Andres Tomas Aguayo

List of Publications by Citations

161 papers	6,960 citations	50 h-index	77 g-index
168 ext. papers	7,641 ext. citations	6.3 avg, IF	5.81 L-index

#	Paper	IF	Citations
161	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	3.9	366
160	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	3.9	325
159	Stable operation conditions for gas-solid contact regimes in conical spouted beds. *Industrial & Engineering Chemistry Research*, **1992**, 31, 1784-1792	3.9	185
158	Insights into the coke deposited on HZSM-5, H and HY zeolites during the cracking of polyethylene. *Applied Catalysis B: Environmental*, **2011**, 104, 91-100	21.8	160
157	Role of acidity and microporous structure in alternative catalysts for the transformation of methanol into olefins. *Applied Catalysis A: General*, **2005**, 283, 197-207	5.1	150
156	Selective Production of Aromatics by Crude Bio-oil Valorization with a Nickel-Modified HZSM-5 Zeolite Catalyst. *Energy & Fuels*, **2010**, 24, 2060-2070	4.1	149
155	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	4.1	148
154	Kinetic Modeling of Dimethyl Ether Synthesis in a Single Step on a CuOZnOAl2O3/Al2O3 Catalyst. *Industrial & Engineering Chemistry Research*, **2007**, 46, 5522-5530	3.9	139
153	Deactivation and regeneration of hybrid catalysts in the single-step synthesis of dimethyl ether from syngas and CO2. *Catalysis Today*, **2005**, 106, 265-270	5.3	139
152	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	5.3	125
151	Selective production of olefins from bioethanol on HZSM-5 zeolite catalysts treated with NaOH. *Applied Catalysis B: Environmental*, **2010**, 97, 299-306	21.8	121
150	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	3.5	121
149	Hydrothermally stable HZSM-5 zeolite catalysts for the transformation of crude bio-oil into hydrocarbons. *Applied Catalysis B: Environmental*, **2010**, 100, 318-327	21.8	115
148	Olefin Production by Catalytic Transformation of Crude Bio-Oil in a Two-Step Process. *Industrial & Engineering Chemistry Research*, **2010**, 49, 123-131	3.9	111
147	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	3.9	107
146	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	5.3	102
145	Kinetics of the irreversible deactivation of the HZSM-5 catalyst in the MTO process. *Chemical Engineering Science*, **2003**, 58, 5239-5249	4.4	100

144	Catalysts of Ni/αAl2O3 and Ni/La2O3-αAl2O3 for hydrogen production by steam reforming of bio-oil aqueous fraction with pyrolytic lignin retention. *International Journal of Hydrogen Energy*, **2013**, 38, 1307-1318	6.7	99
143	Deposition and Characteristics of Coke over a H-ZSM5 Zeolite-Based Catalyst in the MTG Process. *Industrial & Engineering Chemistry Research*, **1996**, 35, 3991-3998	3.9	92
142	Membrane Reactors for in Situ Water Removal: A Review of Applications. *Industrial & Engineering Chemistry Research*, **2013**, 52, 10342-10354	3.9	91
141	Deactivation of a CuO□ZnO□Al2O3/□Al2O3 Catalyst in the Synthesis of Dimethyl Ether. *Industrial & Engineering Chemistry Research*, **2008**, 47, 2238-2247	3.9	89
140	Kinetic Modeling of Methanol Transformation into Olefins on a SAPO-34 Catalyst. *Industrial & Engineering Chemistry Research*, **2000**, 39, 292-300	3.9	88
139	Kinetic modelling of dimethyl ether synthesis from (H2 + CO2) by considering catalyst deactivation. *Chemical Engineering Journal*, **2011**, 174, 660-667	14.7	86
138	Hydrothermal stability of HZSM-5 catalysts modified with Ni for the transformation of bioethanol into hydrocarbons. *Fuel*, **2010**, 89, 3365-3372	7.1	86
137	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	3.5	85
136	Stability and hydrodynamics of conical spouted beds with binary mixtures. *Industrial & Engineering Chemistry Research*, **1993**, 32, 2826-2834	3.9	83
135	Role of water in the kinetic modeling of catalyst deactivation in the MTG process. *AICHE Journal*, **2002**, 48, 1561-1571	3.6	82
134	Modified HZSM-5 zeolites for intensifying propylene production in the transformation of 1-butene. *Chemical Engineering Journal*, **2014**, 251, 80-91	14.7	80
133	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	3.9	77
132	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	3.5	77
131	Catalyst Equilibration for Transformation of Methanol into Hydrocarbons by Reaction□Regeneration Cycles. *Industrial & Engineering Chemistry Research*, **1996**, 35, 2177-2182	3.9	73
130	Design factors of conical spouted beds and jet spouted beds. *Industrial & Engineering Chemistry Research*, **1993**, 32, 1245-1250	3.9	72
129	Kinetic model for the reaction of DME to olefins over a HZSM-5 zeolite catalyst. *Chemical Engineering Journal*, **2016**, 302, 801-810	14.7	70
128	A comparative thermodynamic study on the CO2 conversion in the synthesis of methanol and of DME. *Energy*, **2017**, 120, 796-804	7.9	69
127	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	3.5	66

126	Kinetic modelling for the transformation of bioethanol into olefins on a hydrothermally stable NiHZSM-5 catalyst considering the deactivation by coke. *Chemical Engineering Journal*, **2011**, 167, 262-277	14.7	64
125	Role of Coke Characteristics in the Regeneration of a Catalyst for the MTG Process. *Industrial & Engineering Chemistry Research*, **1997**, 36, 60-66	3.9	63
124	Catalyst deactivation by coking in the MTG process in fixed and fluidized bed reactors. *Catalysis Today*, **1997**, 37, 239-248	5.3	63
123	Role of Reaction-Medium Water on the Acidity Deterioration of a HZSM-5 Zeolite. *Industrial & Engineering Chemistry Research*, **2004**, 43, 5042-5048	3.9	63
122	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	3.5	61
121	Concentration-Dependent Kinetic Model for Catalyst Deactivation in the MTG Process. *Industrial & Engineering Chemistry Research*, **1996**, 35, 81-89	3.9	59
120	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	3.9	58
119	Kinetic Modelling of the Transformation of Aqueous Ethanol into Hydrocarbons on a HZSM-5 Zeolite. *Industrial & Engineering Chemistry Research*, **2001**, 40, 3467-3474	3.9	57
118	Deactivating Species Deposited on PtPd Catalysts in the Hydrocracking of Light-Cycle Oil. *Energy & Fuels*, **2012**, 26, 1509-1519	4.1	56
117	Regeneration of CuO-ZnO-Al2O3/Al2O3 catalyst in the direct synthesis of dimethyl ether. *Applied Catalysis B: Environmental*, **2010**, 94, 108-116	21.8	56
116	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	5.8	55
115	Design and Operation of a Catalytic Polymerization Reactor in a Dilute Spouted Bed Regime. *Industrial & Engineering Chemistry Research*, **1997**, 36, 1637-1643	3.9	55
114	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	14.7	52
113	Improving the DME steam reforming catalyst by alkaline treatment of the HZSM-5 zeolite. *Applied Catalysis B: Environmental*, **2013**, 130-131, 73-83	21.8	52
112	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	8.9	52
111	Coke Aging and Its Incidence on Catalyst Regeneration. *Industrial & Engineering Chemistry Research*, **2003**, 42, 3914-3921	3.9	48
110	Performance of CuOZnOZrO2 and CuOZnOMnO 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	7.2	46
109	Deactivation kinetics for the conversion of dimethyl ether to olefins over a HZSM-5 zeolite catalyst. *Chemical Engineering Journal*, **2017**, 311, 367-377	14.7	46

108	Study of Physical Mixtures of Cr2O3–ZnO and ZSM-5 Catalysts for the Transformation of Syngas into Liquid Hydrocarbons. *Industrial & Engineering Chemistry Research*, **1998**, 37, 1211-1219	3.9	46
107	Open-framework copper adeninate compounds with three-dimensional microchannels tailored by aliphatic monocarboxylic acids. *Inorganic Chemistry*, **2011**, 50, 5330-2	5.1	45
106	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	3.9	45
105	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	14.7	40
104	Isotherms of chemical adsorption of bases on solid catalysts for acidity measurement. *Journal of Chemical Technology and Biotechnology*, **1994**, 60, 141-146	3.5	40
103	Controlling coke deactivation and cracking selectivity of MFI zeolite by H3PO4 or KOH modification. *Applied Catalysis A: General*, **2015**, 505, 105-115	5.1	38
102	Olefin production by cofeeding methanol and n-butane: Kinetic modeling considering the deactivation of HZSM-5 zeolite. *AICHE Journal*, **2011**, 57, 2841-2853	3.6	38
101	Deactivation Kinetics for Direct Dimethyl Ether Synthesis on a CuO–ZnO–Al2O3/γ-Al2O3 Catalyst. *Industrial & Engineering Chemistry Research*, **2010**, 49, 481-489	3.9	38
100	Initiation Step and Reactive Intermediates in the Transformation of Methanol into Olefins over SAPO-18 Catalyst. *Industrial & Engineering Chemistry Research*, **2005**, 44, 7279-7286	3.9	37
99	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	3.5	37
98	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	3.9	37
97	Stability of CuZnOAl2O3/HZSM-5 and CuFe2O4/HZSM-5 catalysts in dimethyl ether steam reforming operating in reaction–regeneration cycles. *Fuel Processing Technology*, **2014**, 126, 145-154	7.2	35
96	Catalyst discrimination for olefin production by coupled methanol/n-butane cracking. *Applied Catalysis A: General*, **2010**, 383, 202-210	5.1	35
95	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	14.7	34
94	Modifications in the HZSM-5 zeolite for the selective transformation of ethylene into propylene. *Applied Catalysis A: General*, **2014**, 479, 17-25	5.1	34
93	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	3.9	34
92	Kinetic Model for the Transformation of 1-Butene on a K-Modified HZSM-5 Catalyst. *Industrial & Engineering Chemistry Research*, **2014**, 53, 10599-10607	3.9	32
91	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	5.3	32

90	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	21.8	30
89	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	6.7	30
88	ROLE OF WATER IN THE KINETIC MODELING OF METHANOL TRANSFORMATION INTO HYDROCARBONS ON HZSM-5 ZEOLITE. *Chemical Engineering Communications*, **2004**, 191, 944-967	2.2	30
87	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	6.7	29
86	Intensifying Propylene Production by 1-Butene Transformation on a K Modified HZSM-5 Zeolite-Catalyst. *Industrial & Engineering Chemistry Research*, **2014**, 53, 4614-4622	3.9	29
85	Effect of Operating Conditions on Dimethyl Ether Steam Reforming over a CuFe2O4/□Al2O3 Bifunctional Catalyst. *Industrial & Engineering Chemistry Research*, **2015**, 54, 9722-9732	3.9	28
84	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	4	27
83	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	3.9	27
82	Catalyst reactivation kinetics for methanol transformation into hydrocarbons. Expressions for designing reaction□egeneration cycles in isothermal and adiabatic fixed bed reactor. *Chemical Engineering Science*, **2001**, 56, 5059-5071	4.4	25
81	Acidity, Surface Species, and Mechanism of Methanol Transformation into Olefins on a SAPO-34. *Industrial & Engineering Chemistry Research*, **1998**, 37, 2336-2340	3.9	25
80	Two appealing alternatives for MOFs synthesis: solvent-free oven heating vs. microwave heating. *RSC Advances*, **2014**, 4, 60409-60412	3.7	24
79	Direct synthesis of dimethyl ether from syngas on CuO ZnO MnO/SAPO-18 bifunctional catalyst. *International Journal of Hydrogen Energy*, **2016**, 41, 18015-18026	6.7	23
78	Selective dealumination of HZSM-5 zeolite boosts propylene by modifying 1-butene cracking pathway. *Applied Catalysis A: General*, **2017**, 543, 1-9	5.1	23
77	Four nodal self-catenated [{Ni8(Bpy)16}V24O68]□8.5(H2O), combining three dimensional metal□rganic and inorganic frameworks. *CrystEngComm*, **2010**, 12, 1880	3.3	23
76	MTG fluidized bed reactor□egenerator unit with catalyst circulation: process simulation and operation of an experimental setup. *Chemical Engineering Science*, **2000**, 55, 3223-3235	4.4	23
75	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	3.9	22
74	Improved Performance of a PBM Reactor for Simultaneous CO2 Capture and DME Synthesis. *Industrial & Engineering Chemistry Research*, **2014**, 53, 19479-19487	3.9	22
73	Deactivation and acidity deterioration of a silica/alumina catalyst in the isomerization of cis-butene. *Industrial & Engineering Chemistry Research*, **1993**, 32, 588-593	3.9	22

72	Coke deposition on silica-alumina catalysts in dehydration reactions. *Industrial & Engineering Chemistry Product Research and Development*, **1985**, 24, 531-539		22
71	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	4.1	21
70	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	3.9	21
69	Deactivation kinetics of a HZSM-5 zeolite catalyst treated with alkali for the transformation of bio-ethanol into hydrocarbons. *AICHE Journal*, **2012**, 58, 526-537	3.6	21
68	Behavior of a CuFe2O4/Al2O3 Catalyst for the Steam Reforming of Dimethyl Ether in Reaction-Regeneration Cycles. *Industrial & Engineering Chemistry Research*, **2015**, 54, 11285-11294	3.9	20
67	Kinetics of the steam reforming of dimethyl ether over CuFe2O4/Al2O3. *Chemical Engineering Journal*, **2016**, 306, 401-412	14.7	20
66	Isomerization of butenes as a test reaction for measurement of solid catalyst acidity. *Industrial & Engineering Chemistry Research*, **1990**, 29, 1172-1178	3.9	19
65	Kinetic modeling of the direct synthesis of dimethyl ether over a CuO-ZnO-MnO/SAPO-18 catalyst and assessment of the CO2 conversion. *Fuel Processing Technology*, **2018**, 181, 233-243	7.2	19
64	Study of temperature-programmed desorption of tert-butylamine to measure the surface acidity of solid catalysts. *Industrial & Engineering Chemistry Research*, **1990**, 29, 1621-1626	3.9	18
63	Direct Synthesis of Dimethyl Ether From (H2+CO) and (H2+CO2) Feeds. Effect of Feed Composition. *International Journal of Chemical Reactor Engineering*, **2005**, 3,	1.2	17
62	Role of Shape Selectivity and Catalyst Acidity in the Transformation of Chloromethane into Light Olefins. *Industrial & Engineering Chemistry Research*, **2015**, 54, 7822-7832	3.9	16
61	Co-feeding water to attenuate deactivation of the catalyst metallic function (CuO-ZnO-Al2O3) by coke in the direct synthesis of dimethyl ether. *Applied Catalysis B: Environmental*, **2011**, 106, 167-167	21.8	16
60	Kinetic Behavior of the SAPO-18 Catalyst in the Transformation of Methanol into Olefins. *Industrial & Engineering Chemistry Research*, **2005**, 44, 6605-6614	3.9	16
59	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	5.1	15
58	Kinetic modeling of CO2+CO hydrogenation to DME over a CuO-ZnO-ZrO2@SAPO-11 core-shell catalyst. *Fuel Processing Technology*, **2020**, 206, 106434	7.2	14
57	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	6.3	14
56	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	2.2	14
55	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	5.3	13

54	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	3.9	13
53	Strategies for the Intensification of CO2 Valorization in the One-Step Dimethyl Ether Synthesis Process. *Industrial & Engineering Chemistry Research*, **2020**, 59, 713-722	3.9	13
52	Reactor 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	3.9	13
51	MOF-derived/zeolite hybrid catalyst for the production of light olefins from CO2. *ChemCatChem*, **2020**, 12, 5750-5758	5.2	13
50	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	2.8	13
49	Coke deactivation and regeneration of HZSM-5 zeolite catalysts in the oligomerization of 1-butene. *Applied Catalysis B: Environmental*, **2021**, 291, 120076	21.8	13
48	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 CuOZnOAl2O3/SAPO-18 catalyst. *International Journal of Hydrogen Energy*, **2017**, 42, 27130-27138	6.7	12
47	Composite AgVO3@V1.65+V0.44+O4.8 hydrogels and xerogels for iodide capture. *Journal of Materials Chemistry A*, **2015**, 3, 19996-20012	13	12
46	Catalyst configuration for the direct synthesis of dimethyl ether from CO and CO2 hydrogenation on CuOZnOMnO/SAPO-18 catalysts. *Reaction Kinetics, Mechanisms and Catalysis*, **2018**, 124, 401-418	1.6	12
45	Capability of the Direct Dimethyl Ether Synthesis Process for the Conversion of Carbon Dioxide. *Applied Sciences (Switzerland)*, **2018**, 8, 677	2.6	12
44	Reactivation of the HZSM-5 zeolite-based catalyst used in the MTG process. *AICHE Journal*, **1997**, 43, 1551-1558	3.6	12
43	Microporous vanadyl-arsenate with the template incorporated exhibiting sorption and catalytic properties. *Chemical Communications*, **2008**, 4738-40	5.8	12
42	MTG Process in a Fixed-Bed Reactor. Operation and Simulation of a Pseudoadiabatic Experimental Unit. *Industrial & Engineering Chemistry Research*, **2001**, 40, 6087-6098	3.9	12
41	MTG Process in a Fluidized Bed with Catalyst Circulation: Operation and Simulation of an Experimental Unit. *Industrial & Engineering Chemistry Research*, **1998**, 37, 4222-4230	3.9	11
40	Experimental implementation of a catalytic membrane reactor for the direct synthesis of DME from H2+CO/CO2. *Chemical Engineering Science*, **2021**, 234, 116396	4.4	11
39	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		10
38	A straightforward synthesis of carbon nanotube perovskite composites for solid oxide fuel cells. *Journal of Materials Chemistry*, **2011**, 21, 10273		9
37	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	3.9	9

36	A comprehensive approach for designing different configurations of isothermal reactors with fast catalyst deactivation. *Chemical Engineering Journal*, **2020**, 379, 122260	14.7	9
35	Activation of n-pentane while prolonging HZSM-5 catalyst lifetime during its combined reaction with methanol or dimethyl ether. *Catalysis Today*, **2020**,	5.3	8
34	Kinetics and reactor modeling of the conversion of n-pentane using HZSM-5 catalysts with different Si/Al ratios. *Reaction Chemistry and Engineering*, **2019**, 4, 1922-1934	4.9	8
33	Fe(AsO4): a new iron(III) arsenate synthesized from thermal treatment of (NH4)[Fe(AsO4)F]. *Chemical Communications*, **2003**, 622-3	5.8	8
32	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	6.3	7
31	Kinetic and Deactivation Differences Among Methanol, Dimethyl Ether and Chloromethane as Stock for Hydrocarbons. *ChemCatChem*, **2019**, 11, 5444-5456	5.2	7
30	Joint Transformation of Methanol and n-Butane into Olefins on an HZSM-5 Zeolite Catalyst in ReactionRegeneration Cycles. *Industrial & Engineering Chemistry Research*, **2012**, 51, 13073-13084	3.9	7
29	Macro-kinetic model for CuOZnOZrO2@SAPO-11 core-shell catalyst in the direct synthesis of DME from CO/CO2. *Renewable Energy*, **2021**, 169, 1242-1251	8.1	7
28	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	14.7	7
27	Model validation of a packed bed LTA membrane reactor for the direct synthesis of DME from CO/CO2. *Chemical Engineering Journal*, **2021**, 408, 127356	14.7	7
26	Kinetic Model for the Conversion of Chloromethane into Hydrocarbons over a HZSM-5 Zeolite Catalyst. *Industrial & Engineering Chemistry Research*, **2018**, 57, 908-919	3.9	6
25	Simulation and Optimization of Methanol Transformation into Hydrocarbons in an Isothermal Fixed-Bed Reactor under ReactionRegeneration Cycles. *Industrial & Engineering Chemistry Research*, **1998**, 37, 2383-2390	3.9	6
24	Optimization of temperature-time sequences in reaction-regeneration cycles. Application to the isomerization of cis-butene. *Industrial & Engineering Chemistry Research*, **1993**, 32, 2542-2547	3.9	6
23	Polymerization of gaseous benzyl alcohol. 3. Deactivation mechanism of silica/alumina catalyst. *Industrial & Engineering Chemistry Research*, **1989**, 28, 1752-1756	3.9	6
22	Optimization of the preparation of a catalyst under deactivation. 2. Application to the operation in reaction-regeneration cycles. *Industrial & Engineering Chemistry Research*, **1989**, 28, 1299-1303	3.9	6
21	Polymerization of gaseous benzyl alcohol. 1. Study of silica/alumina catalysts and reaction conditions. *Industrial & Engineering Chemistry Research*, **1987**, 26, 1956-1960	3.9	6
20	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	3.9	5
19	Study of the regeneration stage of the MTG process in a pseudoadiabatic fixed bed reactor. *Chemical Engineering Journal*, **2003**, 92, 141-150	14.7	5

18	A techno-economic and life cycle assessment for the production of green methanol from CO2: catalyst and process bottlenecks. *Journal of Energy Chemistry*, **2021**, 68, 255-255	12	5
17	Crystal structure of K0.75[Fe(II) 3.75Fe(III) 1.25(HPO3)6][]0.5H2O, an open-framework iron phosphite with mixed-valent Fe(II)/Fe(III) ions. *Acta Crystallographica Section E: Crystallographic Communications*, **2016**, 72, 63-5	0.7	4
16	Analysis of kinetic models of the methanol-to-gasoline (MTG) process in an integral reactor. *The Chemical Engineering Journal and the Biochemical Engineering Journal*, **1996**, 63, 45-51		4
15	Hydrodynamics of a Liquid-Liquid Countercurrent Extraction Column with Upflow Gas Agitation. *Chemie-Ingenieur-Technik*, **1986**, 58, 74-75	0.8	3
14	Operating conditions to maximize clean liquid fuels yield by oligomerization of 1-butene on HZSM-5 zeolite catalysts. *Energy*, **2020**, 207, 118317	7.9	3
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