
42	Role of operating conditions in the catalyst deactivation in the in-line steam reforming of volatiles from biomass fast pyrolysis. Fuel, 2018, 216, 233-244.	3.4	73
43	Strongly Fluorescent Carbon Quantum Dots from Biomass Tar as Highly Selective and Sensitive Probe for Fe³⁺ Detection. Nano, 2018, 13, 1850043.	0.5	9
44	Influence of Bed Material, Additives, and Operational Conditions on Alkali Metal and Tar Concentrations in Fluidized Bed Gasification of Biomass. Energy & Fuels, 2018, 32, 6797-6806.	2.5	25
45	Catalytic cracking of biomass pyrolysis tar over char-supported catalysts. Energy Conversion and Management, 2018, 167, 81-90.	4.4	202
46	Carbon nanotubes formation and its influence on steam reforming of toluene over Ni/Al2O3 catalysts: Roles of catalyst supports. Fuel Processing Technology, 2018, 176, 7-14.	3.7	68
47	The catalytic reforming of tar from pyrolysis and gasification of brown coal: Effects of parental carbon materials on the performance of char catalysts. Fuel Processing Technology, 2018, 174, 142-148.	3.7	60
48	Steam reforming of Î±-methylnaphthalene as a model compound of biomass tar over Ni-based catalyst for hydrogen-rich gas. Korean Journal of Chemical Engineering, 2018, 35, 394-408.	1.2	13
49	Microwave plasma application in decomposition and steam reforming of model tar compounds. Fuel Processing Technology, 2018, 169, 1-14.	3.7	77
50	Recent advances in the gasification of waste plastics. A critical overview. Renewable and Sustainable Energy Reviews, 2018, 82, 576-596.	8.2	506
51	Oxidative reforming of ethanol over CeO 2 -SiO 2 based catalysts in a fluidized bed reactor. Chemical Engineering and Processing: Process Intensification, 2018, 124, 319-327.	1.8	23
52	Catalytic Tar Reforming during Brown Coal Pyrolysis: Effects of Heating Rate and Activation Time on Char Catalysts. Energy & Fuels, 2018, 32, 81-88.	2.5	8
53	Catalytic mechanism of ion-exchanging alkali and alkaline earth metallic species on biochar reactivity during CO2/H2O gasification. Fuel, 2018, 212, 523-532.	3.4	168
54	Effects of Oxygen Enrichment in Air Oxidants on Biomass Gasification Efficiency and the Reduction of Tar Emissions. Energies, 2018, 11, 2664.	1.6	13
55	Three integrated process simulation using aspen plusÂ®: Pine gasification, syngas cleaning and methanol synthesis. Energy Conversion and Management, 2018, 177, 416-427.	4.4	134

#	Article	IF	Citations
56	Plasma catalytic steam reforming of a model tar compound by microwave-metal discharges. Fuel, 2018, 234, 1278-1284.	3.4	35
57	Operando DRIFTS-MS Study of WGS and rWGS Reaction on Biochar-Based Pt Catalysts: The Promotional Effect of Na. Journal of Carbon Research, 2018, 4, 47.	1.4	13
58	In-situ catalytic conversion of tar from biomass gasification over carbon nanofibers- supported Fe-Ni bimetallic catalysts. Fuel Processing Technology, 2018, 182, 77-87.	3.7	75
59	Solar Fuels by Heterogeneous Photocatalysis: From Understanding Chemical Bases to Process Development. ChemEngineering, 2018, 2, 42.	1.0	13
60	Implementation of novel ice-templated materials for conversion of tars from gasification product gas. Fuel Processing Technology, 2018, 181, 340-351.	3.7	13
61	Low-temperature trace light-tar reforming in biomass syngas by atmospheric hydrogenation and hydrogenolysis. Fuel Processing Technology, 2018, 181, 304-310.	3.7	6
62	Performance of a Ni/ZrO2 catalyst in the steam reforming of the volatiles derived from biomass pyrolysis. Journal of Analytical and Applied Pyrolysis, 2018, 136, 222-231.	2.6	35
63	Fluidizable Feâ€“Co/Ceâ€“ZrO₂ Catalysts for Steam Reforming of Toluene as a Tar Surrogate in Biomass Gasification. Energy & Fuels, 2018, 32, 12833-12842.	2.5	24
64	Tar Decomposition over a Porous Iron Ore Catalyst: Experiment and Kinetic Analysis. Energy & Fuels, 2018, 32, 7046-7053.	2.5	6
65	Metal/Acid Bifunctional Catalysis and Intimacy Criterion for Ethylcyclohexane Hydroconversion: When Proximity Does Not Matter. ACS Catalysis, 2018, 8, 6035-6046.	5.5	51
66	Study on the synergism of steam reforming and photocatalysis for the degradation of Toluene as a tar model compound under microwave-metal discharges. Energy, 2018, 155, 815-823.	4.5	24
67	A critical assessment of tar generated during biomass gasification - Formation, evaluation, issues and mitigation strategies. Renewable and Sustainable Energy Reviews, 2018, 91, 1045-1064.	8.2	75
68	Kinetic study of the catalytic reforming of biomass pyrolysis volatiles over a commercial Ni/Al2O3 catalyst. International Journal of Hydrogen Energy, 2018, 43, 12023-12033.	3.8	24
69	Interaction of Ethanol with MgO-SiO₂ Catalysts Studied by TPD Techniques. Chemistry Letters, 2018, 47, 1097-1100.	0.7	7
70	Assessing tar removal in biomass gasification by steam reforming over a commercial automotive catalyst. Fuel, 2018, 233, 291-298.	3.4	11
71	Catalytic decomposition of undiluted methane into hydrogen and carbon nanotubes over Pt promoted Ni/CeO₂ catalysts. New Journal of Chemistry, 2018, 42, 14843-14856.	1.4	55
72	Tar formation and evolution during biomass gasification: An experimental and theoretical study. Fuel, 2018, 234, 944-953.	3.4	40
73	Microwave-assisted in-situ elimination of primary tars over biochar: Low temperature behaviours and mechanistic insights. Bioresource Technology, 2018, 267, 333-340.	4.8	22

#	Article	IF	Citations
74	Preparation, modification and development of Ni-based catalysts for catalytic reforming of tar produced from biomass gasification. Renewable and Sustainable Energy Reviews, 2018, 94, 1086-1109.	8.2	206
75	Role of temperature on gasification performance and tar composition in a fountain enhanced conical spouted bed reactor. Energy Conversion and Management, 2018, 171, 1589-1597.	4.4	75
76	High Time- and Size-Resolved Measurements of PM and Chemical Composition from Coal Combustion: Implications for the EC Formation Process. Environmental Science & Technology, 2018, 52, 6676-6685.	4.6	55
77	Hydrogen-rich syngas production via steam reforming of palm oil mill effluent (POME) â€“ A thermodynamics analysis. International Journal of Hydrogen Energy, 2019, 44, 20711-20724.	3.8	39
78	An Energy and Exergy Analysis of Biomass Gasification Integrated with a Char-Catalytic Tar Reforming System. Energy & Fuels, 2019, 33, 8746-8757.	2.5	20
79	Reaction pathways and selectivity in chemo-catalytic conversion of biomass-derived carbohydrates to high-value chemicals: A review. Fuel Processing Technology, 2019, 196, 106162.	3.7	64
80	Catalytic thermochemical conversion of biomass for biofuel production: A comprehensive review. Renewable and Sustainable Energy Reviews, 2019, 113, 109266.	8.2	289
81	Bimetallic Feâ€Promoted Catalyst for COâ€Free Hydrogen Production in Highâ€Temperatureâ€Methanol Steam Reforming. ChemCatChem, 2019, 11, 4568-4580.	1.8	23
82	Enhanced reforming of mixed biomass tar model compounds using a hybrid gliding arc plasma catalytic process. Catalysis Today, 2019, 337, 225-233.	2.2	42
83	Syngas production via chemical looping reforming biomass pyrolysis oil using NiO/dolomite as oxygen carrier, catalyst or sorbent. Energy Conversion and Management, 2019, 198, 111835.	4.4	29
84	Hydrogen production from steam gasification of tableted biomass in molten eutectic carbonates. International Journal of Hydrogen Energy, 2019, 44, 22919-22925.	3.8	28
85	Conversion of Products Formed in Gasification of Organic Fuels in a Flow-Through Filtration Converter with Packing. Russian Journal of Applied Chemistry, 2019, 92, 1020-1029.	0.1	3
86	Ni- and Fe-doped Î³-Al2O3 or olivine as primary catalyst for toluene reforming. Materials Today Chemistry, 2019, 14, 100197.	1.7	11
87	Recent advances in syngas production from biomass catalytic gasification: A critical review on reactors, catalysts, catalytic mechanisms and mathematical models. Renewable and Sustainable Energy Reviews, 2019, 116, 109426.	8.2	248
88	Research on Carrier Recovery Algorithm in Coherent Optical Communication System. IOP Conference Series: Earth and Environmental Science, 2019, 310, 042008.	0.2	0
89	Catalytic reforming of biomass pyrolysis tar using the low-cost steel slag as catalyst. Energy, 2019, 189, 116161.	4.5	38
90	Biomass-Tar-Enabled Nitrogen-Doped Highly Ultramicroporous Carbon as an Efficient Absorbent for CO₂ Capture. Energy & Fuels, 2019, 33, 8927-8936.	2.5	19
91	Roles of alkali/alkaline earth metals in steam reforming of biomass tar for hydrogen production over perovskite supported Ni catalysts. Fuel, 2019, 257, 116032.	3.4	92

#	Article	IF	Citations
92	Evaluation of the catalytic performance of different activated biochar catalysts for removal of tar from biomass pyrolysis. Fuel, 2019, 258, 116204.	3.4	102
93	Exploring the Conversion Mechanisms of Toluene as a Biomass Tar Model Compound on NiFe₂O₄ Oxygen Carrier. ACS Sustainable Chemistry and Engineering, 2019, 7, 16539-16548.	3.2	46
94	Support Effects on Water Gas Shift Activity and Sulfur Dependence of Mo Sulfide Catalysts. Energy & Fuels, 2019, 33, 11655-11662.	2.5	7
95	Hydrogen production from the thermochemical conversion of biomass: issues and challenges. Sustainable Energy and Fuels, 2019, 3, 314-342.	2.5	224
96	Steam reforming of toluene and naphthalene as tar surrogate in a gliding arc discharge reactor. Journal of Hazardous Materials, 2019, 369, 244-253.	6.5	65
97	Combined steam-dry reforming of toluene in syngas over CaNiRu/Al₂O₃ catalysts. International Journal of Green Energy, 2019, 16, 333-349.	2.1	20
98	Role of O-containing functional groups in biochar during the catalytic steam reforming of tar using the biochar as a catalyst. Fuel, 2019, 253, 441-448.	3.4	104
99	Effect of benzene doping on soot precursors formation in non-premixed flames of producer gas (PG). Combustion and Flame, 2019, 207, 265-280.	2.8	21
100	Catalytic Performances of Bi-Metallic Ni-Co Catalysts in Acetic Acid Steam Reforming Reaction: Effect of Mg Incorporation. International Journal of Chemical Reactor Engineering, 2019, 17, .	0.6	2
101	Nickel-based catalysts for steam reforming of naphthalene utilizing gasification slag from municipal solid waste as a support. Fuel, 2019, 254, 115561.	3.4	19
102	Plasma-enhanced steam reforming of different model tar compounds over Ni-based fusion catalysts. Journal of Hazardous Materials, 2019, 377, 24-33.	6.5	55
103	Behaviour of primary catalysts in the biomass steam gasification in a fountain confined spouted bed. Fuel, 2019, 253, 1446-1456.	3.4	73
104	Toluene microwave-assisted reforming with CO2 or a mixed agent of CO2-H2O on Fe-doped activated biochar. Energy, 2019, 177, 358-366.	4.5	20
105	Hydrogen and methane mixture from biomass gasification coupled with catalytic tar reforming, methanation and adsorption enhanced reforming. Fuel Processing Technology, 2019, 192, 147-153.	3.7	18
106	Catalytic reforming of biomass primary tar from pyrolysis over waste steel slag based catalysts. International Journal of Hydrogen Energy, 2019, 44, 16224-16233.	3.8	50
107	A new insight into Au/TiO2-catalyzed hydrogen production from water-methanol mixture using lamps containing simultaneous ultraviolet and visible radiation. International Journal of Hydrogen Energy, 2019, 44, 14945-14954.	3.8	22
108	Transitionâ€Metalâ€Mediated Cleavage of Câ”C Bonds in Aromatic Rings. Chemistry - an Asian Journal, 2019, 14, 2181-2192.	1.7	13
109	Gas cleaning for waste applications (syngas cleaning for catalytic synthetic natural gas synthesis). , 2019, , 161-220.		8

#	Article	IF	Citations
110	Potential power generation on a small-scale separated-type biomass gasification system. Energy, 2019, 179, 19-29.	4.5	30
111	Ni-based catalysts for steam reforming of tar model derived from biomass gasification. E3S Web of Conferences, 2019, 90, 01015.	0.2	5
112	Impact of Char Properties and Reaction Parameters on Naphthalene Conversion in a Macro-TGA Fixed Char Bed Reactor. Catalysts, 2019, 9, 307.	1.6	8
113	Catalytic Cracking of Biomass-Derived Hydrocarbon Tars or Model Compounds To Form Biobased Benzene, Toluene, and Xylene Isomer Mixtures. Industrial & Engineering Chemistry Research, 2019, 58, 7690-7705.	1.8	47
114	Reforming of tar from biomass gasification in a hybrid catalysis-plasma system: A review. Applied Catalysis B: Environmental, 2019, 250, 250-272.	10.8	133
115	Applications in catalysis. , 2019, , 291-339.		0
116	Syngas from catalytic steam reforming of palm oil mill effluent: An optimization study. International Journal of Hydrogen Energy, 2019, 44, 9220-9236.	3.8	37
117	Steam reforming of toluene as model of tar compound over Mo catalysts derived from hydrotalcites. Journal of Saudi Chemical Society, 2019, 23, 916-924.	2.4	6
118	Integrated drying and gasification of wet microalgae biomass to produce H2 rich syngas â€“ A thermodynamic approach by considering in-situ energy supply. International Journal of Hydrogen Energy, 2019, 44, 10361-10373.	3.8	15
119	Catalytic characteristics of innovative Ni/slag catalysts for syngas production and tar removal from biomass pyrolysis. International Journal of Hydrogen Energy, 2019, 44, 11848-11860.	3.8	52
120	Enhanced hydrogen-rich gas production from waste biomass using pyrolysis with non-thermal plasma-catalysis. Catalysis Today, 2019, 337, 216-224.	2.2	54
121	Harnessing renewable hydrogen-rich syngas from valorization of palm oil mill effluent (POME) using steam reforming technique. Renewable Energy, 2019, 138, 1114-1126.	4.3	39
122	Effect of various blended fuels on syngas quality and performance in catalytic co-gasification: A review. Renewable and Sustainable Energy Reviews, 2019, 105, 252-267.	8.2	99
123	Synthesis of graphitic mesoporous carbon supported Ce-doped nickel catalyst for steam reforming of toluene. Materials Letters, 2019, 244, 123-125.	1.3	16
124	Catalytic Steam Gasification of Glucose for Hydrogen Production Using Stable Based Ni on a Î³â€“Alumina Fluidizable Catalyst. International Journal of Chemical Reactor Engineering, 2019, 17, .	0.6	3
125	Catalytic co-gasification of coconut shells and oil palm fronds blends in the presence of cement, dolomite, and limestone: Parametric optimization via Box Behnken Design. Journal of the Energy Institute, 2019, 92, 871-882.	2.7	43
126	Evolution of dolomite composition and reactivity during biomass gasification. Applied Catalysis A: General, 2019, 572, 97-106.	2.2	43
127	Nickelâ€“zeolite composite catalysts with metal nanoparticles selectively encapsulated in the zeolite micropores. Journal of Materials Science, 2019, 54, 5399-5411.	1.7	27

#	Article	IF	Citations
128	Gasification performance of Spirulina microalgae â€“ A thermodynamic study with tar formation. Fuel, 2019, 241, 372-381.	3.4	27
129	Low-Temperature Steam Reforming of Toluene and Biomass Tar over Biochar-Supported Ni Nanoparticles. ACS Sustainable Chemistry and Engineering, 2019, 7, 3111-3119.	3.2	111
130	Methanol as an Alternative Fuel for Diesel Engines. Energy, Environment, and Sustainability, 2019, , 9-33.	0.6	31
131	Catalytic upgrading of coal pyrolysis volatiles over metal-loaded HZSM-5 catalysts in a fluidized bed reactor. Journal of Analytical and Applied Pyrolysis, 2019, 139, 31-39.	2.6	45
132	Pyrolysis-catalytic steam reforming of agricultural biomass wastes and biomass components for production of hydrogen/syngas. Journal of the Energy Institute, 2019, 92, 1987-1996.	2.7	120
133	Recent developments in sulphur-resilient catalytic systems for syngas production. Renewable and Sustainable Energy Reviews, 2019, 100, 52-70.	8.2	61
134	Evaluation of Operational Cycles for Longâ€Term Run of a Tar Removal Catalytic System. Chemical Engineering and Technology, 2019, 42, 980-986.	0.9	1
135	Characteristics comparison of tar from lignite pyrolysis with inherent and simulated moisture for adopting a two-stage gasification process. Fuel, 2019, 236, 695-708.	3.4	23
136	Catalytic and noncatalytic gasification of woodâ€“coconut shell blend under different operating conditions. Environmental Progress and Sustainable Energy, 2019, 38, 688-698.	1.3	24
137	Introduction: hydrogen storage as solution for a changing energy landscape. Physical Sciences Reviews, 2019, 4, .	0.8	2
138	Stability of different Ni supported catalysts in the in-line steam reforming of biomass fast pyrolysis volatiles. Applied Catalysis B: Environmental, 2019, 242, 109-120.	10.8	95
139	Catalytic upgrading of bio-oils over high alumina zeolites. Renewable Energy, 2019, 136, 1304-1310.	4.3	38
140	Catalytic steam gasification of Mengdong coal in the presence of iron ore for hydrogen-rich gas production. Journal of the Energy Institute, 2019, 92, 391-402.	2.7	21
141	Parametric analysis and optimization for the catalytic air gasification of palm kernel shell using coal bottom ash as catalyst. Renewable Energy, 2020, 145, 671-681.	4.3	53
142	Catalytic upgrading of lignite pyrolysis volatiles over modified HY zeolites. Fuel, 2020, 259, 116234.	3.4	40
143	Development of biochar-based nanocatalysts for tar cracking/reforming during biomass pyrolysis and gasification. Bioresource Technology, 2020, 298, 122263.	4.8	116
144	Biomass thermochemical conversion: A review on tar elimination from biomass catalytic gasification. Journal of the Energy Institute, 2020, 93, 1083-1098.	2.7	138
145	Small-scale biomass gasification systems for power generation (<200â€¯kW class): A review. Renewable and Sustainable Energy Reviews, 2020, 117, 109486.	8.2	221

#	Article	IF	Citations
146	Toluene microwave cracking and reforming over bio-char with in-situ activation and ex-situ impregnation of metal. Renewable Energy, 2020, 149, 1205-1213.	4.3	21
147	Gasification of wet microalgae to produce H2-rich syngas and electricity: A thermodynamic study considering exergy analysis. Renewable Energy, 2020, 147, 2195-2205.	4.3	33
148	Microwave reforming with char-supported Nickel-Cerium catalysts: A potential approach for thorough conversion of biomass tar model compound. Applied Energy, 2020, 261, 114375.	5.1	42
149	Methanation of syngas from biomass gasification: An overview. International Journal of Hydrogen Energy, 2020, 45, 4223-4243.	3.8	119
150	Mini-Review on Char Catalysts for Tar Reforming during Biomass Gasification: The Importance of Char Structure. Energy & Fuels, 2020, 34, 1219-1229.	2.5	98
151	Process and sustainability analyses of the integrated biomass pyrolysis, gasification, and methanol synthesis process for methanol production. Energy, 2020, 193, 116788.	4.5	38
152	Evaluating tar production via the release of volatile matters for H2-rich syngas production. International Journal of Hydrogen Energy, 2020, 45, 3712-3720.	3.8	12
153	Effect of temperature on multiple competitive processes for co-production of carbon nanotubes and hydrogen during catalytic reforming of toluene. Fuel, 2020, 264, 116749.	3.4	22
154	Effect of La2O3 promotion on a Ni/Al2O3 catalyst for H2 production in the in-line biomass pyrolysis-reforming. Fuel, 2020, 262, 116593.	3.4	51
155	Application of response surface methodology in catalytic co-gasification of palm wastes for bioenergy conversion using mineral catalysts. Biomass and Bioenergy, 2020, 132, 105418.	2.9	31
156	Recent progress in the development of catalysts for steam reforming of biomass tar model reaction. Fuel Processing Technology, 2020, 199, 106252.	3.7	139
157	Tar elimination from biomass gasification syngas with bauxite residue derived catalysts and gasification char. Applied Energy, 2020, 258, 114088.	5.1	69
158	Syngas as Electron Donor for Sulfate and Thiosulfate Reducing Haloalkaliphilic Microorganisms in a Gas-Lift Bioreactor. Microorganisms, 2020, 8, 1451.	1.6	2
159	Residual gasification char applied to tar reforming in a pilot-scale gasifier: Performance and evolution of char properties for perspective cascade uses. Fuel Processing Technology, 2020, 210, 106546.	3.7	26
160	Sol-gel Ni-based/Î³-Al2O3 as efficient catalysts for toluene reforming: Catalytic activity during long-term experiments and in presence of H2S. Journal of Environmental Chemical Engineering, 2020, 8, 104528.	3.3	7
161	Hydrogen-rich syngas production by chemical looping reforming on crude wood vinegar using Ni-modified HY zeolite oxygen carrier. Fuel, 2020, 279, 118547.	3.4	17
162	The migration, transformation and control of trace metals during the gasification of rice straw. Chemosphere, 2020, 260, 127540.	4.2	15
163	Reactivity and deactivation mechanisms of toluene reforming over waste peat char-supported Fe/Ni/Ca catalyst. Fuel, 2020, 271, 117517.	3.4	25

#	Article	IF	Citations
164	Catalytic pyrolysis of rain tree biomass with nano nickel oxide synthetized from nickel plating slag: A green path for treating waste by waste. Bioresource Technology, 2020, 315, 123831.	4.8	30
165	A kinetic model for air-steam reforming of bio-oil over Rhâ€“Ni/Î³-Al2O3 catalyst: Acetol as a model compound. International Journal of Hydrogen Energy, 2020, 45, 24300-24311.	3.8	3
166	Catalytic steam reforming of biomass fast pyrolysis volatiles over Niâ€“Co bimetallic catalysts. Journal of Industrial and Engineering Chemistry, 2020, 91, 167-181.	2.9	62
167	Experimental and Comprehensive Evaluation of Vegetable Oils for Biomass Tar Absorption. ACS Omega, 2020, 5, 19579-19588.	1.6	2
168	Techno-Economic Assessment of Bio-Syngas Production for Methanol Synthesis: A Focus on the Waterâ€“Gas Shift and Carbon Capture Sections. Bioengineering, 2020, 7, 70.	1.6	43
169	Can microwave treat biomass tar? A comprehensive study based on experimental and net energy analysis. Applied Energy, 2020, 272, 115194.	5.1	19
170	Resistance of Ni/perovskite catalysts to H2S in toluene steam reforming for H2 production. International Journal of Hydrogen Energy, 2020, 45, 26800-26811.	3.8	24
171	Catalytic steam reforming of in-situ tar from rice husk over MCM-41 supported LaNiO3 to produce hydrogen rich syngas. Renewable Energy, 2020, 161, 408-418.	4.3	51
172	Synthesis and evaluation of pyrolysis waste peat char supported catalyst for steam reforming of toluene. Renewable Energy, 2020, 160, 964-973.	4.3	15
173	Catalytic Steam Reforming of Bio-Oil-Derived Acetic Acid over CeO₂-ZnO Supported Ni Nanoparticle Catalysts. ACS Omega, 2020, 5, 19727-19736.	1.6	5
174	Product Compositions from Sequential Biomass Pyrolysis and Gasification of Its Char Residue. Journal of Energy Engineering - ASCE, 2020, 146, 04020049.	1.0	10
175	Upcycling biomass tar into highly porous, defective and pyridinic-n-enriched graphene nanohybrid as efficient bifunctional catalyst for Zn-air battery. Electrochimica Acta, 2020, 364, 137319.	2.6	12
176	Removal of toluene as a biomass tar surrogate by combining catalysis with nonthermal plasma: understanding the processing stability of plasma catalysis. Catalysis Science and Technology, 2020, 10, 6953-6969.	2.1	10
177	Seashell waste-derived materials for secondary catalytic tar reduction in municipal solid waste gasification. Biomass and Bioenergy, 2020, 143, 105828.	2.9	7
178	Integration of pyrolysis â€“ tar decomposition over porous low grade iron ore. IOP Conference Series: Materials Science and Engineering, 2020, 722, 012053.	0.3	2
179	An economic study of combined heat and power plants in district heat production. Cleaner Engineering and Technology, 2020, 1, 100018.	2.1	3
180	CO2 gasification of elephant grass: Effect of Ni/mayenite catalyst on dry reforming of tar. Biomass and Bioenergy, 2020, 143, 105829.	2.9	11
181	CFD Hydrodynamics Investigations for Optimum Biomass Gasifier Design. Processes, 2020, 8, 1323.	1.3	3

#	Article	IF	Citations
182	Gas fuel production derived from pine sawdust pyrolysis catalyzed on alumina. Asia-Pacific Journal of Chemical Engineering, 2020, 15, e2456.	0.8	6
183	Oxidative Catalytic Cracking and Reforming of Coal Pyrolysis Volatiles over NiO. Energy & Fuels, 2020, 34, 6928-6937.	2.5	11
184	Mechanism of catalytic tar reforming over biochar: Description of volatile-H2O-char interaction. Fuel, 2020, 275, 117954.	3.4	45
185	Thermodynamic assessment of the oxidative steam reforming of biomass fast pyrolysis volatiles. Energy Conversion and Management, 2020, 214, 112889.	4.4	27
186	Optimization of hydrogen production via toluene steam reforming over Niâ€“Co supported modified-activated carbon using ANN coupled GA and RSM. International Journal of Hydrogen Energy, 2021, 46, 24632-24651.	3.8	58
187	Ru-Promoted Ni/ŝAl2O3 Fluidized Catalyst for Biomass Gasification. Catalysts, 2020, 10, 316.	1.6	11
188	Catalytic reforming of palm kernel shell microwave pyrolysis vapors over iron-loaded activated carbon: Enhanced production of phenol and hydrogen. Bioresource Technology, 2020, 306, 123111.	4.8	42
189	Recent trends in biochar production methods and its application as a soil health conditioner: a review. SN Applied Sciences, 2020, 2, 1.	1.5	112
190	Catalytic tar conversion and the prospective use of iron-based catalyst in the future development of biomass gasification: a review. Biomass Conversion and Biorefinery, 2022, 12, 1369-1392.	2.9	28
191	Effects of inherent potassium on the catalytic performance of Ni/biochar for steam reforming of toluene as a tar model compound. Chinese Journal of Chemical Engineering, 2021, 35, 189-195.	1.7	23
192	Catalytic Conversion of Coal and Biomass Volatiles: A Review. Energy & Fuels, 2020, 34, 10307-10363.	2.5	110
193	Catalytic Mechanism of K and Ca on the Volatileâ€“Biochar Interaction for Rapid Pyrolysis of Biomass: Experimental and Simulation Studies. Energy & Fuels, 2020, 34, 9741-9753.	2.5	34
194	Advancement in valorization technologies to improve utilization of bio-based waste in bioeconomy context. Renewable and Sustainable Energy Reviews, 2020, 131, 109965.	8.2	63
195	Microwave-assisted calcined olivine catalyst steam reforming of tar for hydrogen production. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2020, , 1-8.	1.2	1
196	Graphitic carbon embedded with Fe/Ni nano-catalysts derived from bacterial precursor for efficient toluene cracking. Green Chemistry, 2020, 22, 1934-1943.	4.6	31
197	Thermal tar cracking enhanced by cold plasma â€“ A study of naphthalene as tar surrogate. Energy Conversion and Management, 2020, 208, 112540.	4.4	28
198	A state-of-the-art review on thermochemical conversion of biomass for biofuel production: A TG-FTIR approach. Energy Conversion and Management, 2020, 209, 112634.	4.4	238
199	Pyrolysis char derived from waste peat for catalytic reforming of tar model compound. Applied Energy, 2020, 263, 114565.	5.1	20

#	Article	IF	Citations
200	Male sexual history influences female fertility and re-mating incidence in the mosquito vector Aedes aegypti (Diptera: Culicidae). Journal of Insect Physiology, 2020, 121, 104019.	0.9	10
201	Hydrogen Production from Catalytic Steam Reforming of Bioâ€Oils: A Critical Review. Chemical Engineering and Technology, 2020, 43, 625-640.	0.9	33
202	Catalytic oxidation of benzene over alumina-supported Cu-Mn-Ce mixed oxide catalysts. Korean Journal of Chemical Engineering, 2020, 37, 54-64.	1.2	14
203	Hydrogen-rich syngas production with tar elimination via biomass chemical looping gasification (BCLG) using BaFe2O4/Al2O3 as oxygen carrier. Chemical Engineering Journal, 2020, 387, 124107.	6.6	74
204	A review of dolomite catalyst for biomass gasification tar removal. Fuel, 2020, 267, 117095.	3.4	145
205	Enhancement of gas and aromatics by in-situ catalytic pyrolysis of biomass in the presence of silica gel. Biomass and Bioenergy, 2020, 138, 105567.	2.9	9
206	Catalytic steam reforming of tar for enhancing hydrogen production from biomass gasification: a review. Frontiers in Energy, 2020, 14, 545-569.	1.2	27
207	Towards synthetic fuels production from biomass gasification: Tar content at low temperatures. Biomass and Bioenergy, 2020, 137, 105540.	2.9	11
208	Highly active and stable HF acid modified HZSM-5 supported Ni catalysts for steam reforming of toluene and biomass pyrolysis tar. Energy Conversion and Management, 2020, 212, 112799.	4.4	50
209	Effect of carbon structure on hydrogen release derived from different biomass pyrolysis. Fuel, 2020, 271, 117638.	3.4	32
210	Ni-Based heterogeneous catalysts for the transformation of fatty acids into higher yields of O-free hydrocarbons. Green Chemistry, 2020, 22, 3470-3480.	4.6	12
211	Hydrogen production by catalytic processes. , 2020, , 57-89.		1
212	A comprehensive review of anti-coking, anti-poisoning and anti-sintering catalysts for biomass tar reforming reaction. Chemical Engineering Science: X, 2020, 7, 100065.	1.5	19
213	Enhanced hydrogen production in co-gasification of sewage sludge and industrial wastewater sludge by a pilot-scale fluidized bed gasifier. International Journal of Hydrogen Energy, 2021, 46, 14083-14095.	3.8	36
214	Assessment of product yields and catalyst deactivation in fixed and fluidized bed reactors in the steam reforming of biomass pyrolysis volatiles. Chemical Engineering Research and Design, 2021, 145, 52-62.	2.7	32
215	Modeling and parametric optimization of air catalytic co-gasification of wood-oil palm fronds blend for clean syngas (H2+CO) production. International Journal of Hydrogen Energy, 2021, 46, 30559-30580.	3.8	19
216	A biomass-based small-scale power generation system with energy/exergy recuperation. Energy Conversion and Management, 2021, 227, 113623.	4.4	22
217	Toluene steam reforming using nickel based catalysts made from mining residues. Catalysis Today, 2021, 365, 111-121.	2.2	12

#	Article	IF	Citations
218	Gas Characteristics of Pine Sawdust Catalyzed Pyrolysis by Additives. Journal of Thermal Science, 2021, 30, 333-342.	0.9	7
219	Review on biomass gasification: Gasifiers, gasifying mediums, and operational parameters. Materials Science for Energy Technologies, 2021, 4, 329-340.	1.0	38
220	Electrochemical upgrading of biomass-derived 5-hydroxymethylfurfural and furfural over oxygen vacancy-rich NiCoMn-layered double hydroxides nanosheets. Green Chemistry, 2021, 23, 4034-4043.	4.6	95
221	Advance strategies for tar elimination from biomass gasification techniques. , 2021, , 61-88.		0
222	Transforming biomass tar into a highly active Ni-based carbon-supported catalyst for selective hydrogenation-transalkylation of guaiacol. Journal of Analytical and Applied Pyrolysis, 2021, 153, 104976.	2.6	14
223	Nanocatalysts for Biofuels Production. , 2021, , 1613-1638.		0
224	A comprehensive experimental and modeling investigation of walnut shell gasification process in a pilot-scale downdraft gasifier integrated with an internal combustion engine. Energy Conversion and Management, 2021, 231, 113836.	4.4	21
225	Catalytic reforming of acetic acid as main primary tar compound from biomass updraft gasifiers: screening of suitable catalysts and operating conditions. Biomass and Bioenergy, 2021, 146, 105982.	2.9	13
226	Effect of Steam on the Tar Reforming during Circulating Fluidized Bed Char Gasification. ACS Omega, 2021, 6, 11192-11198.	1.6	8
227	Structures and spectroscopic properties of low-energy candidate structures for toluene-(H2O)n (n=1â€“10) clusters. Journal of Molecular Liquids, 2021, 326, 115213.	2.3	0
228	Pyrolysis-catalytic upgrading of bio-oil and pyrolysis-catalytic steam reforming of biogas: aÂreview. Environmental Chemistry Letters, 2021, 19, 2825-2872.	8.3	40
229	A comprehensive study on the transition metalâ€“catalysed pyrolysis kinetics, thermodynamics and mechanisms of bamboo powder. Biomass Conversion and Biorefinery, 2023, 13, 5043-5057.	2.9	2
230	Technological review on thermochemical conversion of COVID-19-related medical wastes. Resources, Conservation and Recycling, 2021, 167, 105429.	5.3	91
231	LDH-derived Niâ€“MgOâ€“Al2O3 catalysts for hydrogen-rich syngas production via steam reforming of biomass tar model: Effect of catalyst synthesis methods. International Journal of Hydrogen Energy, 2021, 46, 18338-18352.	3.8	23
232	Synthesis of biomimetic monolithic biochar-based catalysts for catalytic decomposition of biomass pyrolysis tar. Energy, 2021, 222, 120002.	4.5	21
233	Qualitative analysis of tar based on tar sampling conditions for empty fruit bunch gasification. Biomass Conversion and Biorefinery, 2023, 13, 4695-4704.	2.9	2
234	Effect of boron doping on the performance of Ni/Biochar catalysts for steam reforming of toluene as a tar model compound. Journal of Analytical and Applied Pyrolysis, 2021, 155, 105033.	2.6	26
235	Thermal evolution of gas-liquid-solid products and migration regulation of C/H/O elements during biomass pyrolysis. Journal of Analytical and Applied Pyrolysis, 2021, 156, 105128.	2.6	24

#	Article	IF	Citations
236	Development of catalytic ceramic filter candles for tar conversion. Fuel Communications, 2021, 7, 100021.	2.0	2
237	Efficient removal of tar from gas fraction resulting from thermo-chemical conversion of biomass using coal fly ashâ€“based catalysts. Renewable Energy, 2021, 171, 1290-1302.	4.3	10
238	Utilization of Eichhornia crassipes biomass for production of biochar and its feasibility in agroecosystems: a review. Environmental Sustainability, 2021, 4, 285-297.	1.4	9
239	Biochemical and Thermochemical Routes of H₂ Production from Food Waste: AÂComparative Review. Chemical Engineering and Technology, 2023, 46, 191-203.	0.9	23
240	Catalytic upgrading of lignocellulosic biomass pyrolysis vapors: Insights into physicochemical changes in ZSM-5. Journal of Analytical and Applied Pyrolysis, 2021, 156, 105123.	2.6	20
241	Fundamentals and applications of char in biomass tar reforming. Fuel Processing Technology, 2021, 216, 106782.	3.7	59
242	Nickel supported over MCM-41 coated ceramic membrane for steam reforming of real tar. International Journal of Hydrogen Energy, 2021, 46, 20882-20892.	3.8	17
243	Modified nickel-based catalysts for improved steam reforming of biomass tar: A critical review. Renewable and Sustainable Energy Reviews, 2021, 145, 111023.	8.2	135
244	Insights into the mechanism of tar reforming using biochar as a catalyst. Fuel, 2021, 296, 120672.	3.4	24
245	Catalytic performance of hydrotalcite-like-compound-derived Ni-metal alloy catalyst for toluene reforming with gasoline engine exhaust model gas as reforming agent. Fuel Processing Technology, 2021, 218, 106837.	3.7	15
246	Recent Advances in Catalyst Technology for Biomass Tar Model Reforming: Thermal, Plasma and Membrane Reactors. Waste and Biomass Valorization, 2022, 13, 1-30.	1.8	21
247	Role of Metals in Biochar Production and Utilization in Catalytic Applications: A Review. Waste and Biomass Valorization, 2022, 13, 797-822.	1.8	13
248	Progress on Catalyst Development for the Steam Reforming of Biomass and Waste Plastics Pyrolysis Volatiles: A Review. Energy & Fuels, 2021, 35, 17051-17084.	2.5	106
249	Investigation of coke deposition during catalytic cracking of different biomass model tar: Effect of microwave. Applied Catalysis A: General, 2021, 624, 118325.	2.2	7
250	Effect of synthesis temperature on catalytic activity and coke resistance of Ni/bio-char during CO2 reforming of tar. International Journal of Hydrogen Energy, 2021, 46, 27543-27554.	3.8	12
251	Advanced approach for catalytic decomposition of tar: Electrically heated catalyst system. Chemical Engineering and Processing: Process Intensification, 2021, 165, 108407.	1.8	9
252	An effect blending of acetone and acetic acid as bio-oil model compound for steam reforming reaction over Ce doped LaNi0.8Fe0.2O3-based perovskite. Biomass and Bioenergy, 2021, 151, 106177.	2.9	12
253	H2S-resistant CeO2-NiO-MgO-Al2O3 LDH-derived catalysts for steam reforming of toluene. Fuel Processing Technology, 2021, 219, 106871.	3.7	27

#	Article	IF	Citations
254	Tar steam reforming for synthesis gas production over Ni-based on ceria/zirconia and La0.3Sr0.7Co0.7Fe0.3O3 in a packed-bed reactor. Chemosphere, 2021, 277, 130280.	4.2	6
255	A techno-economic analysis of solar catalytic chemical looping biomass refinery for sustainable production of high purity hydrogen. Energy Conversion and Management, 2021, 243, 114341.	4.4	9
256	Iron-based catalyst (Fe2-xNixTiO5) for tar decomposition in biomass gasification. Fuel, 2021, 300, 120859.	3.4	19
257	Thermal Analysis Technologies for Biomass Feedstocks: A State-of-the-Art Review. Processes, 2021, 9, 1610.	1.3	27
258	Review of microwave-based treatments of biomass gasification tar. Renewable and Sustainable Energy Reviews, 2021, 150, 111510.	8.2	37
259	Microwave-assisted catalytic pyrolysis of corn cobs with Fe-modified Choerospondias axillaris seed-based biochar catalyst for phenol-rich bio-oil. Journal of Analytical and Applied Pyrolysis, 2021, 159, 105306.	2.6	23
260	Microwave pyrolysis of herb residue for syngas production with in-situ tar elimination and nitrous oxides controlling. Fuel Processing Technology, 2021, 221, 106955.	3.7	13
261	Role of filamentous coke in deactivation of Ni/bio-char catalyst during dry reforming of non-oxygenates tar. Journal of Analytical and Applied Pyrolysis, 2021, 159, 105314.	2.6	18
262	Torrefaction of biomass: Production of enhanced solid biofuel from municipal solid waste and other types of biomass. Renewable and Sustainable Energy Reviews, 2021, 150, 111436.	8.2	71
263	Mechanism of coke formation and corresponding gas fraction characteristics in biochar-catalyzed tar reforming during Corn Straw Pyrolysis. Fuel Processing Technology, 2021, 221, 106903.	3.7	23
264	Arming wood carbon with carbon-coated mesoporous nickel-silica nanolayer as monolithic composite catalyst for steam reforming of toluene. Journal of Colloid and Interface Science, 2021, 599, 650-660.	5.0	16
265	Low temperature toluene and phenol abatement as tar model molecules over Ni-based catalysts: Influence of the support and the synthesis method. Applied Catalysis B: Environmental, 2021, 297, 120479.	10.8	20
266	Direct synthesis of methane-rich gas from reed biomass pyrolysis volatiles over its biochar-supported Ni catalysts. Biomass and Bioenergy, 2021, 154, 106250.	2.9	17
267	Biomass direct gasification for electricity generation and natural gas replacement in the lime kilns of the pulp and paper industry: A techno-economic analysis. Energy, 2021, 237, 121562.	4.5	12
268	Single-step production of hydrogen-rich syngas from toluene using multifunctional Ni-dolomite catalysts. Chemical Engineering Journal, 2021, 425, 131522.	6.6	17
269	Experimental and thermodynamic study on sorption-enhanced steam reforming of toluene for H2 production using the mixture of Ni/perovskite-CaO. Fuel, 2021, 305, 121447.	3.4	23
270	Role of temperature in the biomass steam pyrolysis in a conical spouted bed reactor. Energy, 2022, 238, 122053.	4.5	33
271	Boosting syngas production from corncob tar reforming over Ni/MgAl hydrotalcite-derived catalysts. Fuel, 2022, 307, 121779.	3.4	15

#	Article	IF	Citations
272	Valorization of fluid petroleum coke for efficient catalytic destruction of biomass gasification tar. Journal of Hazardous Materials, 2022, 424, 127297.	6.5	3
273	Critical assessment of plasma tar reforming during biomass gasification: A review on advancement in plasma technology. Journal of Hazardous Materials, 2022, 421, 126764.	6.5	35
274	Recent progress and perspectives of catalyst design and downstream integration in biomass tar reforming. Chemical Engineering Journal, 2022, 429, 132316.	6.6	42
275	Renewable Biomass Wastes for Biohydrogen Production. , 2022, , 273-298.		2
276	Production routes of advanced renewable <scp>C1</scp> to <scp>C4</scp> alcohols as biofuel components â€“ a review. Biofuels, Bioproducts and Biorefining, 2020, 14, 845-878.	1.9	41
277	A novel system of biomass-based hydrogen production by combining steam bio-oil reforming and chemical looping process. Applied Energy, 2020, 268, 115122.	5.1	42
278	Carbon-coated mesoporous silica-supported Ni nanocomposite catalyst for efficient hydrogen production via steam reforming of toluene. Fuel, 2020, 275, 118036.	3.4	28
279	Progress and prospects of produced gas utilization from biomass tar reforming. Journal of Hazardous Materials Letters, 2020, 1, 100008.	2.0	8
280	Steam gasification of poultry litter biochar for bio-syngas production. Chemical Engineering Research and Design, 2017, 109, 478-488.	2.7	47
281	Developing a fuzzy-model with particle swarm optimization-based for improving the conversion and gasification rate of palm kernel shell. Renewable Energy, 2020, 166, 125-135.	4.3	22
282	A critical review on the influence of process parameters in catalytic co-gasification: Current performance and challenges for a future prospectus. Renewable and Sustainable Energy Reviews, 2020, 134, 110382.	8.2	53
283	Process optimization of catalytic steam reforming of toluene to hydrogen using response surface methodology (RSM) and artificial neural network-genetic algorithm (ANN-GA). IOP Conference Series: Materials Science and Engineering, 0, 991, 012079.	0.3	1
284	A Review on the Dry Reforming Processes for Hydrogen Production: Catalytic Materials and Technologies. Frontiers in Ceramic Science, 2018, , 60-128.	0.0	19
285	Catalytic Steam Reforming of Toluene: Understanding the Influence of the Main Reaction Parameters over a Reference Catalyst. Energies, 2020, 13, 813.	1.6	13
286	Desempenho mecÃ¢nico e durabilidade de argamassas contendo adiÃ§Ãµes de resÃduos de carvÃ£o vegetal amazÃ´nico. Revista Materia, 2021, 26, .	0.1	0
287	Catalysts and their role in biomass gasification and tar abetment: a review. Biomass Conversion and Biorefinery, 0, , 1.	2.9	19
289	Main issues of the impact of tar, H2S, HCl and alkali metal from biomass-gasification derived syngas on the SOFC anode and the related gas cleaning technologies for feeding a SOFC system: A review. International Journal of Hydrogen Energy, 2022, 47, 517-539.	3.8	39
290	Impact of Molybdena and Vanadia Mixed Based Oxides on Hydrogen Production by Steam Reforming. Frontiers in Ceramic Science, 2018, , 1-32.	0.0	0

#	Article	IF	Citations
291	Application of industrial solid wastes in catalyst and chemical sorbent development for hydrogen/syngas production by conventional and intensified steam reforming. , 2020, , 21-55.		2
292	The Removal of Mixed Tar in Biomass Fuel Gas through the Thermal and Catalytic Treatment Methods: Review. IOP Conference Series: Materials Science and Engineering, 0, 1003, 012141.	0.3	0
293	Insight into Tar Formation Mechanism during Catalytic Pyrolysis of Biomass over Waste Aluminum Dross. Applied Sciences (Switzerland), 2021, 11, 246.	1.3	1
294	Photothermal steam reforming: A novel method for tar elimination in biomass gasification. Applied Energy, 2022, 305, 117917.	5.1	12
295	Spray atomization characteristics of biomass pyrolysis tar: Influence of methanol addition, temperature, and atomization pressure. Energy, 2022, 242, 122534.	4.5	7
297	Role of reforming agent in filamentous coke deposition on Ni/bio-char catalyst during non-oxygenates tar reforming. Applied Catalysis A: General, 2022, 630, 118446.	2.2	4
298	Bio-hydrogen production from steam reforming of liquid biomass wastes and biomass-derived oxygenates: A review. Fuel, 2022, 311, 122623.	3.4	29
299	Sustainable use of rice husk for the cleaner production of value-added products. Journal of Environmental Chemical Engineering, 2022, 10, 106899.	3.3	30
300	Catalytic Pyrolysis of Biomass Tar Using Different Ni-Based HZMS-5: Influence of Promoters Characteristics on Hydrogen-Rich Gas Formation. SSRN Electronic Journal, 0, , .	0.4	0
301	Catalyst development for tar reduction in biomass gasification: Recent progress and the way forward. Journal of Environmental Management, 2022, 305, 114274.	3.8	27
302	Fabrication strategies of Ni-based catalysts in reforming of biomass tar/tar model compounds. Applications in Energy and Combustion Science, 2022, 9, 100053.	0.9	6
303	Hydrogen-rich syngas production from biomass pyrolysis and catalytic reforming using biochar-based catalysts. Fuel, 2022, 313, 123006.	3.4	54
304	Activity and Stability of Different Fe Loaded Primary Catalysts for Tar Elimination. SSRN Electronic Journal, 0, , .	0.4	0
305	Multi-objective optimisation with hybrid machine learning strategy for complex catalytic processes. Energy and AI, 2022, 7, 100134.	5.8	14
306	Non-natural catalysts for catalytic tar conversion in biomass gasification technology. International Journal of Hydrogen Energy, 2022, 47, 7638-7665.	3.8	13
307	Catalytic pyrolysis of toluene as biomass tar model component using Ni/HZSM-5 modified by CeO2 and MgO promoters. Journal of Analytical and Applied Pyrolysis, 2022, 162, 105436.	2.6	17
308	Pyrolysis of biomass Tar model compound with various Ni-based catalysts: Influence of promoters characteristics on hydrogen-rich gas formation. Energy, 2022, 244, 123137.	4.5	19
309	Functionalized wood as bio-based advanced materials: Properties, applications, and challenges. Renewable and Sustainable Energy Reviews, 2022, 157, 112074.	8.2	22

#	Article	IF	Citations
310	Enhanced combined H2O/CO2 reforming of sludge to produce high-quality syngas via spiral continuous microwave pyrolysis technology: CO2 reforming mechanism and H2/CO directional regulation. Chemical Engineering Journal, 2022, 434, 134628.	6.6	18
311	Activity and stability of different Fe loaded primary catalysts for tar elimination. Fuel, 2022, 317, 123457.	3.4	12
312	Influence of gas atmosphere and role of tar on catalytic reforming of methane and tar model compounds: Special focus on syngas produced by sorption enhanced gasification. Fuel, 2022, 317, 123502.	3.4	5
313	Recent Progress in the Steam Reforming of Bio-Oil for Hydrogen Production: A Review of Operating Parameters, Catalytic Systems and Technological Innovations. Catalysts, 2021, 11, 1526.	1.6	19
314	Biomass-Derived Bimetallic Ni-Fe Catalyst with Enhanced Tar Removal Performance. SSRN Electronic Journal, 0, , .	0.4	0
315	Hydrogen generation from biomass by pyrolysis. Nature Reviews Methods Primers, 2022, 2, .	11.8	55
316	A Review of Biomass Resources and Thermochemical Conversion Technologies. Chemical Engineering and Technology, 2022, 45, 791-799.	0.9	39
317	Hydrogen-rich syngas production by the three-dimensional structure of LaNiO3 catalyst from a blend of acetic acid and acetone as a bio-oil model compound. International Journal of Hydrogen Energy, 2022, 47, 15160-15174.	3.8	18
318	Low-Temperature Reforming of Biomass Tar over Ni/ZSM-5 Catalysts: Unraveling the H₂-Rich Gas Production Pathways Using In Situ and Ex Situ Techniques. Industrial & Engineering Chemistry Research, 2022, 61, 5734-5746.	1.8	5
319	Advancements in the field of electronic waste Recycling: Critical assessment of chemical route for generation of energy and valuable products coupled with metal recovery. Separation and Purification Technology, 2022, 289, 120773.	3.9	28
320	Biomass gasification as an industrial process with effective proof-of-concept: A comprehensive review on technologies, processes and future developments. Results in Engineering, 2022, 14, 100408.	2.2	48
321	Development of a universal method for high yield of furfural and hydrogen from raw lignocellulosic biomass. Bioresource Technology Reports, 2022, 18, 101022.	1.5	6
322	Pyrolysis-catalytic steam/dry reforming of processed municipal solid waste for control of syngas H2:CO ratio. Journal of the Energy Institute, 2022, 102, 128-142.	2.7	8
323	Co-carbonization of a mixture of waste insulation electric cables (WIEC) and lignocellulosic waste, for the removal of chlorine: Biochar properties and their behaviors. Fuel, 2022, 320, 123932.	3.4	7
324	Understandings of Catalyst Deactivation and Regeneration during Biomass Tar Reforming: A Crucial Review. ACS Sustainable Chemistry and Engineering, 2021, 9, 17186-17206.	3.2	26
325	Catalysts for steam reforming of biomass tar and their effects on the products. , 2022, , 249-295.		2
326	Catalytic reforming of tar and volatiles from walnut shell pyrolysis over a novel Ni/olivine/La2O3 supported on ZrO2. Journal of the Energy Institute, 2022, 103, 33-46.	2.7	10
327	Recent advances in thermodynamic analysis of biomass gasification: A review on numerical modelling and simulation. Journal of the Energy Institute, 2022, 102, 395-419.	2.7	46

#	Article	IF	Citations
328	Efficient removal of tar employing dolomite catalyst in gasification: Challenges and opportunities. Science of the Total Environment, 2022, 836, 155721.	3.9	16
329	Effect of Fe impregnation on CO2-assisted pyrolysis of hazelnut shell. Fuel, 2022, 324, 124514.	3.4	2
330	Boosting production of useful chemicals and micro-mesopores biochar from in situ catalytic pyrolysis of cellulose with red mud. Biomass Conversion and Biorefinery, 2024, 14, 7045-7055.	2.9	5
331	Effective catalytic steam reforming of naphthalene over Ni-modified ZSM-5 via one-pot hydrothermal synthesis. Waste Management, 2022, 147, 1-9.	3.7	7
332	Production of biochar using sustainable microwave pyrolysis approach. , 2022, , 323-332.		1
333	Catalytic supercritical water gasification of biomass waste using iron-doped alkaline earth catalysts. Biomass Conversion and Biorefinery, 0, , .	2.9	1
334	One-step preparation of char-supported iron nanocatalysts under microwave irradiation and their application for tar removal. Journal of Analytical and Applied Pyrolysis, 2022, 165, 105564.	2.6	4
335	Power Production from Biomass. , 2022, , .		0
336	Torrefaction of Woody Biomass and In-Situ Pyrolytic Reforming of Volatile Matter: Analyses of Products and Process Heat Demand. SSRN Electronic Journal, 0, , .	0.4	0
337	Evaluation of Different Oxygen Carriers for Chemical Looping Reforming of Toluene as Tar Model Compound in Biomass Gasification Gas: A Thermodynamic Analysis. Atmosphere, 2022, 13, 887.	1.0	0
338	Simulation on the Electric and Thermal Fields of a Microwave Reactor for Ex Situ Biomass Tar Elimination. Energies, 2022, 15, 4143.	1.6	1
339	Catalytic steam reforming of toluene as model tar compound of biomass gasification over Cu/Ni/olivine. Chemical Engineering and Technology, 0, , .	0.9	1
340	Preparation of polydopamine-derived carbon-based nano-Fe catalysts and its catalytic conversion of toluene for hydrogen production. Fuel, 2022, 324, 124692.	3.4	4
341	A Highly Efficient Bimetallic/Biochar Composite with Enhanced Catalytic Reforming of Pyrolysis Tar: Performance and Mechanism. SSRN Electronic Journal, 0, , .	0.4	0
342	Aluminumâ€'yttrium oxides supported iron for effective catalytic reforming of toluene: Promotion roles of yttrium. Fuel Processing Technology, 2022, 235, 107344.	3.7	3
343	Decomposition of biomass gasification tar model compounds over waste tire pyrolysis char. Waste Disposal & Sustainable Energy, 2022, 4, 75-89.	1.1	7
344	Catalytic Steam Reforming of Biomass Tar Model Compounds with Low Cost Catalysts: Effect of Operation Conditions. Topics in Catalysis, 2022, 65, 1382-1393.	1.3	3
345	Electrolysis Assisted Biomass Gasification for Liquid Fuels Production. Frontiers in Energy Research, 0, 10, .	1.2	4

#	Article	IF	Citations
346	Review on Catalytic Biomass Gasification for Hydrogen Production as a Sustainable Energy Form and Social, Technological, Economic, Environmental, and Political Analysis of Catalysts. ACS Omega, 2022, 7, 24918-24941.	1.6	27
347	An overview on thermochemical conversion and potential evaluation of biofuels derived from agricultural wastes. Energy Nexus, 2022, 7, 100125.	3.3	33
348	Torrefaction of woody biomass and in-situ pyrolytic reforming of volatile matter: Analyses of products and process heat demand. Journal of Analytical and Applied Pyrolysis, 2022, 167, 105658.	2.6	4
349	Layered double hydroxides-based materials as novel catalysts for gaseous VOCs abatement: Recent advances and mechanisms. Coordination Chemistry Reviews, 2022, 471, 214738.	9.5	12
350	Food waste valorisation via gasification â€“ A review on emerging concepts, prospects and challenges. Science of the Total Environment, 2022, 851, 157955.	3.9	25
351	Experimental and numerical study of the effects of N2 dilution and CH4 addition on the laminar burning characteristics of syngas. Fuel, 2022, 329, 125403.	3.4	5
352	Torrefaction of organic municipal solid waste to high calorific value solid fuel using batch reactor with helical screw induced rotation. Bioresource Technology, 2022, 363, 127974.	4.8	14
353	Innovative concept for the effect of changing gasifying medium and injection points on syngas quality: Towards higher H2 production, and Free-CO2 emissions. Energy, 2022, 261, 125416.	4.5	4
354	Research progress of catalysts for catalytic steam reforming of high temperature tar:A review. Fuel, 2023, 331, 125790.	3.4	21
355	Recent Advances in Direct Catalytic Thermochemical Gasification of Biomass to Biofuels. Clean Energy Production Technologies, 2022, , 241-295.	0.3	1
356	A highly efficient bimetallic/biochar composite with enhanced catalytic reforming of pyrolysis tar: Performance and mechanism. Bioresource Technology Reports, 2022, 19, 101204.	1.5	3
357	Perspectives of the Formation of Carbon Nanostructures from Biomass Gasification Tar Compoundsâ”€A Mini-Review. Energy & Fuels, 2022, 36, 12475-12490.	2.5	2
358	Catalytic upgrading of bio-oils derived from terrestrial and marine biomass over various types of zeolites. Journal of Analytical and Applied Pyrolysis, 2022, 168, 105735.	2.6	4
359	Effect of electron injection on oxidative pyrolysis of cellulose and polypropylene. Applied Energy, 2022, 326, 119944.	5.1	1
360	Biomass gasification ash reutilization: Recirculation reusability and mechanism analysis. Waste Management, 2022, 154, 64-73.	3.7	1
361	Exploring the roles of potassium and calcium additives in corn straw gasification performance and SO2 release behavior. Journal of the Energy Institute, 2023, 108, 101140.	2.7	0
362	How syngas composition affects catalytic steam reforming of tars: An analysis using toluene as model compound. International Journal of Hydrogen Energy, 2023, 48, 1290-1303.	3.8	8
363	Catalyst Deactivation and Its Mitigation during Catalytic Conversions of Biomass. ACS Catalysis, 2022, 12, 13555-13599.	5.5	17

#	Article	IF	Citations
364	Study on the feasibility of converting the recovered volatile organic compounds to syngas via catalytic steam reforming for gas-fueled power generation. Energy, 2023, 263, 125761.	4.5	3
365	Fischer-Tropsch synthesis over lignin-derived cobalt-containing porous carbon fiber catalysts. Applied Catalysis B: Environmental, 2023, 321, 122078.	10.8	7
366	Pt/N co-doped porous carbon derived from bio-tar: A remarkable catalyst for efficient oxidation of 5-hydroxymethylfurfural under alkali-free condition: Performance, mechanism and kinetics. Chemical Engineering Journal, 2023, 454, 140179.	6.6	11
367	Experimental and CFD investigation of thermo-catalytic conversion of toluene as tar model in a fixed bed of date stone and spent coffee ground chars. Biomass Conversion and Biorefinery, 0, , .	2.9	0
368	Investigation on co-hydropyrolysis of heavy bio-oil with degradable plastics. Carbon Capture Science & Technology, 2023, 6, 100082.	4.9	3
369	A comprehensive review of primary strategies for tar removal in biomass gasification. Energy Conversion and Management, 2023, 276, 116496.	4.4	69
370	Study on the mechanism of syngas production from catalytic pyrolysis of biomass tar by Niâ€“Fe catalyst in CO2 atmosphere. Fuel, 2023, 335, 126705.	3.4	9
371	A review of waste-to-hydrogen conversion technologies for solid oxide fuel cell (SOFC) applications: Aspect of gasification process and catalyst development. Journal of Environmental Management, 2023, 329, 117077.	3.8	33
372	Facile synthesis of low-cost Co-Cu/C alloy catalysts for hydrogen-rich syngas production from low-temperature steam reforming of biomass tar. Chemical Engineering Science, 2023, 267, 118370.	1.9	8
373	Co-gasification of waste PET, PP and biomass for energy recovery: A thermodynamic model to assess the produced syngas quality. Energy, 2023, 266, 126510.	4.5	13
374	UVâ€“vis-enhanced photothermal catalytic reforming of biomass model tar via LaMnxNi1-xO3 perovskite catalyst. Chemical Engineering Journal, 2023, 457, 141112.	6.6	4
375	Microwave Pyrolysis of Biomass: The Influence of Surface Area and Structure of a Layer. Applied Sciences (Switzerland), 2022, 12, 12442.	1.3	2
376	GasificaciÃ³n CatalÃtica y AutotÃ©rmica de Residuos BiomÃ¡sicos a Escala Banco: ConstrucciÃ³n y OptimizaciÃ³n.. Revista Ion, 2022, 35, .	0.1	1
377	Biomass Pyrolysis Followed by Catalytic HybridÂReforming for Syngas Production. Waste and Biomass Valorization, 2023, 14, 2715-2743.	1.8	2
378	Thermal and oxidation processes for tar removal from syngas. , 2023, , 419-448.		0
379	Process modeling and apparatus simulation for syngas production. , 2023, , 43-101.		0
380	Research advancement in molten salt-mediated thermochemical upcycling of biomass waste. Green Chemistry, 2023, 25, 2087-2108.	4.6	7
381	Plasma technology for syngas cleaning. , 2023, , 389-417.		0

#	Article	IF	Citations
382	Current State, Development and Future Directions of Medical Waste Valorization. Energies, 2023, 16, 1074.	1.6	3
383	Tar and inorganic contaminant removal from syngas: Modeling and simulation. , 2023, , 241-273.		0
384	Experimental study on cotton stalk pyrolysis tar degradation by oxidation in combination with K-containing semi-coke. Fuel, 2023, 340, 127461.	3.4	2
385	Coupling biomass gasification and inline co-steam reforming: Synergistic effect on promotion of hydrogen production and tar removal. Fuel Processing Technology, 2023, 243, 107689.	3.7	13
386	Thermodynamic guidelines for improved operation of iron-based catalysts in gasification of biomass. Energy, 2023, 268, 126641.	4.5	2
387	Plasma-enabled catalytic steam reforming of toluene as a biomass tar surrogate: Understanding the synergistic effect of plasma catalysis. Chemical Engineering Journal, 2023, 464, 142696.	6.6	4
388	Progress on co-processing of biomass and plastic waste for hydrogen production. Energy Conversion and Management, 2023, 284, 116983.	4.4	19
389	Role of biochar-based catalysts in microwave-induced biomass pyrolysis: Structural properties and modification with Fe-series metals. Fuel, 2023, 341, 127769.	3.4	6
390	Recycling exhaust emissions of internal combustion engines within the gasification systems: Performance and analysis. Fuel, 2023, 346, 128297.	3.4	1
391	Hydrogen-rich syngas production from biomass gasification using biochar-based nanocatalysts. Bioresource Technology, 2023, 379, 129005.	4.8	10
392	Gasification integrated with steam co-reforming of agricultural waste biomass over its derived CO2/O2/steam-mediated porous biochar for boosting H2-rich syngas production. Journal of Environmental Chemical Engineering, 2023, 11, 109556.	3.3	4
393	A review on gasification and pyrolysis of waste plastics. Frontiers in Chemistry, 0, 10, .	1.8	16
394	Syngas from agricultural waste. , 2023, , 379-409.		1
395	Sustainable management of unavoidable biomass wastes. , 2023, 1, 100005.		16
396	Slow pyrolysis experimental investigation of biomass tar formation and hydrogen production by tar reforming. International Journal of Hydrogen Energy, 2024, 52, 74-87.	3.8	6
397	Review of Porous Ceramics for Hot Gas Cleanup of Biomass Syngas Using Catalytic Ceramic Filters to Produce Green Hydrogen/Fuels/Chemicals. Energies, 2023, 16, 2334.	1.6	7
398	Recent progress on catalyst development in biomass tar steam reforming: toluene as a biomass tar model compound. Biomass Conversion and Biorefinery, 0, , .	2.9	1
399	Assessment of the inherent CaO in char on tar catalytic conversion by a micro fluidized bed reaction analyzer for biomass gasification. Fuel, 2023, 344, 127866.	3.4	1

#	Article	IF	Citations
400	Oxygen Vacancy Induced Strong Metal-Support Interactions on Ni/Ce_{0.8}Zr_{0.2}O₂ Nanorod Catalysts for Promoting Steam Reforming of Toluene: Experimental and Computational Studies. Langmuir, 2023, 39, 4495-4506.	1.6	6
401	The Combined Impact of Ni-Based Catalysts and a Binary Carbonate Salts Mixture on the CO2 Gasification Performance of Olive Kernel Biomass Fuel. Catalysts, 2023, 13, 596.	1.6	1
402	Nickel-loaded red mud catalyst for steam gasification of bamboo sawdust to produce hydrogen-rich syngas. International Journal of Hydrogen Energy, 2023, , .	3.8	1
403	Biomass catalytic pyrolysis over CaO microspheres: Relationship between the production of bio-oil components and CO2 capture. Fuel Processing Technology, 2023, 247, 107775.	3.7	8
405	Thermochemical hydrogen production. , 2023, , 333-345.		1
407	Cracking Upgrading Process of Biomass. , 2023, , .		0
416	A review of the thermochemistries of biomass gasification and utilisation of gas products. Sustainable Energy and Fuels, 2023, 7, 3505-3540.	2.5	1
458	Application of nanotechnology in hydrogen production from biomass: A critical review. Advanced Composites and Hybrid Materials, 2024, 7, .	9.9	2