Diane Hildebrandt

List of Publications by Year
in descending order

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225 papers	3,660 citations	159525 30 h-index	206029 48 g-index
250 all docs	250 docs citations	250 times ranked	2429 citing authors

#	Article	IF	Citations
1	A geometric approach to steady flow reactors: the attainable region and optimization in concentration space. Industrial & Engineering Chemistry Research, 1987, 26, 1803-1810.	1.8	210
2	Fischerâ€“Tropsch synthesis over iron catalysts supported on carbon nanotubes. Applied Catalysis A: General, 2005, 287, 60-67.	2.2	189
3	Optimal reactor design from a geometric viewpointâ€”I. Universal properties of the attainable region. Chemical Engineering Science, 1997, 52, 1637-1665.	1.9	125
4	Geometry of the attainable region generated by reaction and mixing: with and without constraints. Industrial & Engineering Chemistry Research, 1990, 29, 49-58.	1.8	116
5	The attainable region and optimal reactor structures. Chemical Engineering Science, 1990, 45, 2161-2168.	1.9	111
6	Fe-Ru small particle bimetallic catalysts supported on carbon nanotubes for use in Fischerâ€“TrÃ¶psch synthesis. Applied Catalysis A: General, 2007, 328, 243-251.	2.2	96
7	Fischerâ€“Tropsch Synthesis Using H₂/CO/CO₂ Syngas Mixtures over a Cobalt Catalyst. Industrial & Engineering Chemistry Research, 2010, 49, 11061-11066.	1.8	75
8	Fischerâ€“Tropsch Synthesis Using H₂/CO/CO₂ Syngas Mixtures over an Iron Catalyst. Industrial & Engineering Chemistry Research, 2011, 50, 11002-11012.	1.8	60
9	A critical review of the impact of water on cobalt-based catalysts in Fischer-Tropsch synthesis. Fuel Processing Technology, 2019, 192, 105-129.	3.7	55
10	Metal-organic framework (MOF)-derived catalysts for Fischer-Tropsch synthesis: Recent progress and future perspectives. Journal of Energy Chemistry, 2020, 51, 230-245.	7.1	52
11	Wastewater treatment of reactive dyestuffs by ozonation in a semi-batch reactor. Chemical Engineering Journal, 2011, 166, 662-668.	6.6	47
12	Heat transfer study with and without Fischer-Tropsch reaction in a fixed bed reactor with TiO2, SiO2, and SiC supported cobalt catalysts. Chemical Engineering Journal, 2014, 247, 75-84.	6.6	45
13	Column Profile Maps. 1. Derivation and Interpretation. Industrial & Engineering Chemistry Research, 2004, 43, 364-374.	1.8	44
14	The effect of sulfur on supported cobalt Fischerâ€“Tropsch catalysts. Catalysis Today, 1999, 49, 33-40.	2.2	43
15	Linear programming formulations for attainable region analysis. Chemical Engineering Science, 2002, 57, 2015-2028.	1.9	42
16	The application of the attainable region analysis to comminution. Chemical Engineering Science, 2006, 61, 5969-5980.	1.9	42
17	Determination of the milling parameters of a platinum group minerals ore to optimize product size distribution for flotation purposes. Minerals Engineering, 2013, 43-44, 67-78.	1.8	41
18	The simultaneous adsorption, activation and in situ reduction of carbon dioxide over Au-loading BiOCl with rich oxygen vacancies. Nanoscale, 2021, 13, 2585-2592.	2.8	41

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19	Producing Transportation Fuels with Less Work. Science, 2009, 323, 1680-1681.	6.0	40
20	Recent advances in understanding the Fischerâ€“Tropsch synthesis (FTS) reaction. Current Opinion in Chemical Engineering, 2012, 1, 296-302.	3.8	38
21	Optimal mixing for exothermic reversible reactions. Industrial & Engineering Chemistry Research, 1992, 31, 1541-1549.	1.8	35
22	Effect of the addition of Au on Co/TiO2 catalyst for the Fischerâ€“Tropsch reaction. Topics in Catalysis, 2007, 44, 129-136.	1.3	35
23	Use of the attainable region analysis to optimize particle breakage in a ball mill. Chemical Engineering Science, 2009, 64, 3766-3777.	1.9	35
24	The role of vapourâ€“liquid equilibrium in Fischerâ€“Tropsch product distribution. Chemical Engineering Science, 2011, 66, 6254-6263.	1.9	35
25	Vapor recompression for efficient distillation. 1. A new synthesis perspective on standard configurations. AICHE Journal, 2013, 59, 2977-2992.	1.8	35
26	Study of Radial Heat Transfer in a Tubular Fischerâ^'Tropsch Synthesis Reactor. Industrial & Engineering Chemistry Research, 2010, 49, 10682-10688.	1.8	33
27	An attainable region analysis of the effect of ball size on milling. Powder Technology, 2011, 210, 36-46.	2.1	33
28	Study of the effects of temperature on syngas composition from pyrolysis of wood pellets using a nitrogen plasma torch reactor. Journal of Analytical and Applied Pyrolysis, 2018, 130, 159-168.	2.6	33
29	Synthesis, structure, and performance of carbide phases in Fischer-Tropsch synthesis: A critical review. Fuel, 2021, 296, 120689.	3.4	33
30	Reactor and process synthesis. Computers and Chemical Engineering, 1997, 21, S775-S783.	2.0	32
31	A comparison of Au/Co/Al2O3 and Au/Co/SiO2 catalysts in the Fischerâ€“Tropsch reaction. Applied Catalysis A: General, 2011, 395, 1-9.	2.2	32
32	The effect of CO2 on a cobalt-based catalyst for low temperature Fischerâ€“Tropsch synthesis. Chemical Engineering Journal, 2012, 193-194, 318-327.	6.6	32
33	Cobalt hybrid catalysts in Fischer-Tropsch synthesis. Reviews in Chemical Engineering, 2020, 36, 437-457.	2.3	32
34	The effect of silanol groups on the metal-support interactions in silica-supported cobalt Fischer-Tropsch catalysts. A temperature programmed surface reaction. Journal of Catalysis, 2020, 381, 121-129.	3.1	31
35	The impact and challenges of sustainable biogas implementation: moving towards a bio-based economy. Energy, Sustainability and Society, 2017, 7, .	1.7	30
36	Choosing Optimal Control Policies Using the Attainable Region Approach. Industrial & Engineering Chemistry Research, 1999, 38, 639-651.	1.8	29

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37	Fischerâ€“Tropsch synthesis using H2/CO/CO2 syngas mixtures: A comparison of paraffin to olefin ratios for iron and cobalt based catalysts. Applied Catalysis A: General, 2012, 433-434, 58-68.	2.2	29
38	Incorporation of solar-thermal energy into a gasification process to co-produce bio-fertilizer and power. Environmental Pollution, 2020, 266, 115103.	3.7	28
39	On-line deactivation of Au/TiO2 for CO oxidation in H2-rich gas streams. Catalysis Today, 2007, 122, 254-259.	2.2	27
40	Ultra-deep desulphurization of both model and commercial diesel fuels by adsorption method. Journal of Environmental Chemical Engineering, 2019, 7, 102957.	3.3	27
41	A study of Fischer-Tropsch synthesis: Product distribution of the light hydrocarbons. Applied Catalysis A: General, 2016, 517, 217-226.	2.2	26
42	Column Profile Maps. 2. Singular Points and Phase Diagram Behaviour in Ideal and Nonideal Systems. Industrial & Engineering Chemistry Research, 2004, 43, 3590-3603.	1.8	25
43	Thermodynamics Analysis of Processes. 1. Implications of Work Integration. Industrial & Engineering Chemistry Research, 2005, 44, 3529-3537.	1.8	25
44	Application of basic process modeling in investigating the breakage behavior of UG2 ore in wet milling. Powder Technology, 2015, 279, 42-48.	2.1	25
45	Classification of Chemical Processes: A Graphical Approach to Process Synthesis To Improve Reactive Process Work Efficiency. Industrial & Engineering Chemistry Research, 2010, 49, 8227-8237.	1.8	24
46	Variation of residence time with chain length for products in a slurry-phase Fischerâ€“Tropsch reactor. Journal of Catalysis, 2012, 287, 93-101.	3.1	23
47	The Attainable Region for Segregated, Maximum Mixed, and Other Reactor Models. Industrial & Engineering Chemistry Research, 1994, 33, 1136-1144.	1.8	22
48	An experimental validation of a specific energy-based approach for comminution. Chemical Engineering Science, 2007, 62, 2765-2776.	1.9	22
49	A laboratory scale application of the attainable region technique on a platinum ore. Powder Technology, 2015, 274, 14-19.	2.1	22
50	Fischerâ€“Tropsch synthesis: product distribution, operating conditions, iron catalyst deactivation and catalyst speciation. International Journal of Industrial Chemistry, 2018, 9, 317-333.	3.1	22
51	Optimal reactor structures for exothermic reversible reactions with complex kinetics. Chemical Engineering Science, 1996, 51, 2399-2407.	1.9	21
52	Improving comminution efficiency using classification: An attainable region approach. Powder Technology, 2008, 187, 252-259.	2.1	21
53	A vaporâ€“liquid equilibrium thermodynamic model for a Fischerâ€“Tropsch reactor. Fluid Phase Equilibria, 2012, 314, 38-45.	1.4	21
54	Ball size distribution for the maximum production of a narrowly-sized mill product. Powder Technology, 2015, 284, 12-18.	2.1	21

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55	Scale-up of batch grinding data for simulation of industrial milling of platinum group minerals ore. Minerals Engineering, 2014, 63, 100-109.	1.8	20
56	A long term study of the gas phase of low pressure Fischer-Tropsch products when reducing an iron catalyst with three different reducing gases. Applied Catalysis A: General, 2017, 534, 1-11.	2.2	20
57	Reactor and Process Synthesis. Computers and Chemical Engineering, 1997, 21, S775-S783.	2.0	20
58	Olefin pseudo-equilibrium in the Fischerâ€“Tropsch reaction. Chemical Engineering Journal, 2012, 181-182, 667-676.	6.6	19
59	Synthesis and Integration of Chemical Processes from a Mass, Energy, and Entropy Perspective. Industrial & Engineering Chemistry Research, 2007, 46, 8756-8766.	1.8	18
60	Complex Column Design by Application of Column Profile Map Techniques: Sharp-Split Petlyuk Column Design. Industrial & Engineering Chemistry Research, 2010, 49, 327-349.	1.8	18
61	Application of attainable region theory to batch reactors. Chemical Engineering Science, 2013, 99, 203-214.	1.9	18
62	Analysis of an exothermic reversible reaction in a catalytic reactor with periodic flow reversal. Chemical Engineering Science, 1992, 47, 1825-1837.	1.9	17
63	Making Sense of the Fischerâ˜Tropsch Synthesis Reaction: Start-Up. Industrial & Engineering Chemistry Research, 2010, 49, 9753-9758.	1.8	17
64	Estimating rate constants of contaminant removal in constructed wetlands treating winery effluent: A comparison of three different methods. Chemical Engineering Research and Design, 2014, 92, 903-916.	2.7	17
65	Desulphurization of diesel fuels using intermediate Lewis acids loaded on activated charcoal and alumina. Chemical Engineering Communications, 2019, 206, 572-580.	1.5	17
66	DRIFT spectroscopy and optical reflectance of heat-treated coal from a quenched gasifier. Fuel, 1995, 74, 1216-1219.	3.4	16
67	Novel separation system design using â€œmoving trianglesâ€• Computers and Chemical Engineering, 2004, 29, 181-189.	2.0	16
68	Fischerâ€“TrÃ¶psch synthesis over Co/TiO2: Effect of ethanol addition. Fuel, 2007, 86, 73-80.	3.4	16
69	Reactive distillation in conventional Fischerâ€“Tropsch reactors. Fuel Processing Technology, 2015, 130, 54-61.	3.7	16
70	Modulated synthesized Ni-based MOF with improved adsorptive desulfurization activity. Journal of Cleaner Production, 2021, 323, 129196.	4.6	16
71	Self-assembled Zn-functionalized Ni-MOF as an efficient electrode for electrochemical energy storage. Journal of Physics and Chemistry of Solids, 2022, 167, 110779.	1.9	15
72	Variables indicating the cost of vapour-liquid equilibrium separation processes. Chemical Engineering Science, 1996, 51, 4749-4757.	1.9	14

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73	High yield syngas formation by partial oxidation of methane over Co-alumina catalysts. Studies in Surface Science and Catalysis, 1997, , 461-465.	1.5	14
74	A graphical approach to process synthesis and its application to steam reforming. AICHE Journal, 2013, 59, 3714-3729.	1.8	14
75	Turning wine (waste) into water: Toward technological advances in the use of constructed wetlands for winery effluent treatment. AICHE Journal, 2014, 60, 420-431.	1.8	14
76	Variation of the Short-Chain Paraffin and Olefin Formation Rates with Time for a Cobalt Fischerâ€“Tropsch Catalyst. Industrial & Engineering Chemistry Research, 2017, 56, 469-478.	1.8	14
77	The â€œyuck factorâ€•of biogas technology: Naturalness concerns, social acceptance and community dynamics in South Africa. Energy Research and Social Science, 2021, 71, 101846.	3.0	14
78	Process synthesis for reaction systems with cooling via finding the Attainable Region. Computers and Chemical Engineering, 1997, 21, S35-S40.	2.0	14
79	Predicting phase and chemical equilibrium using the convex hull of the Gibbs free energy. The Chemical Engineering Journal and the Biochemical Engineering Journal, 1994, 54, 187-197.	0.1	13
80	The Attainable Region and Pontryagin's Maximum Principle. Industrial & Engineering Chemistry Research, 1999, 38, 652-659.	1.8	13
81	A Process Synthesis Approach To Investigate the Effect of the Probability of Chain Growth on the Efficiency of Fischerâ€“Tropsch Synthesis. Industrial & Engineering Chemistry Research, 2006, 45, 5928-5935.	1.8	13
82	A Thermodynamic Approach to Olefin Product Distribution in Fischerâ€“Tropsch Synthesis. Industrial & Engineering Chemistry Research, 2012, 51, 16544-16551.	1.8	13
83	Use of the attainable region approach to determine major trends and optimize particle breakage in a laboratory mill. Powder Technology, 2016, 291, 414-419.	2.1	13
84	Process synthesis for reaction systems with cooling via finding the Attainable Region. Computers and Chemical Engineering, 1997, 21, S35-S40.	2.0	12
85	Effect of cobalt carboxylate precursor chain length on Fischer-TrÃ¶psch cobalt/alumina catalysts. Applied Catalysis A: General, 2007, 326, 164-172.	2.2	12
86	A New Way to Look at Fischerâ€“Tropsch Synthesis Using Flushing Experiments. Industrial & Engineering Chemistry Research, 2011, 50, 4359-4365.	1.8	12
87	Low-Pressure Fischerâ€“Tropsch Synthesis: In Situ Oxidative Regeneration of Iron Catalysts. Industrial & Engineering Chemistry Research, 2017, 56, 4267-4274.	1.8	12
88	<scp>Fischerâ€“Tropsch</scp> synthesis with ethene coâ€feeding: Experimental evidence of the COâ€insertion mechanism at low temperature. AICHE Journal, 2020, 66, e17029.	1.8	12
89	Role of CoO-Co nanoparticles supported on SiO2 in Fischer-Tropsch synthesis: Evidence for enhanced CO dissociation and olefin hydrogenation. Fuel Processing Technology, 2021, 216, 106781.	3.7	12
90	ZIF-8-derived ZnO/C decorated hydroxyl-functionalized multi-walled carbon nanotubes as a new composite electrode for supercapacitor application. Colloids and Interface Science Communications, 2022, 47, 100589.	2.0	12

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91	Fischerâ˜Tropsch Results and Their Analysis for Reactor Synthesis. Industrial & Engineering Chemistry Research, 2005, 44, 5987-5994.	1.8	11
92	Application of Membrane Residue Curve Maps to Batch and Continuous Processes. Industrial & Engineering Chemistry Research, 2008, 47, 2361-2376.	1.8	11
93	Recursive constant control policy algorithm for attainable regions analysis. Computers and Chemical Engineering, 2009, 33, 309-320.	2.0	11
94	A Revised Method of Attainable Region Construction Utilizing Rotated Bounding Hyperplanes. Industrial & Engineering Chemistry Research, 2010, 49, 10549-10557.	1.8	11
95	Work to Chemical Processes: The Relationship between Heat, Temperature, Pressure, and Process Complexity. Industrial & Engineering Chemistry Research, 2011, 50, 8603-8619.	1.8	11
96	Effects of CO₂ on South African fresh water microalgae growth. Environmental Progress and Sustainable Energy, 2012, 31, 24-28.	1.3	11
97	Liquid Fuels from Alternative Carbon Sources Minimizing Carbon Dioxide Emissions. AICHE Journal, 2013, 59, 2062-2078.	1.8	11
98	Kinetics of the Decomposition of Hydrogen Peroxide in Acidic Copper Sulfate Solutions. Industrial & Engineering Chemistry Research, 2015, 54, 5589-5597.	1.8	11
99	Use of the attainable region method to simulate a full-scale ball mill with a realistic transport model. Minerals Engineering, 2015, 73, 116-123.	1.8	11
100	A Study of the Fischerâ€“Tropsch Synthesis in a Batch Reactor: Rate, Phase of Water, and Catalyst Oxidation. Energy & Fuels, 2017, 31, 7405-7412.	2.5	11
101	The effect of hydrophobicity on SiO2â€“supported Co catalysts in Fischer-Tropsch synthesis. Fuel, 2021, 296, 120667.	3.4	11
102	Binary distillation re-visited using the attainable region theory. Computers and Chemical Engineering, 2000, 24, 231-237.	2.0	10
103	Derivation and Properties of Membrane Residue Curve Maps. Industrial & Engineering Chemistry Research, 2006, 45, 9080-9087.	1.8	10
104	Synthesizing a Process from Experimental Results:Â A Fischerâ˜Tropsch Case Study. Industrial & Engineering Chemistry Research, 2007, 46, 156-167.	1.8	10
105	Low-pressure methanol/ dimethylether synthesis from syngas on gold-based catalysts. Gold Bulletin, 2007, 40, 219-224.	3.2	10
106	Using the attainable region analysis to determine the effect of process parameters on breakage in a ball mill. AICHE Journal, 2012, 58, 2665-2673.	1.8	10
107	A fundamental investigation on the breakage of a bed of silica sand particles: An attainable region approach. Powder Technology, 2016, 301, 1208-1212.	2.1	10
108	Effect of feeding nitrogen to a fixed bed Fischerâ€“Tropsch reactor while keeping the partial pressures of reactants the same. Chemical Engineering Journal, 2016, 293, 151-160.	6.6	10

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109	Optimization of the Thermal Efficiency of a Fixed-Bed Gasifier using Computational Fluid Dynamics. Computer Aided Chemical Engineering, 2018, 44, 1747-1752.	0.3	10
110	Fischerâ€“Tropsch synthesis: The effect of hydrophobicity on silica-supported iron catalysts. Journal of Industrial and Engineering Chemistry, 2021, 97, 426-433.	2.9	10
111	The attainable region for systems with mixing and multiple-rate processes: finding optimal reactor structures. The Chemical Engineering Journal and the Biochemical Engineering Journal, 1994, 54, 175-186.	0.1	9
112	Automating reactor network synthesis: finding a candidate attainable region for the waterâ€“gas shift (WGS) reaction. Computers and Chemical Engineering, 2004, 28, 149-160.	2.0	9
113	The Oxidative Dehydrogenation ofn-Butane in a Fixed-Bed Reactor and in an Inert Porous Membrane ReactorMaximizing the Production of Butenes and Butadiene. Industrial & Engineering Chemistry Research, 2006, 45, 2661-2671.	1.8	9
114	Conversion of Synthesis Gas to Dimethylether Over Gold-based Catalysts. Topics in Catalysis, 2012, 55, 771-781.	1.3	9
115	Distribution between C2 and C3 in low temperature Fischerâ€“Tropsch synthesis over a TiO2-supported cobalt catalyst. Applied Catalysis A: General, 2015, 506, 67-76.	2.2	9
116	Contributing to energy sustainability: a review of mesoporous material supported catalysts for Fischerâ€“Tropsch synthesis. Sustainable Energy and Fuels, 2021, 5, 79-107.	2.5	9
117	Insight into the role of Co2C supported on reduced graphene oxide in Fischer-Tropsch synthesis and ethene hydroformylation. Applied Catalysis A: General, 2021, 614, 118050.	2.2	9
118	Adsorptive desulfurization using period 4 transition metals oxide: A study of Lewis acid strength derived from the adsorbent ionic-covalent parameter. Chemical Engineering Journal, 2022, 444, 136484.	6.6	9
119	Can the Operating Leaves of a Distillation Column Really Be Expanded?. Industrial & Engineering Chemistry Research, 2005, 44, 7511-7519.	1.8	8
120	The oxidative dehydrogenation of n-butane in a differential side-stream catalytic membrane reactor. Catalysis Today, 2010, 156, 237-245.	2.2	8
121	Column profile maps as a tool for synthesizing complex column configurations. Computers and Chemical Engineering, 2010, 34, 1487-1496.	2.0	8
122	A new method of locating all pinch points in nonideal distillation systems, and its application to pinch point loci and distillation boundaries. Computers and Chemical Engineering, 2011, 35, 1072-1087.	2.0	8
123	Process flow sheet synthesis: Reaching targets for idealized coal gasification. AICHE Journal, 2014, 60, 3258-3266.	1.8	8
124	Experimental Simulation of Three-Dimensional Attainable Region for the Synthesis of Exothermic Reversible Reaction: Ethyl Acetate Synthesis Case Study. Industrial & Engineering Chemistry Research, 2015, 54, 2619-2626.	1.8	8
125	Application of the attainable region method to determine optimal conditions for milling and leaching. Powder Technology, 2017, 317, 400-407.	2.1	8
126	Effect of Ru-promotion on the catalytic performance of a cobalt-based Fischer-Tropsch catalyst activated in syngas or H2. Fuel, 2022, 320, 123939.	3.4	8

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127	Addressing the water-energy nexus: A focus on the barriers and potentials of harnessing wastewater treatment processes for biogas production in Sub Saharan Africa. Heliyon, 2022, 8, e09385.	1.4	8
128	Cobalt Catalyst Reduction Thermodynamics in Fischer Tropsch: An Attainable Region Approach. Reactions, 2020, 1, 115-129.	0.9	7
129	Recent developments in catalyst pretreatment technologies for cobalt based Fisherâ€“Tropsch synthesis. Reviews in Chemical Engineering, 2022, 38, 503-538.	2.3	7
130	Effect of Pre-Treatment Conditions on the Activity and Selectivity of Cobalt-Based Catalysts for CO Hydrogenation. Reactions, 2021, 2, 258-274.	0.9	7
131	An experimental simulation of distillation column concentration profiles using a batch apparatus. Chemical Engineering Science, 2003, 58, 479-486.	1.9	6
132	Application of the Attainable Region Concept to the Oxidative Dehydrogenation of 1-Butene in Inert Porous Membrane Reactors. Industrial & Engineering Chemistry Research, 2004, 43, 1827-1831.	1.8	6
133	Study of Carbon Monoxide Hydrogenation Over Supported Au Catalysts. Studies in Surface Science and Catalysis, 2007, 163, 141-151.	1.5	6
134	Toward zero waste production in the paint industry. Water S A, 2007, 30, .	0.2	6
135	Crossing Reaction Equilibrium in an Adiabatic Reactor System. Asia-Pacific Journal of Chemical Engineering, 2008, 6, 41-54.	0.0	6
136	Systems approach to reducing energy usage and carbon dioxide emissions. AICHE Journal, 2009, 55, 2202-2207.	1.8	6
137	Experimental Simulation of a Two-Dimensional Attainable Region and Its Application in the Optimization of Production Rate and Process Time of an Adiabatic Batch Reactor. Industrial & Engineering Chemistry Research, 2014, 53, 13308-13319.	1.8	6
138	Batch Distillation Targets for Minimum Energy Consumption. Industrial & Engineering Chemistry Research, 2014, 53, 2751-2757.	1.8	6
139	Making processes work. Computers and Chemical Engineering, 2015, 81, 22-31.	2.0	6
140	Applying thermodynamics to digestion/gasification processes: the Attainable Region approach. Journal of Thermal Analysis and Calorimetry, 2018, 131, 25-36.	2.0	6
141	Experimental and simulation study of the temperature distribution in a <scp>benchâ€scale</scp> fixed bed <scp>Fischerâ€“Tropsch</scp> reactor. AICHE Journal, 2021, 67, e17145.	1.8	6
142	Modulated Synthesis of a Novel Nickel-Based Metalâ€“Organic Framework Composite Material for the Adsorptive Desulfurization of Liquid Fuels. Industrial & Engineering Chemistry Research, 2021, 60, 10997-11008.	1.8	6
143	Using the G-H space to show heat and work efficiencies associated with nitrogen plasma gasification of wood. Chemical Engineering Science, 2021, 243, 116793.	1.9	6
144	An Annual and Seasonal Characterisation of Winery Effluent in South Africa. South African Journal of Enology and Viticulture, 2016, 32, .	0.8	6

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145	Insight into Adsorptive Desulfurization by Zeolites: A Machine Learning Exploration. Energy & Fuels, 2022, 36, 4427-4438.	2.5	6
146	Reduced graphene oxide supported cobalt catalysts for ethylene hydroformylation: Modified cobalt-support interaction by rhodium. Fuel, 2022, 324, 124479.	3.4	6
147	A catalytic trap for low-temperature complete NO reduction in oxygen-rich media. Chemical Communications, 1996, , 2081.	2.2	5
148	A periodic flow reversal reactor: An infinitely fast switching model and a practical proposal for its implementation. Canadian Journal of Chemical Engineering, 1996, 74, 760-765.	0.9	5
149	Fischer-Tropsch synthesis: DRIFTS and SIMS surface investigation of Co and Co/Ru on titania supports. Studies in Surface Science and Catalysis, 1997, 107, 243-248.	1.5	5
150	The cost of crossing reaction equilibrium in a system that is overall adiabatic. Computers and Chemical Engineering, 2002, 26, 803-809.	2.0	5
151	An unconventional Au/TiO2 PROX system for complete removal of CO from non-reformate hydrogen. Gold Bulletin, 2008, 41, 318-325.	3.2	5
152	Reactive column profile map topology: Continuous distillation column with non-reversible kinetics. Computers and Chemical Engineering, 2008, 32, 622-629.	2.0	5
153	Efficient Combustion: A Process Synthesis Approach to Improve the Efficiency of Coal-Fired Power Stations. Industrial & Engineering Chemistry Research, 2012, 51, 9061-9077.	1.8	5
154	Production of Fuels and Chemicals from a CO2/H2 Mixture. Reactions, 2020, 1, 130-146.	0.9	5
155	Fischer-Tropsch synthesis: A long term comparative study of the product selectivity and paraffin to olefin ratios over an iron-based catalyst activated by syngas or H2. Applied Catalysis A: General, 2020, 602, 117700.	2.2	5
156	Tubular reactor internals for suppressing hot spot formation applied to the Fischer-Tropsch reaction. Chemical Engineering and Processing: Process Intensification, 2021, 161, 108309.	1.8	5
157	Attainable products for the vapour-liquid separation of homogeneous ternary mixtures. The Chemical Engineering Journal and the Biochemical Engineering Journal, 1995, 59, 51-70.	0.1	4
158	An anatomic and physiological model of hepatic vascular system. Journal of Applied Physiology, 1995, 79, 1008-1026.	1.2	4
159	Efficiency of Polymer Beads in the Removal of Heparin: Toward the Development of a Novel Reactor. Artificial Cells, Blood Substitutes, and Biotechnology, 2006, 34, 419-432.	0.9	4
160	Process Synthesis for a Reactorâ€Separatorâ€Recycle System using the Attainable Region Approach. Asia-Pacific Journal of Chemical Engineering, 1998, 6, 21-39.	0.0	4
161	Environmental impacts of electric vehicles in South Africa. South African Journal of Science, 2012, 108, .	0.3	4
162	Attainable regions for a reactor: Application of Î”Hâ€“Î”G plot. Chemical Engineering Research and Design, 2012, 90, 1590-1609.	2.7	4

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163	A thermodynamic approach toward defining the limits of biogas production. AICHE Journal, 2015, 61, 4270-4276.	1.8	4
164	Lu Plot and Yao Plot: Models To Analyze Product Distribution of Long-Term Gas-Phase Fischerâ€“Tropsch Synthesis Experimental Data on an Iron Catalyst. Energy & Fuels, 2017, 31, 5682-5690.	2.5	4
165	Process flow sheet synthesis: Systemsâ€level design applied to synthetic crude production. AICHE Journal, 2017, 63, 5413-5424.	1.8	4
166	Recoverable acrylamide-vinylamine copolymer immobilized TEMPO mediated oxidation of cellulose with good catalytic performance and low cellulose degradation. Cellulose, 2021, 28, 4151-4164.	2.4	4
167	Analysis of the Carbon Efficiency of a Hybrid XTL-CSP process. Computer Aided Chemical Engineering, 2016, 38, 835-840.	0.3	4
168	â€˜Costingâ€™ distillation systems from residue curve based designs. Computers and Chemical Engineering, 2000, 24, 1275-1280.	2.0	3
169	Expanding the operating leaves in distillation column sections by distributed feed addition and sidestream withdrawal. Computer Aided Chemical Engineering, 2003, 15, 1050-1057.	0.3	3
170	Experimental simulation of distillation concentration profiles using batch apparatus: Column stripping section. Chemical Engineering Science, 2005, 60, 6815-6823.	1.9	3
171	On Column Profile Maps: An Analysis of Sharp Splits. Industrial & Engineering Chemistry Research, 2011, 50, 6331-6342.	1.8	3
172	A Graphical Method of Improving the Production Rate from Batch Reactors. Industrial & Engineering Chemistry Research, 2012, 51, 13562-13573.	1.8	3
173	Steady-State Attainment Period for Fischerâ€“Tropsch Products. Topics in Catalysis, 2014, 57, 582-587.	1.3	3
174	Reaction of ethylene over a typical <scp>Fischerâ€Tropsch</scp> synthesis Co/<scp>TiO₂</scp> catalyst. Engineering Reports, 2020, 2, e12232.	0.9	3
175	Integrating environmental concerns into the teaching of mathematical optimization. Education for Chemical Engineers, 2020, 32, 40-49.	2.8	3
176	Effect of ethylene co-feeding in Fischer-Tropsch synthesis: A study of reaction equilibrium and competition. Fuel, 2021, 302, 121146.	3.4	3
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