

Matthew Realff

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

168 papers	5,022 citations	35 h-index	67 g-index
183 ext. papers	5,981 ext. citations	6.1 avg, IF	6.03 L-index

#	Paper	IF	Citations
168	Cellulose crystallinity--a key predictor of the enzymatic hydrolysis rate. <i>FEBS Journal</i> , 2010 , 277, 1571-82	5.7	399
167	Modeling cellulase kinetics on lignocellulosic substrates. <i>Biotechnology Advances</i> , 2009 , 27, 833-848	17.8	308
166	Optimal design and global sensitivity analysis of biomass supply chain networks for biofuels under uncertainty. <i>Computers and Chemical Engineering</i> , 2011 , 35, 1738-1751	4	267
165	Acid-catalyzed conversion of sugars and furfurals in an ionic-liquid phase. <i>ChemSusChem</i> , 2009 , 2, 665-718	3	215
164	Structural Changes of γ -Al ₂ O ₃ -Supported Catalysts in Hot Liquid Water. <i>ACS Catalysis</i> , 2011 , 1, 552-561	13.1	205
163	Design of biomass processing network for biofuel production using an MILP model. <i>Biomass and Bioenergy</i> , 2011 , 35, 853-871	5.3	175
162	Machine learning: Overview of the recent progresses and implications for the process systems engineering field. <i>Computers and Chemical Engineering</i> , 2018 , 114, 111-121	4	157
161	Effect of Amine Surface Coverage on the Co-Adsorption of CO ₂ and Water: Spectral Deconvolution of Adsorbed Species. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 4194-200	6.4	139
160	Role of Lewis and Brønsted Acid Sites in the Dehydration of Glycerol over Niobia. <i>ACS Catalysis</i> , 2014 , 4, 3180-3192	13.1	124
159	Assessing performance and uncertainty in developing carpet reverse logistics systems. <i>Computers and Operations Research</i> , 2007 , 34, 443-463	4.6	109
158	Robust reverse production system design for carpet recycling. <i>IIE Transactions</i> , 2004 , 36, 767-776		109
157	Life cycle energy and greenhouse gas emissions for an ethanol production process based on blue-green algae. <i>Environmental Science & Technology</i> , 2010 , 44, 8670-7	10.3	101
156	Effect of preparation methods on the performance of Co/Al ₂ O ₃ catalysts for dry reforming of methane. <i>Green Chemistry</i> , 2014 , 16, 885-896	10	99
155	Differences in the Nature of Active Sites for Methane Dry Reforming and Methane Steam Reforming over Nickel Aluminate Catalysts. <i>ACS Catalysis</i> , 2016 , 6, 5873-5886	13.1	94
154	Hydrodeoxygenation of Guaiacol over Ceria-Zirconia Catalysts. <i>ChemSusChem</i> , 2015 , 8, 2073-83	8.3	88
153	Elucidation of Surface Species through in Situ FTIR Spectroscopy of Carbon Dioxide Adsorption on Amine-Grafted SBA-15. <i>ChemSusChem</i> , 2017 , 10, 266-276	8.3	81
152	Stability of Pt/ γ -Al ₂ O ₃ Catalysts in Model Biomass Solutions. <i>Topics in Catalysis</i> , 2012 , 55, 162-174	2.3	78

151	Systems Design and Economic Analysis of Direct Air Capture of CO ₂ through Temperature Vacuum Swing Adsorption Using MIL-101(Cr)-PEI-800 and mmen-Mg ₂ (dobpdc) MOF Adsorbents. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 750-764	3.9	71
150	Steric Effect and Evolution of Surface Species in the Hydrodeoxygenation of Bio-Oil Model Compounds over Pt/HBEA. <i>ACS Catalysis</i> , 2016 , 6, 1292-1307	13.1	71
149	Stability of Pt/Al ₂ O ₃ Catalysts in Lignin and Lignin Model Compound Solutions under Liquid Phase Reforming Reaction Conditions. <i>ACS Catalysis</i> , 2013 , 3, 464-473	13.1	68
148	Operational planning and optimal sizing of microgrid considering multi-scale wind uncertainty. <i>Applied Energy</i> , 2017 , 195, 616-633	10.7	62
147	Dynamic programming in a heuristically confined state space: a stochastic resource-constrained project scheduling application. <i>Computers and Chemical Engineering</i> , 2004 , 28, 1039-1058	4	62
146	Hierarchical Ga-MFI Catalysts for Propane Dehydrogenation. <i>Chemistry of Materials</i> , 2017 , 29, 7213-7222	9.6	58
145	Prospects and Challenges for Solar Fertilizers. <i>Joule</i> , 2019 , 3, 1578-1605	27.8	54
144	Control of interfacial acid-metal catalysis with organic monolayers. <i>Nature Catalysis</i> , 2018 , 1, 148-155	36.5	49
143	Effect of Humidity on the CO ₂ Adsorption of Tertiary Amine Grafted SBA-15. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 23480-23487	3.8	48
142	Strategic design of reverse production systems. <i>Computers and Chemical Engineering</i> , 2000 , 24, 991-996	4	47
141	Protein engineering of cellulases. <i>Current Opinion in Biotechnology</i> , 2014 , 29, 139-45	11.4	44
140	Modeling of rapid temperature swing adsorption using hollow fiber sorbents. <i>Chemical Engineering Science</i> , 2014 , 113, 62-76	4.4	43
139	Design and optimization of free-fall electrostatic separators for plastics recycling. <i>AIChE Journal</i> , 2003 , 49, 3138-3149	3.6	43
138	Design and simulation of an organosolv process for bioethanol production. <i>Biomass Conversion and Biorefinery</i> , 2013 , 3, 199-212	2.3	41
137	The "Missing" Bicarbonate in CO Chemisorption Reactions on Solid Amine Sorbents. <i>Journal of the American Chemical Society</i> , 2018 , 140, 8648-8651	16.4	41
136	Conversion of Methane into Methanol and Ethanol over Nickel Oxide on Ceria-Zirconia Catalysts in a Single Reactor. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 13876-13881	16.4	38
135	Sample average approximation methods for stochastic MINLPs. <i>Computers and Chemical Engineering</i> , 2004 , 28, 333-346	4	38
134	On thermodynamic separation efficiency: Adsorption processes. <i>AIChE Journal</i> , 2016 , 62, 3699-3705	3.6	38

133	How Well Do Approximate Models of Adsorption-Based CO ₂ Capture Processes Predict Results of Detailed Process Models?. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 7097-7108	3.9	35
132	SO ₂ -catalyzed steam explosion: the effects of different severity on digestibility, accessibility, and crystallinity of lignocellulosic biomass. <i>Biotechnology Progress</i> , 2013 , 29, 909-16	2.8	33
131	31P-NMR analysis of bio-oils obtained from the pyrolysis of biomass. <i>Biofuels</i> , 2010 , 1, 839-845	2	33
130	Quantitative solid state NMR analysis of residues from acid hydrolysis of loblolly pine wood. <i>Bioresource Technology</i> , 2009 , 100, 4758-65	11	32
129	Quenching of reactive intermediates during mechanochemical depolymerization of lignin. <i>Catalysis Today</i> , 2018 , 302, 180-189	5.3	31
128	Scenario relaxation algorithm for finite scenario-based min _h ax regret and min _h ax relative regret robust optimization. <i>Computers and Operations Research</i> , 2008 , 35, 2093-2102	4.6	31
127	Silica-Supported Sterically Hindered Amines for CO Capture. <i>Langmuir</i> , 2018 , 34, 12279-12292	4	31
126	Relationship between Acid-Base Properties and the Activity of ZrO ₂ -Based Catalysts for the Cannizzaro Reaction of Pyruvaldehyde to Lactic Acid. <i>ChemCatChem</i> , 2017 , 9, 2675-2683	5.2	30
125	Understanding DABCO Nanorotor Dynamics in Isostructural Metal-Organic Frameworks. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 812-6	6.4	30
124	Moving Beyond Adsorption Capacity in Design of Adsorbents for CO ₂ Capture from Ultradilute Feeds: Kinetics of CO ₂ Adsorption in Materials with Stepped Isotherms. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 366-377	3.9	30
123	Development of Optimal Decoking Scheduling Strategies for an Industrial Naphtha Cracking Furnace System. <i>Industrial & Engineering Chemistry Research</i> , 2006 , 45, 5738-5747	3.9	29
122	Pooling for improved screening of combinatorial libraries for directed evolution. <i>Biotechnology Progress</i> , 2006 , 22, 961-7	2.8	29
121	Spectroscopic Characterization of Adsorbed CO on 3-Aminopropylsilyl-Modified SBA15 Mesoporous Silica. <i>Environmental Science & Technology</i> , 2017 , 51, 6553-6559	10.3	28
120	The Role of Brønsted and Water-Tolerant Lewis Acid Sites in the Cascade Aqueous-Phase Reaction of Triose to Lactic Acid. <i>ChemCatChem</i> , 2019 , 11, 3054-3063	5.2	28
119	New approach for optimal electricity planning and dispatching with hourly time-scale air quality and health considerations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 10884-9	11.5	28
118	Two stage stochastic bilevel programming model of a pre-established timberlands supply chain with biorefinery investment interests. <i>Computers and Chemical Engineering</i> , 2015 , 73, 141-153	4	27
117	Modeling and experimental validation of carbon dioxide sorption on hollow fibers loaded with silica-supported poly(ethylenimine). <i>Chemical Engineering Journal</i> , 2015 , 259, 737-751	14.7	26
116	Critical Comparison of Structured Contactors for Adsorption-Based Gas Separations. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2018 , 9, 129-152	8.9	26

115	Enhanced Hydrothermal Stability of FAO Catalyst Supports with Alkyl Phosphonate Coatings. <i>Langmuir</i> , 2018 , 34, 3619-3625	4	26
114	Cost and Energy Savings Using an Optimal Design of Reverse Osmosis Membrane Pretreatment for Dilute Bioethanol Purification. <i>Industrial & Engineering Chemistry Research</i> , 2013 , 52, 11132-11141	3.9	26
113	Geographic and process information for chemical plant layout problems. <i>AIChE Journal</i> , 1999 , 45, 2161-2174	3.1	26
112	Nickel Speciation and Methane Dry Reforming Performance of Ni/CexZr1-xO2 Prepared by Different Synthesis Methods. <i>ACS Catalysis</i> , 2020 , 10, 11235-11252	13.1	25
111	CO2 Sorption Performance of Composite Polymer/Aminosilica Hollow Fiber Sorbents: An Experimental and Modeling Study. <i>Industrial & Engineering Chemistry Research</i> , 2015 , 54, 1783-1795	3.9	22
110	Three-stage design of high-resolution microalgae-based biofuel supply chain using geographic information system. <i>Applied Energy</i> , 2020 , 265, 114773	10.7	20
109	Decentralized decision-making and protocol design for recycled material flows. <i>International Journal of Production Economics</i> , 2008 , 116, 325-337	9.3	20
108	Managing uncertainty in data-driven simulation-based optimization. <i>Computers and Chemical Engineering</i> , 2020 , 136, 106519	4	20
107	A parametric study of the techno-economics of direct CO2 air capture systems using solid adsorbents. <i>AIChE Journal</i> , 2019 , 65, e16607	3.6	19
106	N Solid State NMR Spectroscopic Study of Surface Amine Groups for Carbon Capture: 3-Aminopropylsilyl Grafted to SBA-15 Mesoporous Silica. <i>Environmental Science & Technology</i> , 2018 , 52, 1488-1495	10.3	19
105	Proactive Scheduling Strategy Applied to Decoking Operations of an Industrial Naphtha Cracking Furnace System. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 3024-3032	3.9	19
104	Operation of pipeless batch plants II. MILP schedules. <i>Computers and Chemical Engineering</i> , 1998 , 22, 841-855	4	19
103	Modeling obsolete computer stock under regional data constraints: An Atlanta case study. <i>Resources, Conservation and Recycling</i> , 2007 , 51, 847-869	11.9	19
102	Bayesian estimation of parametric uncertainties, quantification and reduction using optimal design of experiments for CO2 adsorption on amine sorbents. <i>Computers and Chemical Engineering</i> , 2015 , 81, 376-388	4	17
101	Effects of Open Metal Site Availability on Adsorption Capacity and Olefin/Paraffin Selectivity in the Metal-Organic Framework Cu3(BTC)2. <i>Industrial & Engineering Chemistry Research</i> , 2016 , 55, 5043-5053	3.9	16
100	Analysis and comparison of single period single level and bilevel programming representations of a pre-existing timberlands supply chain with a new biorefinery facility. <i>Computers and Chemical Engineering</i> , 2014 , 68, 242-254	4	15
99	Silica-Supported Hindered Aminopolymers for CO2 Capture. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 22551-22560	3.9	14
98	An algorithmic framework for improving heuristic solutions. <i>Computers and Chemical Engineering</i> , 2004 , 28, 1297-1307	4	14

97	Techno-economic analysis of 1,4-butanediol production by a single-step bioconversion process. <i>Biofuels, Bioproducts and Biorefining</i> , 2019 , 13, 1261-1273	5.3	13
96	Anthropogenic CO ₂ as a feedstock for the production of algal-based biofuels. <i>Biofuels, Bioproducts and Biorefining</i> , 2015 , 9, 72-81	5.3	13
95	EcoWorx, Green Engineering principles in practice. <i>Environmental Science & Technology</i> , 2003 , 37, 5269-77	10.3	13
94	Uncertainty quantification via bayesian inference using sequential monte carlo methods for CO ₂ adsorption process. <i>AIChE Journal</i> , 2016 , 62, 3352-3368	3.6	13
93	Approximate dynamic programming: Application to process supply chain management. <i>AIChE Journal</i> , 2006 , 52, 2473-2485	3.6	12
92	Support vector machines for learning to identify the critical positions of a protein. <i>Journal of Theoretical Biology</i> , 2005 , 234, 351-61	2.3	12
91	Coupling of Methane to Ethane, Ethylene, and Aromatics over Nickel on Ceria/Zirconia at Low Temperatures. <i>ChemCatChem</i> , 2018 , 10, 2700-2708	5.2	11
90	Operation of pipeless batch plants III. Vessel dispatch rules. <i>Computers and Chemical Engineering</i> , 1998 , 22, 857-866	4	11
89	A Q-Learning-based method applied to stochastic resource constrained project scheduling with new project arrivals. <i>International Journal of Robust and Nonlinear Control</i> , 2007 , 17, 1214-1231	3.6	11
88	Combining a Geographical Information System and Process Engineering to Design an Agricultural-Industrial Ecosystem. <i>Journal of Industrial Ecology</i> , 2001 , 5, 13-31	7.2	11
87	Hierarchical Bayesian estimation for adsorption isotherm parameter determination. <i>Chemical Engineering Science</i> , 2020 , 214, 115435	4.4	11
86	Thermodynamic Limitations of the Catalyst Design Space for Methanol Production from Methane. <i>ChemCatChem</i> , 2019 , 11, 593-600	5.2	11
85	Hot spot generation, reactivity, and decay in mechanochemical reactors. <i>Chemical Engineering Journal</i> , 2020 , 382, 122954	14.7	11
84	Multi-time scale Markov decision process approach to strategic network growth of reverse supply chains?. <i>Omega</i> , 2010 , 38, 20-32	7.2	10
83	Centralized versus decentralized decision-making for recycled material flows. <i>Environmental Science & Technology</i> , 2008 , 42, 1172-7	10.3	10
82	Simulation modeling of pooling for combinatorial protein engineering. <i>Journal of Biomolecular Screening</i> , 2005 , 10, 856-64		10
81	An algorithmic framework for improving heuristic solutions. <i>Computers and Chemical Engineering</i> , 2004 , 28, 1285-1296	4	10
80	Applying Direct Yellow 11 to a modified Simons staining assay. <i>Cellulose</i> , 2017 , 24, 2367-2373	5.5	9

79	Design and Optimization of Drum-type Electrostatic Separators for Plastics Recycling. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 3503-3509	3.9	9
78	Mechanocatalytic Ammonia Synthesis over TiN in Transient Microenvironments. <i>ACS Energy Letters</i> , 2020 , 5, 3362-3367	20.1	9
77	Continuous Liquid-Phase Upgrading of Dihydroxyacetone to Lactic Acid over Metal Phosphate Catalysts. <i>ACS Catalysis</i> , 2020 , 10, 11936-11950	13.1	9
76	Development of Phase-Change-Based Thermally Modulated Fiber Sorbents. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 5768-5776	3.9	9
75	An effective chemical pretreatment method for lignocellulosic biomass with substituted imidazoles. <i>Biotechnology Progress</i> , 2015 , 31, 25-34	2.8	8
74	Adsorption Process Intensification through Structured Packing: A Modeling Study Using Zeolite 13X and a Mixture of Propylene and Propane in Hollow-Fiber and Packed Beds. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 5750-5767	3.9	8
73	Modeling and inferential control of the batch acetylation of cellulose. <i>AIChE Journal</i> , 2006 , 52, 2149-2160	3.6	8
72	Direct aromatization of CO ₂ via combined CO ₂ hydrogenation and zeolite-based acid catalysis. <i>Journal of CO₂ Utilization</i> , 2021 , 45, 101405	7.6	8
71	Defining Targets for Adsorbent Material Performance to Enable Viable BECCS Processes. <i>Jacs Au</i> , 2021 , 1, 795-806		8
70	Transformations of FCC catalysts and carbonaceous deposits during repeated reaction-regeneration cycles. <i>Catalysis Science and Technology</i> , 2019 , 9, 6977-6992	5.5	8
69	Organosilane-Assisted Synthesis of Hierarchical MCM-22 Zeolites for Condensation of Glycerol into Bulky Products. <i>Crystal Growth and Design</i> , 2019 , 19, 231-241	3.5	8
68	Pretreatment Effects on the Surface Chemistry of Small Oxygenates on Molybdenum Trioxide. <i>ACS Catalysis</i> , 2020 , 10, 8187-8200	13.1	7
67	Strategic capacity decision-making in a stochastic manufacturing environment using real-time approximate dynamic programming. <i>Naval Research Logistics</i> , 2010 , 57, 211-224	1.5	7
66	Point-based standard optimization with life cycle assessment for product design. <i>Computers and Chemical Engineering</i> , 2010 , 34, 1356-1364	4	7
65	E-waste. <i>Materials Today</i> , 2004 , 7, 40-45	21.8	7
64	A Framework for Geographically Sensitive and Efficient Recycling Networks. <i>Journal of Environmental Planning and Management</i> , 2003 , 46, 147-165	2.8	7
63	Research needs targeting direct air capture of carbon dioxide: Material & process performance characteristics under realistic environmental conditions. <i>Korean Journal of Chemical Engineering</i> , 2022 , 39, 1-19	2.8	7
62	Evolution of Structure and Active Sites during the Synthesis of ZSM-5: From Amorphous to Fully Grown Structure. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 2439-2449	3.8	6

61	Identification of the Active Sites in the Dehydrogenation of Methanol on Pt/Al ₂ O ₃ Catalysts. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 19015-19023	3.8	6
60	Cyclopentadiene Dimerization Kinetics in the Presence of C ₅ Alkenes and Alkadienes. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 22516-22525	3.9	5
59	Engineering allosteric communication. <i>Current Opinion in Structural Biology</i> , 2020 , 63, 115-122	8.1	5
58	Bayesian design of experiments for adsorption isotherm modeling. <i>Computers and Chemical Engineering</i> , 2020 , 135, 106774	4	5
57	Direct Air Capture of CO ₂ in Enclosed Environments: Design under Uncertainty and Techno-Economic Analysis. <i>Computer Aided Chemical Engineering</i> , 2018 , 44, 2179-2184	0.6	5
56	The Design of a Sustainability Assessment Standard Using Life Cycle Information. <i>Journal of Industrial Ecology</i> , 2013 , 17, 493-503	7.2	5
55	Analysis of waste vitrification product-process systems. <i>Computers and Chemical Engineering</i> , 1998 , 22, 789-800	4	5
54	Techno-economic analysis of water precipitation for lignin value prior to pulping. <i>Chemical Engineering Research and Design</i> , 2019 , 143, 4-10	5.5	5
53	Using Site Heterogeneity in Metal-Organic Frameworks with Bimetallic Open Metal Sites for Olefin/Paraffin Separations. <i>ACS Applied Nano Materials</i> , 2020 , 3, 5291-5300	5.6	4
52	Similarities in Recalcitrant Structures of Industrial Non-Kraft and Kraft Lignin. <i>ChemSusChem</i> , 2020 , 13, 4624-4632	8.3	4
51	Correction to Systems Design and Economic Analysis of Direct Air Capture of CO ₂ through Temperature Vacuum Swing Adsorption Using MIL-101(Cr)-PEI-800 and mmen-Mg ₂ (dobpdc) MOF Adsorbents. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 503-505	3.9	4
50	Solvent Selection for Lignin Value Prior to Pulping. <i>ChemSusChem</i> , 2020 , 13, 267-273	8.3	4
49	Production of active pharmaceutical ingredients (APIs) from lignin-derived phenol and catechol. <i>Green Chemistry</i> ,	10	4
48	Bioreactor-based fuel systems. I: Optimal production capacity considering start-up dynamics. <i>Computers and Chemical Engineering</i> , 2014 , 71, 141-153	4	3
47	Solid-Phase Reactive Chromatographic Separation System: Optimization-Based Design and Its Potential Application to Biomass Saccharification via Acid Hydrolysis. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 15946-15961	3.9	3
46	Produktion von Methanol und Ethanol aus Methan in einem einzigen Reaktor mit einem Nickeloxid auf Ceroxid-Zirkoniumoxid-Katalysator. <i>Angewandte Chemie</i> , 2017 , 129, 14064-14069	3.6	3
45	Optimization and Technoeconomic Analysis of Rapid Temperature Swing Adsorption Process for Carbon Capture from Coal-Fired Power Plant. <i>Computer Aided Chemical Engineering</i> , 2015 , 36, 253-278	0.6	3
44	Controlled exploration of state space in off-line ADP and its application to stochastic shortest path problems. <i>Computers and Chemical Engineering</i> , 2009 , 33, 2111-2122	4	3

43	Identifying the interacting positions of a protein using Boolean learning and support vector machines. <i>Computational Biology and Chemistry</i> , 2006 , 30, 268-79	3.6	3
42	A unified probabilistic approach for modeling trajectory-based separations. <i>AIChE Journal</i> , 2005 , 51, 2507-2520	3.6	3
41	Computer supported collaborative learning for curriculum integration. <i>Computers and Chemical Engineering</i> , 2000 , 24, 1473-1479	4	3
40	Designing the bioproduction of Martian rocket propellant via a biotechnology-enabled in situ resource utilization strategy. <i>Nature Communications</i> , 2021 , 12, 6166	17.4	3
39	Lifecycle greenhouse gas emissions for an ethanol production process based on genetically modified cyanobacteria: CO2 sourcing options. <i>Biofuels, Bioproducts and Biorefining</i> , 2020 , 14, 1324-1334	5.3	3
38	Selective Oxidation of Methane to Methanol over Ceria-Zirconia Supported Mono and Bimetallic Transition Metal Oxide Catalysts. <i>ChemCatChem</i> , 2021 , 13, 2832-2842	5.2	3
37	Analysis of energetics and economics of sub-ambient hybrid post-combustion carbon dioxide capture. <i>AIChE Journal</i> , 2021 , 67, e17403	3.6	3
36	Bayesian Estimation, Uncertainty Propagation and Design of Experiments for CO2 Adsorption on Amine Sorbents. <i>Computer Aided Chemical Engineering</i> , 2014 , 34, 345-350	0.6	2
35	A mathematical programming tool for LCI-based product design and case study for a carpet product. <i>Journal of Cleaner Production</i> , 2011 , 19, 1347-1355	10.3	2
34	Optimal decision-oriented Bayesian design of experiments. <i>Journal of Process Control</i> , 2010 , 20, 1084-1099	9.9	2
33	A real time adaptive dynamic programming approach for planning and scheduling. <i>Computer Aided Chemical Engineering</i> , 2006 , 21, 1179-1184	0.6	2
32	On the Application of Explanation-Based Learning to Acquire Control Knowledge for Branch and Bound Algorithms. <i>INFORMS Journal on Computing</i> , 1998 , 10, 56-71	2.4	2
31	Integration of Material and Process Design for Kinetic Adsorption Separation. <i>Industrial & Engineering Chemistry Research</i> , 2021 , 60, 2536-2546	3.9	2
30	Optimal Harvest Management Adaptation for a New Biorefinery Investment in a Timberlands Supply Chain Using a Modified Cyclic Scheduling Model. <i>Computer Aided Chemical Engineering</i> , 2015 , 36, 521-554	0.6	1
29	The logic of efficiency and other metrics. <i>Journal of Advanced Manufacturing and Processing</i> , 2019 , 1,	2.7	1
28	MILP based value backups in partially observed Markov decision processes (POMDPs) with very large or continuous action and observation spaces. <i>Computers and Chemical Engineering</i> , 2013 , 56, 101-113	4.3	1
27	On defect propagation in multi-machine stochastically deteriorating systems with incomplete information. <i>Journal of Process Control</i> , 2012 , 22, 1478-1489	3.9	1
26	REVERSE PRODUCTION SYSTEMS 2007 , 155-177		1

25	Simulation based approach for improving heuristics in stochastic resource-constrained project scheduling problem. <i>Computer Aided Chemical Engineering</i> , 2003 , 15, 439-444	0.6	1
24	Two Stage Bilevel Programming Approach for Representation of Biorefinery Investment Decision Making in a Pre-Established Timberlands Supply Chain. <i>Computer Aided Chemical Engineering</i> , 2014 , 34, 645-650	0.6	1
23	Efficient Evaluation of Vacuum Pressure-swing Cycle Performance using Surrogate-based, Multi-objective Optimization Algorithm. <i>Computer Aided Chemical Engineering</i> , 2020 , 1801-1806	0.6	1
22	Biomolecular Systems Engineering: Unlocking the Potential of Engineered Allosteric Repressor Topology. <i>Annual Review of Biophysics</i> , 2021 , 50, 303-321	21.1	1
21	NMR Reveals Two Bicarbonate Environments in SBA15-Solid-Amine CO ₂ Sorbents. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 16759-16765	3.8	1
20	New model for S-shaped isotherm data and its application to process modeling using IAST. <i>Chemical Engineering Journal</i> , 2021 , 420, 127580	14.7	1
19	Perspective - the need and prospects for negative emission technologies - direct air capture through the lens of current sorption process development.. <i>Korean Journal of Chemical Engineering</i> , 2021 , 38, 2375-2380	2.8	1
18	Assessing the physical potential capacity of direct air capture with integrated supply of low-carbon energy sources 2022 , 12, 170-188		1
17	Real-Time Optimization of Pulp Mill Operations with Wood Moisture Content Variation. <i>Processes</i> , 2020 , 8, 651	2.9	0
16	Heat Transfer Enhancement in Fin Channels Using Aeroelastically Fluttering Reeds. <i>Journal of Advanced Manufacturing and Processing</i> , e10110	2.7	0
15	Thought Experiment on Using Renewable Electricity to Provide Transportation Services. <i>Energy & Fuels</i> , 2021 , 35, 13281-13290	4.1	0
14	Global evaluation of economics of microalgae-based biofuel supply chain using GIS-based framework. <i>Korean Journal of Chemical Engineering</i> , 1	2.8	0
13	Greenhouse Gas Impact of Algal Bio-Crude Production for a Range of CO ₂ Supply Scenarios. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 11931	2.6	0
12	Discrepancy quantification between experimental and simulated data of CO ₂ adsorption isotherm using hierarchical Bayesian estimation. <i>Separation and Purification Technology</i> , 2022 , 121371	8.3	0
11	Welcome to the Journal of Advanced Manufacturing and Processing. <i>Journal of Advanced Manufacturing and Processing</i> , 2019 , 1, e10010	2.7	
10	A Real Time Approximate Dynamic Programming Approach: A High Dimensional Supply Chain Application 2014 , 61-88		
9	An Extended Constrained Total Least-Squares Method for the Identification of Genetic Networks from Noisy Measurements. <i>Industrial & Engineering Chemistry Research</i> , 2015 , 54, 10583-10592	3.9	
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