Andres Tomas Aguayo

List of Publications by Year
in descending order

165 papers	8,322 citations	31902 53 h-index	54797 84 g-index
168 all docs	168 docs citations	168 times ranked	4636 citing authors

#	Article	IF	Citations
1	Transformation of Oxygenate Components of Biomass Pyrolysis Oil on a HZSM-5 Zeolite. I. Alcohols and Phenols. Industrial & Engineering Chemistry Research, 2004, 43, 2610-2618.	1.8	402
2	Transformation of Oxygenate Components of Biomass Pyrolysis Oil on a HZSM-5 Zeolite. II. Aldehydes, Ketones, and Acids. Industrial & Engineering Chemistry Research, 2004, 43, 2619-2626.	1.8	363
3	Stable operation conditions for gas-solid contact regimes in conical spouted beds. Industrial & Engineering Chemistry Research, 1992, 31, 1784-1792.	1.8	223
4	Insights into the coke deposited on HZSM-5, HÎ² and HY zeolites during the cracking of polyethylene. Applied Catalysis B: Environmental, 2011, 104, 91-100.	10.8	206
5	Role of acidity and microporous structure in alternative catalysts for the transformation of methanol into olefins. Applied Catalysis A: General, 2005, 283, 197-207.	2.2	164
6	Selective Production of Aromatics by Crude Bio-oil Valorization with a Nickel-Modified HZSM-5 Zeolite Catalyst. Energy & Fuels, 2010, 24, 2060-2070.	2.5	164
7	Kinetic Modeling of Dimethyl Ether Synthesis in a Single Step on a CuOâˆ’ZnOâˆ’Al₂O₃/Î³-Al₂O₃ Catalyst. Industrial & Engineering Chemistry Research, 2007, 46, 5522-5530.	1.8	162
8	Deactivation of a HZSM-5 Zeolite Catalyst in the Transformation of the Aqueous Fraction of Biomass Pyrolysis Oil into Hydrocarbons. Energy & Fuels, 2004, 18, 1640-1647.	2.5	161
9	Deactivation and regeneration of hybrid catalysts in the single-step synthesis of dimethyl ether from syngas and CO2. Catalysis Today, 2005, 106, 265-270.	2.2	153
10	Effect of operating conditions on the synthesis of dimethyl ether over a CuO-ZnO-Al2O3/NaHZSM-5 bifunctional catalyst. Catalysis Today, 2005, 107-108, 467-473.	2.2	141
11	Undesired components in the transformation of biomass pyrolysis oil into hydrocarbons on an HZSM-5 zeolite catalyst. Journal of Chemical Technology and Biotechnology, 2005, 80, 1244-1251.	1.6	135
12	Selective production of olefins from bioethanol on HZSM-5 zeolite catalysts treated with NaOH. Applied Catalysis B: Environmental, 2010, 97, 299-306.	10.8	135
13	Differences among the deactivation pathway of HZSM-5 zeolite and SAPO-34 in the transformation of ethylene or 1-butene to propylene. Microporous and Mesoporous Materials, 2014, 195, 284-293.	2.2	126
14	Hydrothermally stable HZSM-5 zeolite catalysts for the transformation of crude bio-oil into hydrocarbons. Applied Catalysis B: Environmental, 2010, 100, 318-327.	10.8	124
15	Catalyst Deactivation by Coke in the Transformation of Aqueous Ethanol into Hydrocarbons. Kinetic Modeling and Acidity Deterioration of the Catalyst. Industrial & Engineering Chemistry Research, 2002, 41, 4216-4224.	1.8	123
16	Olefin Production by Catalytic Transformation of Crude Bio-Oil in a Two-Step Process. Industrial & Engineering Chemistry Research, 2010, 49, 123-131.	1.8	119
17	Catalysts of Ni/Î±-Al2O3 and Ni/La2O3-Î±Al2O3 for hydrogen production by steam reforming of bio-oil aqueous fraction with pyrolytic lignin retention. International Journal of Hydrogen Energy, 2013, 38, 1307-1318.	3.8	111
18	Membrane Reactors for <i>in Situ</i> Water Removal: A Review of Applications. Industrial & Engineering Chemistry Research, 2013, 52, 10342-10354.	1.8	109

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19	Kinetics of the irreversible deactivation of the HZSM-5 catalyst in the MTO process. Chemical Engineering Science, 2003, 58, 5239-5249.	1.9	108
20	Study of operating variables in the transformation of aqueous ethanol into hydrocarbons on an HZSM-5 zeolite. Journal of Chemical Technology and Biotechnology, 2002, 77, 211-216.	1.6	104
21	Deposition and Characteristics of Coke over a H-ZSM5 Zeolite-Based Catalyst in the MTG Process. Industrial & Engineering Chemistry Research, 1996, 35, 3991-3998.	1.8	103
22	Kinetic modelling of dimethyl ether synthesis from (H2+CO2) by considering catalyst deactivation. Chemical Engineering Journal, 2011, 174, 660-667.	6.6	101
23	Effect of the Acidity of HZSM-5 Zeolite and the Binder in the DME Transformation to Olefins. Industrial & Engineering Chemistry Research, 2016, 55, 1513-1521.	1.8	101
24	A comparative thermodynamic study on the CO2 conversion in the synthesis of methanol and of DME. Energy, 2017, 120, 796-804.	4.5	101
25	Kinetic Modeling of Methanol Transformation into Olefins on a SAPO-34 Catalyst. Industrial & Engineering Chemistry Research, 2000, 39, 292-300.	1.8	98
26	Deactivation of a CuOâˆ’ZnOâˆ’Al₂O₃/Î³-Al₂O₃ Catalyst in the Synthesis of Dimethyl Ether. Industrial & Engineering Chemistry Research, 2008, 47, 2238-2247.	1.8	97
27	Hydrothermal stability of HZSM-5 catalysts modified with Ni for the transformation of bioethanol into hydrocarbons. Fuel, 2010, 89, 3365-3372.	3.4	96
28	Stability and hydrodynamics of conical spouted beds with binary mixtures. Industrial & Engineering Chemistry Research, 1993, 32, 2826-2834.	1.8	95
29	Modified HZSM-5 zeolites for intensifying propylene production in the transformation of 1-butene. Chemical Engineering Journal, 2014, 251, 80-91.	6.6	89
30	Kinetic model for the reaction of DME to olefins over a HZSM-5 zeolite catalyst. Chemical Engineering Journal, 2016, 302, 801-810.	6.6	88
31	Effect of Si/Al Ratio and of Acidity of H-ZSM5 Zeolites on the Primary Products of Methanol to Gasoline Conversion. Journal of Chemical Technology and Biotechnology, 1996, 66, 183-191.	1.6	87
32	Role of water in the kinetic modeling of catalyst deactivation in the MTG process. AIChE Journal, 2002, 48, 1561-1571.	1.8	87
33	Design factors of conical spouted beds and jet spouted beds. Industrial & Engineering Chemistry Research, 1993, 32, 1245-1250.	1.8	82
34	Catalyst Equilibration for Transformation of Methanol into Hydrocarbons by Reactionâˆ’Regeneration Cycles. Industrial & Engineering Chemistry Research, 1996, 35, 2177-2182.	1.8	80
35	Deactivation by coke of a catalyst based on a SAPO-34 in the transformation of methanol into olefins. Journal of Chemical Technology and Biotechnology, 1999, 74, 315-321.	1.6	78
36	Relationship between surface acidity and activity of catalysts in the transformation of methanol into hydrocarbons. Journal of Chemical Technology and Biotechnology, 1996, 65, 186-192.	1.6	75

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37	Influence of the membrane properties on the catalytic production of dimethyl ether with in situ water removal for the successful capture of co2. Chemical Engineering Journal, 2013, 234, 140-148.	6.6	74
38	Kinetic modelling for the transformation of bioethanol into olefins on a hydrothermally stable Niâ€“HZSM-5 catalyst considering the deactivation by coke. Chemical Engineering Journal, 2011, 167, 262-277.	6.6	73
39	Catalyst deactivation by coking in the MTG process in fixed and fluidized bed reactors. Catalysis Today, 1997, 37, 239-248.	2.2	69
40	Role of Coke Characteristics in the Regeneration of a Catalyst for the MTG Process. Industrial & Engineering Chemistry Research, 1997, 36, 60-66.	1.8	67
41	Kinetic Modelling of the Transformation of Aqueous Ethanol into Hydrocarbons on a HZSM-5 Zeolite. Industrial & Engineering Chemistry Research, 2001, 40, 3467-3474.	1.8	67
42	Role of Reaction-Medium Water on the Acidity Deterioration of a HZSM-5 Zeolite. Industrial & Engineering Chemistry Research, 2004, 43, 5042-5048.	1.8	65
43	Kinetic Modeling of the Methanol-to-Olefins Process on a Silicoaluminophosphate (SAPO-18) Catalyst by Considering Deactivation and the Formation of Individual Olefins. Industrial & Engineering Chemistry Research, 2007, 46, 1981-1989.	1.8	65
44	Coke deactivation and regeneration of HZSM-5 zeolite catalysts in the oligomerization of 1-butene. Applied Catalysis B: Environmental, 2021, 291, 120076.	10.8	65
45	Concentration-Dependent Kinetic Model for Catalyst Deactivation in the MTG Process. Industrial & Engineering Chemistry Research, 1996, 35, 81-89.	1.8	63
46	Deactivating Species Deposited on Ptâ€“Pd Catalysts in the Hydrocracking of Light-Cycle Oil. Energy & Fuels, 2012, 26, 1509-1519.	2.5	63
47	A direct reaction approach for the synthesis of zeolitic imidazolate frameworks: template and temperature mediated control on network topology and crystal size. Chemical Communications, 2012, 48, 9930.	2.2	61
48	Regeneration of CuO-ZnO-Al2O3/Î³-Al2O3 catalyst in the direct synthesis of dimethyl ether. Applied Catalysis B: Environmental, 2010, 94, 108-116.	10.8	60
49	Improving the DME steam reforming catalyst by alkaline treatment of the HZSM-5 zeolite. Applied Catalysis B: Environmental, 2013, 130-131, 73-83.	10.8	59
50	Effect of the Operating Conditions in the Transformation of DME to olefins over a HZSM-5 Zeolite Catalyst. Industrial & Engineering Chemistry Research, 2016, 55, 6569-6578.	1.8	59
51	Performance of CuOâ€“ZnOâ€“ZrO2 and CuOâ€“ZnOâ€“MnO as metallic functions and SAPO-18 as acid function of the catalyst for the synthesis of DME co-feeding CO2. Fuel Processing Technology, 2016, 152, 34-45.	3.7	59
52	Slowing down the deactivation of H-ZSM-5 zeolite catalyst in the methanol-to-olefin (MTO) reaction by P or Zn modifications. Catalysis Today, 2020, 348, 243-256.	2.2	59
53	Design and Operation of a Catalytic Polymerization Reactor in a Dilute Spouted Bed Regime. Industrial & Engineering Chemistry Research, 1997, 36, 1637-1643.	1.8	58
54	Deactivation kinetics for the conversion of dimethyl ether to olefins over a HZSM-5 zeolite catalyst. Chemical Engineering Journal, 2017, 311, 367-377.	6.6	58

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55	Insight into the Deactivation and Regeneration of HZSM-5 Zeolite Catalysts in the Conversion of Dimethyl Ether to Olefins. Industrial & Engineering Chemistry Research, 2018, 57, 13689-13702.	1.8	56
56	Reactivity between La(Sr)FeO3 cathode, doped CeO2 interlayer and yttria-stabilized zirconia electrolyte for solid oxide fuel cell applications. Journal of Power Sources, 2008, 185, 401-410.	4.0	54
57	Simultaneous modeling of the kinetics for n-pentane cracking and the deactivation of a HZSM-5 based catalyst. Chemical Engineering Journal, 2018, 331, 818-830.	6.6	53
58	Coke Aging and Its Incidence on Catalyst Regeneration. Industrial & Engineering Chemistry Research, 2003, 42, 3914-3921.	1.8	50
59	Study of Physical Mixtures of Cr2O3âˆ'ZnO and ZSM-5 Catalysts for the Transformation of Syngas into Liquid Hydrocarbons. Industrial & Engineering Chemistry Research, 1998, 37, 1211-1219.	1.8	49
60	Isotherms of chemical adsorption of bases on solid catalysts for acidity measurement. Journal of Chemical Technology and Biotechnology, 1994, 60, 141-146.	1.6	48
61	Open-Framework Copper Adeninate Compounds with Three-Dimensional Microchannels Tailored by Aliphatic Monocarboxylic Acids. Inorganic Chemistry, 2011, 50, 5330-5332.	1.9	48
62	Synergies in the production of olefins by combined cracking of n-butane and methanol on a HZSM-5 zeolite catalyst. Chemical Engineering Journal, 2010, 160, 760-769.	6.6	47
63	Initiation Step and Reactive Intermediates in the Transformation of Methanol into Olefins over SAPO-18 Catalyst. Industrial & Engineering Chemistry Research, 2005, 44, 7279-7286.	1.8	45
64	Controlling coke deactivation and cracking selectivity of MFI zeolite by H3PO4 or KOH modification. Applied Catalysis A: General, 2015, 505, 105-115.	2.2	45
65	Deactivation Kinetics for Direct Dimethyl Ether Synthesis on a CuOâˆ'ZnOâˆ'Al₂O₃/Î³-Al₂O₃ Catalyst. Industrial & Engineering Chemistry Research, 2010, 49, 481-489.	1.8	44
66	A techno-economic and life cycle assessment for the production of green methanol from CO2: catalyst and process bottlenecks. Journal of Energy Chemistry, 2022, 68, 255-266.	7.1	43
67	Regeneration of a catalyst based on a SAPO-34 used in the transformation of methanol into olefins. Journal of Chemical Technology and Biotechnology, 1999, 74, 1082-1088.	1.6	41
68	Steam Reforming of the Bio-Oil Aqueous Fraction in a Fluidized Bed Reactor with in Situ CO₂ Capture. Industrial & Engineering Chemistry Research, 2013, 52, 17087-17098.	1.8	40
69	Stability of CuZnOAl2O3/HZSM-5 and CuFe2O4/HZSM-5 catalysts in dimethyl ether steam reforming operating in reactionâ€"regeneration cycles. Fuel Processing Technology, 2014, 126, 145-154.	3.7	40
70	Nature and Location of Carbonaceous Species in a Composite HZSM-5 Zeolite Catalyst during the Conversion of Dimethyl Ether into Light Olefins. Catalysts, 2017, 7, 254.	1.6	40
71	Olefin production by cofeeding methanol and <i>n</i>â€butane: Kinetic modeling considering the deactivation of HZSMâ€5 zeolite. AIChE Journal, 2011, 57, 2841-2853.	1.8	39
72	Modifications in the HZSM-5 zeolite for the selective transformation of ethylene into propylene. Applied Catalysis A: General, 2014, 479, 17-25.	2.2	39

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73	Experimental implementation of a catalytic membrane reactor for the direct synthesis of DME from H2+CO/CO2. Chemical Engineering Science, 2021, 234, 116396.	1.9	39
74	Catalyst discrimination for olefin production by coupled methanol/n-butane cracking. Applied Catalysis A: General, 2010, 383, 202-210.	2.2	36
75	ROLE OF WATER IN THE KINETIC MODELING OF METHANOL TRANSFORMATION INTO HYDROCARBONS ON HZSM-5 ZEOLITE. Chemical Engineering Communications, 2004, 191, 944-967.	1.5	35
76	Effect of combining metallic and acid functions in CZA/HZSM-5 desilicated zeolite catalysts on the DME steam reforming in a fluidized bed. International Journal of Hydrogen Energy, 2013, 38, 10019-10028.	3.8	34
77	Kinetic Model for the Transformation of 1-Butene on a K-Modified HZSM-5 Catalyst. Industrial & Engineering Chemistry Research, 2014, 53, 10599-10607.	1.8	34
78	Kinetic behaviour of catalysts with different CuO-ZnO-Al2O3 metallic function compositions in DME steam reforming in a fluidized bed. Applied Catalysis B: Environmental, 2013, 142-143, 315-322.	10.8	32
79	Improved Performance of a PBM Reactor for Simultaneous CO₂ Capture and DME Synthesis. Industrial & Engineering Chemistry Research, 2014, 53, 19479-19487.	1.8	32
80	Intensifying Propylene Production by 1-Butene Transformation on a K Modified HZSM-5 Zeolite-Catalyst. Industrial & Engineering Chemistry Research, 2014, 53, 4614-4622.	1.8	32
81	Effect of Operating Conditions on Dimethyl Ether Steam Reforming over a CuFe₂O₄/Î³-Al₂O₃ Bifunctional Catalyst. Industrial & Engineering Chemistry Research, 2015, 54, 9722-9732.	1.8	32
82	Hydrogen production by steam reforming of bio-oil/bio-ethanol mixtures in a continuous thermal-catalytic process. International Journal of Hydrogen Energy, 2014, 39, 6889-6898.	3.8	31
83	Two appealing alternatives for MOFs synthesis: solvent-free oven heating vs. microwave heating. RSC Advances, 2014, 4, 60409-60412.	1.7	30
84	Selective dealumination of HZSM-5 zeolite boosts propylene by modifying 1-butene cracking pathway. Applied Catalysis A: General, 2017, 543, 1-9.	2.2	30
85	Comparison of Noble Metal- and Copper-Based Catalysts for the Step of Methanol Steam Reforming in the Dimethyl Ether Steam Reforming Process. Industrial & Engineering Chemistry Research, 2016, 55, 3546-3555.	1.8	29
86	Calculation of the kinetics of deactivation by coke of a silica-alumina catalyst in the dehydration of 2-ethylhexanol. Industrial & Engineering Chemistry Research, 1993, 32, 458-465.	1.8	28
87	Kinetic modeling of the direct synthesis of dimethyl ether over a CuOâ€‘ZnOâ€‘MnO/SAPOâ€‘18 catalyst and assessment of the CO2 conversion. Fuel Processing Technology, 2018, 181, 233-243.	3.7	28
88	Strategies for the Intensification of CO₂ Valorization in the One-Step Dimethyl Ether Synthesis Process. Industrial & Engineering Chemistry Research, 2020, 59, 713-722.	1.8	28
89	Acidity, Surface Species, and Mechanism of Methanol Transformation into Olefins on a SAPO-34. Industrial & Engineering Chemistry Research, 1998, 37, 2336-2340.	1.8	27
90	Deactivation kinetics of a HZSMâ€5 zeolite catalyst treated with alkali for the transformation of bioâ€ethanol into hydrocarbons. AICHE Journal, 2012, 58, 526-537.	1.8	27

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91	Kinetic Modeling of the Hydrotreating and Hydrocracking Stages for Upgrading Scrap Tires Pyrolysis Oil (STPO) toward High-Quality Fuels. Energy & Fuels, 2015, 29, 7542-7553.	2.5	27
92	Direct synthesis of dimethyl ether from syngas on CuO ZnO MnO/SAPO-18 bifunctional catalyst. International Journal of Hydrogen Energy, 2016, 41, 18015-18026.	3.8	27
93	Reactorâ€"Regenerator System for the Dimethyl Ether-to-Olefins Process over HZSM-5 Catalysts: Conceptual Development and Analysis of the Process Variables. Industrial & Engineering Chemistry Research, 2020, 59, 14689-14702.	1.8	27
94	Catalyst reactivation kinetics for methanol transformation into hydrocarbons. Expressions for designing reactionâ€"regeneration cycles in isothermal and adiabatic fixed bed reactor. Chemical Engineering Science, 2001, 56, 5059-5071.	1.9	26
95	Optimization of the Zr Content in the CuO-ZnO-ZrO₂/SAPO-11 Catalyst for the Selective Hydrogenation of CO+CO₂ Mixtures in the Direct Synthesis of Dimethyl Ether. Industrial & Engineering Chemistry Research, 2018, 57, 1169-1178.	1.8	26
96	MTG fluidized bed reactorâ€"regenerator unit with catalyst circulation: process simulation and operation of an experimental setup. Chemical Engineering Science, 2000, 55, 3223-3235.	1.9	25
97	Deactivation and acidity deterioration of a silica/alumina catalyst in the isomerization of cis-butene. Industrial & Engineering Chemistry Research, 1993, 32, 588-593.	1.8	23
98	Four nodal self-catenated [{Ni8(Bpy)16}V24O68]Â·8.5(H2O), combining three dimensional metalâ€"organic and inorganic frameworks. CrystEngComm, 2010, 12, 1880.	1.3	23
99	MOFâ€derived/zeolite hybrid catalyst for the production of light olefins from CO₂. ChemCatChem, 2020, 12, 5750-5758.	1.8	23
100	Coke deposition on silica-alumina catalysts in dehydration reactions. Industrial & Engineering Chemistry Product Research and Development, 1985, 24, 531-539.	0.5	22
101	Kinetics of the steam reforming of dimethyl ether over CuFe 2 O 4 /Î³-Al 2 O 3. Chemical Engineering Journal, 2016, 306, 401-412.	6.6	22
102	Direct Synthesis of Dimethyl Ether From (H2+CO) and (H2+CO2) Feeds. Effect of Feed Composition. International Journal of Chemical Reactor Engineering, 2005, 3, .	0.6	21
103	Behavior of a CuFe₂O₄/Î³-Al₂O₃ Catalyst for the Steam Reforming of Dimethyl Ether in Reaction-Regeneration Cycles. Industrial & Engineering Chemistry Research, 2015, 54, 11285-11294.	1.8	21
104	Upgrading of sewage sludge by demineralization and physical activation with CO 2 : Application for methylene blue and phenol removal. Microporous and Mesoporous Materials, 2017, 250, 88-99.	2.2	21
105	Kinetic modeling of CO2+CO hydrogenation to DME over a CuO-ZnO-ZrO2@SAPO-11 core-shell catalyst. Fuel Processing Technology, 2020, 206, 106434.	3.7	21
106	Isomerization of butenes as a test reaction for measurement of solid catalyst acidity. Industrial & Engineering Chemistry Research, 1990, 29, 1172-1178.	1.8	20
107	Role of Shape Selectivity and Catalyst Acidity in the Transformation of Chloromethane into Light Olefins. Industrial & Engineering Chemistry Research, 2015, 54, 7822-7832.	1.8	20
108	SAPO-18 and SAPO-34 catalysts for propylene production from the oligomerization-cracking of ethylene or 1-butene. Applied Catalysis A: General, 2017, 547, 176-182.	2.2	20

#	ARTICLE	IF	CITATIONS
109	Comparison of HZSM-5 Zeolite and SAPO (-18 and -34) Based Catalysts for the Production of Light Olefins from DME. Catalysis Letters, 2016, 146, 1892-1902.	1.4	19
110	Activation of n-pentane while prolonging HZSM-5 catalyst lifetime during its combined reaction with methanol or dimethyl ether. Catalysis Today, 2022, 383, 320-329.	2.2	19
111	Macro-kinetic model for CuOâ€"ZnOâ€"ZrO2@SAPO-11 core-shell catalyst in the direct synthesis of DME from CO/CO2. Renewable Energy, 2021, 169, 1242-1251.	4.3	19
112	Study of temperature-programmed desorption of tert-butylamine to measure the surface acidity of solid catalysts. Industrial & Engineering Chemistry Research, 1990, 29, 1621-1626.	1.8	18
113	Co-feeding water to attenuate deactivation of the catalyst metallic function (CuOâ€"ZnOâ€"Al2O3) by coke in the direct synthesis of dimethyl ether. Applied Catalysis B: Environmental, 2011, 106, 167-167.	10.8	18
114	Effect of the content of CO2 and H2 in the feed on the conversion of CO2 in the direct synthesis of dimethyl ether over a CuO ZnO Al2O3/SAPO-18 catalyst. International Journal of Hydrogen Energy, 2017, 42, 27130-27138.	3.8	18
115	Capability of the Direct Dimethyl Ether Synthesis Process for the Conversion of Carbon Dioxide. Applied Sciences (Switzerland), 2018, 8, 677.	1.3	18
116	Model validation of a packed bed LTA membrane reactor for the direct synthesis of DME from CO/CO2. Chemical Engineering Journal, 2021, 408, 127356.	6.6	18
117	Kinetic Behavior of the SAPO-18 Catalyst in the Transformation of Methanol into Olefins. Industrial & Engineering Chemistry Research, 2005, 44, 6605-6614.	1.8	17
118	Development of a bifunctional catalyst for dimethyl ether steam reforming with CuFe2O4 spinel as the metallic function. Journal of Industrial and Engineering Chemistry, 2016, 36, 169-179.	2.9	17
119	The Role of Zeolite Acidity in Coupled Toluene Hydrogenation and Ring Opening in One and Two Steps. Industrial & Engineering Chemistry Research, 2008, 47, 665-671.	1.8	16
120	Catalyst configuration for the direct synthesis of dimethyl ether from CO and CO2 hydrogenation on CuOâ€"ZnOâ€"MnO/SAPO-18 catalysts. Reaction Kinetics, Mechanisms and Catalysis, 2018, 124, 401-418.	0.8	16
121	A comprehensive approach for designing different configurations of isothermal reactors with fast catalyst deactivation. Chemical Engineering Journal, 2020, 379, 122260.	6.6	16
122	Consideration of the activity distribution using the population balance theory for designing a dual fluidized bed reactor-regenerator system. Application to the MTO process. Chemical Engineering Journal, 2021, 405, 126448.	6.6	16
123	COKE COMBUSTION AND REACTIVATION KINETICS OF A ZSM-5 ZEOLITE BASED CATALYST USED FOR THE TRANSFORMATION OF METHANOL INTO HYDROCARBONS. Chemical Engineering Communications, 1999, 176, 43-63.	1.5	15
124	Microporous vanadyl-arsenate with the template incorporated exhibiting sorption and catalytic properties. Chemical Communications, 2008, , 4738.	2.2	15
125	Reactivation of the HZSM-5 zeolite-based catalyst used in the MTG process. AIChE Journal, 1997, 43, 1551-1558.	1.8	14
126	Composite Î²-AgVO₃@V_{1.6}⁵⁺V_{0.4}⁴⁺O_{4.8} hydrogels and xerogels for iodide capture. Journal of Materials Chemistry A, 2015, 3, 19996-20012.	5.2	14

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127	Conditions for the Joint Conversion of CO₂ and Syngas in the Direct Synthesis of Light Olefins Using In₂O₃â€“ZrO₂/SAPO-34 Catalyst. Industrial & Engineering Chemistry Research, 2022, 61, 10365-10376.	1.8	14
128	MTG Process in a Fixed-Bed Reactor. Operation and Simulation of a Pseudoadiabatic Experimental Unit. Industrial & Engineering Chemistry Research, 2001, 40, 6087-6098.	1.8	13
129	Operating conditions to maximize clean liquid fuels yield by oligomerization of 1-butene on HZSM-5 zeolite catalysts. Energy, 2020, 207, 118317.	4.5	13
130	Spectro-kinetics of the methanol to hydrocarbons reaction combining online product analysis with UVâ€“vis and FTIR spectroscopies throughout the space time evolution. Journal of Catalysis, 2022, 408, 115-127.	3.1	13
131	MTG Process in a Fluidized Bed with Catalyst Circulation:Â Operation and Simulation of an Experimental Unit. Industrial & Engineering Chemistry Research, 1998, 37, 4222-4230.	1.8	12
132	Preparation of carbon-based adsorbents from the pyrolysis of sewage sludge with CO₂. Investigation of the acid washing procedure. Desalination and Water Treatment, 2016, 57, 16053-16065.	1.0	12
133	Kinetics and reactor modeling of the conversion of <i>n</i>-pentane using HZSM-5 catalysts with different Si/Al ratios. Reaction Chemistry and Engineering, 2019, 4, 1922-1934.	1.9	12
134	Quenching the Deactivation in the Methanol-to-Olefin Reaction by Using Tandem Fixed-Beds of ZSM-5 and SAPO-18 Catalysts. Industrial & Engineering Chemistry Research, 2020, 59, 13892-13905.	1.8	12
135	A straightforward synthesis of carbon nanotubeâ€“perovskite composites for solid oxide fuel cells. Journal of Materials Chemistry, 2011, 21, 10273.	6.7	11
136	Kinetic Model for the Conversion of Chloromethane into Hydrocarbons over a HZSM-5 Zeolite Catalyst. Industrial & Engineering Chemistry Research, 2018, 57, 908-919.	1.8	11
137	Kinetic and Deactivation Differences Among Methanol, Dimethyl Ether and Chloromethane as Stock for Hydrocarbons. ChemCatChem, 2019, 11, 5444-5456.	1.8	11
138	Implications of Coâ€Feeding Water on the Growth Mechanisms of Retained Species on a SAPOâ€18 Catalyst during the Methanolâ€toâ€Olefins Reaction. ChemCatChem, 2021, 13, 3140-3154.	1.8	11
139	Optimization of the preparation of a catalyst under deactivation. 1. Control of its kinetic behavior by electing the preparation conditions. Industrial & Engineering Chemistry Research, 1987, 26, 2403-2408.	1.8	10
140	Optimization of temperature-time sequences in reaction-regeneration cycles. Application to the isomerization of cis-butene. Industrial & Engineering Chemistry Research, 1993, 32, 2542-2547.	1.8	10
141	Reaction network of the chloromethane conversion into light olefins using a HZSM-5 zeolite catalyst. Journal of Industrial and Engineering Chemistry, 2018, 61, 427-436.	2.9	10
142	Fe(AsO4): A new iron(iii) arsenate synthesized from thermal treatment of (NH4)[Fe(AsO4)F]. Chemical Communications, 2003, , 622-623.	2.2	9
143	Low-pressure oligomerization of 1-butene to liquid fuels on HZSM-5 zeolite catalysts: Effect of operating conditions. Journal of Industrial and Engineering Chemistry, 2020, 87, 234-241.	2.9	9
144	Simulation and Optimization of Methanol Transformation into Hydrocarbons in an Isothermal Fixed-Bed Reactor under Reactionâˆ’Regeneration Cycles. Industrial & Engineering Chemistry Research, 1998, 37, 2383-2390.	1.8	8

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145	The intrinsic effect of co-feeding water on the formation of active/deactivating species in the methanol-to-hydrocarbons reaction on ZSM-5 zeolite. Catalysis Science and Technology, 2021, 11, 1269-1281.	2.1	8
146	Hydrodynamics of a Liquid-Liquid Countercurrent Extraction Column with Upflow Gas Agitation. Chemie-Ingenieur-Technik, 1986, 58, 74-75.	0.4	7
147	Polymerization of gaseous benzyl alcohol. 1. Study of silica/alumina catalysts and reaction conditions. Industrial & Engineering Chemistry Research, 1987, 26, 1956-1960.	1.8	7
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