Elena CÃ¢ndida Dos Santos

List of Publications by Year
in descending order

		53751	76872
175 papers	6,757 citations	45 h-index	74 g-index

185 all docs	185 docs citations	185 times ranked	5459 citing authors

#	Article	IF	Citations
1	Optimal design of multi-energy systems with seasonal storage. Applied Energy, 2018, 219, 408-424.	5.1	357
2	The Role of Carbon Capture and Utilization, Carbon Capture and Storage, and Biomass to Enable a Net-Zero-CO₂ Emissions Chemical Industry. Industrial & Engineering Chemistry Research, 2020, 59, 7033-7045.	1.8	286
3	Competitive adsorption equilibria of CO2 and CH4 on a dry coal. Adsorption, 2008, 14, 539-556.	1.4	204
4	Equilibrium theory based design of simulated moving bed processes for a generalized Langmuir isotherm. Journal of Chromatography A, 2006, 1126, 311-322.	1.8	165
5	Hydrogen production from natural gas and biomethane with carbon capture and storage â€“ A techno-environmental analysis. Sustainable Energy and Fuels, 2020, 4, 2967-2986.	2.5	164
6	Design and Optimization of a Combined Cooling/Antisolvent Crystallization Process. Crystal Growth and Design, 2009, 9, 1124-1136.	1.4	154
7	Amyloid Templated Gold Aerogels. Advanced Materials, 2016, 28, 472-478.	11.1	149
8	Molecular-dynamics simulations of urea nucleation from aqueous solution. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E6-14.	3.3	142
9	Life cycle assessment of carbon dioxide removal technologies: a critical review. Energy and Environmental Science, 2021, 14, 1701-1721.	15.6	141
10	Comparison of Technologies for CO2 Capture from Cement Productionâ€”Part 1: Technical Evaluation. Energies, 2019, 12, 559.	1.6	137
11	Seasonal energy storage for zero-emissions multi-energy systems via underground hydrogen storage. Renewable and Sustainable Energy Reviews, 2020, 121, 109629.	8.2	137
12	Comparison of Technologies for CO2 Capture from Cement Productionâ€”Part 2: Cost Analysis. Energies, 2019, 12, 542.	1.6	135
13	Perspective on the hydrogen economy as a pathway to reach net-zero CO₂emissions in Europe. Energy and Environmental Science, 2022, 15, 1034-1077.	15.6	132
14	Quantitative Application of in Situ ATR-FTIR and Raman Spectroscopy in Crystallization Processes. Industrial & Engineering Chemistry Research, 2008, 47, 4870-4882.	1.8	121
15	Modeling Nucleation, Growth, and Ostwald Ripening in Crystallization Processes: A Comparison between Population Balance and Kinetic Rate Equation. Crystal Growth and Design, 2013, 13, 4890-4905.	1.4	117
16	Fixed bed adsorption of CO2/H2 mixtures on activated carbon: experiments and modeling. Adsorption, 2012, 18, 143-161.	1.4	115
17	Assessment of carbon dioxide removal potential via BECCS in a carbon-neutral Europe. Energy and Environmental Science, 2021, 14, 3086-3097.	15.6	106
18	Robust and optimal design of multi-energy systems with seasonal storage through uncertainty analysis. Applied Energy, 2019, 238, 1192-1210.	5.1	100

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19	Life Cycle Assessment of Direct Air Carbon Capture and Storage with Low-Carbon Energy Sources. Environmental Science & Technology, 2021, 55, 11397-11411.	4.6	99
20	Adsorption of pure carbon dioxide and methane on dry coal from the sulcis coal province (SW) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 702	0.8	97
21	A Population Balance Model for Chiral Resolution via Viedma Ripening. Crystal Growth and Design, 2011, 11, 4611-4622.	1.4	96
22	Rational design of temperature swing adsorption cycles for post-combustion CO 2 capture. Chemical Engineering Science, 2017, 158, 381-394.	1.9	96
23	Pure and binary adsorption of CO2, H2, and N2 on activated carbon. Adsorption, 2012, 18, 49-65.	1.4	91
24	Experimental Characterization and Population Balance Modeling of the Polymorph Transformation of <scp>l</scp>-Glutamic Acid. Crystal Growth and Design, 2009, 9, 243-252.	1.4	79
25	On the potential of phase-change adsorbents for CO₂ capture by temperature swing adsorption. Faraday Discussions, 2016, 192, 153-179.	1.6	78
26	Role of Carbon Capture, Storage, and Utilization to Enable a Net-Zero-CO₂-Emissions Aviation Sector. Industrial & Engineering Chemistry Research, 2021, 60, 6848-6862.	1.8	76
27	Population Balance Modeling with Size-Dependent Solubility: Ostwald Ripening. Crystal Growth and Design, 2012, 12, 1489-1500.	1.4	71
28	Postcombustion CO₂ Capture: A Comparative Techno-Economic Assessment of Three Technologies Using a Solvent, an Adsorbent, and a Membrane. ACS Engineering Au, 2021, 1, 50-72.	2.3	70
29	Sorption and swelling of semicrystalline polymers in supercritical CO2. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 1531-1546.	2.4	67
30	Sorption and swelling of poly(<scp>DL</scp>â€lactic acid) and poly(lacticâ€coâ€glycolic acid) in supercritical CO₂: An experimental and modeling study. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 483-496.	2.4	67
31	Multi-scale modeling of a reactive mixing process in a semibatch stirred tank. Chemical Engineering Science, 2004, 59, 1767-1781.	1.9	64
32	Temperature Swing Adsorption for Postcombustion CO₂ Capture: Single- and Multicolumn Experiments and Simulations. Industrial & Engineering Chemistry Research, 2016, 55, 1401-1412.	1.8	62
33	Experimental characterization and multi-scale modeling of mixing in static mixers. Chemical Engineering Science, 2008, 63, 4135-4149.	1.9	61
34	Electrochemical conversion technologies for optimal design of decentralized multi-energy systems: Modeling framework and technology assessment. Applied Energy, 2018, 221, 557-575.	5.1	59
35	Precipitation and Transformation of the Three Polymorphs of <scp>d</scp>-Mannitol. Industrial & Engineering Chemistry Research, 2010, 49, 5854-5862.	1.8	56
36	Local Equilibrium Theory for the Binary Chromatography of Species Subject to a Generalized Langmuir Isotherm. Industrial & Engineering Chemistry Research, 2006, 45, 5332-5350.	1.8	55

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37	Precombustion CO₂ Capture by Pressure Swing Adsorption (PSA): Comparison of Laboratory PSA Experiments and Simulations. Industrial & Engineering Chemistry Research, 2013, 52, 8311-8322.	1.8	54
38	On the optimal design of membrane-based gas separation processes. Journal of Membrane Science, 2017, 526, 118-130.	4.1	54
39	Equilibrium Theoryâ€“Based Analysis of Nonlinear Waves in Separation Processes. Annual Review of Chemical and Biomolecular Engineering, 2013, 4, 119-141.	3.3	53
40	Reliable measurement of near-critical adsorption by gravimetric method. Adsorption, 2006, 12, 393-403.	1.4	52
41	Slowing the Growth Rate of Ibuprofen Crystals Using the Polymeric Additive Pluronic F127. Crystal Growth and Design, 2011, 11, 3813-3821.	1.4	52
42	Growth Rate Estimation of Î² <scp>l</scp>-Glutamic Acid from Online Measurements of Multidimensional Particle Size Distributions and Concentration. Industrial & Engineering Chemistry Research, 2014, 53, 9136-9148.	1.8	52
43	Temperature Swing Adsorption for the Recovery of the Heavy Component: An Equilibrium-Based Shortcut Model. Industrial & Engineering Chemistry Research, 2015, 54, 3027-3038.	1.8	50
44	â€˜Cycle to cycleâ€™ optimizing control of simulated moving beds. AICHE Journal, 2008, 54, 194-208.	1.8	48
45	Experimental evidence of a delta-shock in nonlinear chromatography. Journal of Chromatography A, 2010, 1217, 2002-2012.	1.8	48
46	Nonclassical Composition Fronts in Nonlinear Chromatography: Delta-Shock. Industrial & Engineering Chemistry Research, 2009, 48, 7733-7752.	1.8	45
47	Enabling low-carbon hydrogen supply chains through use of biomass and carbon capture and storage: A Swiss case study. Applied Energy, 2020, 275, 115245.	5.1	45
48	Solar-driven steam-based gasification of sugarcane bagasse in a combined drop-tube and fixed-bed reactor â€“ Thermodynamic, kinetic, and experimental analyses. Biomass and Bioenergy, 2013, 52, 173-183.	2.9	42
49	Experimental assessment of powerfeed chromatography. AICHE Journal, 2004, 50, 625-632.	1.8	41
50	MCM-41, MOF and UiO-67/MCM-41 adsorbents for pre-combustion CO2 capture by PSA: adsorption equilibria. Adsorption, 2012, 18, 213-227.	1.4	41
51	Design of Simulated Moving Bed Separations:Â Generalized Langmuir Isotherm. Industrial & Engineering Chemistry Research, 2006, 45, 6311-6324.	1.8	40
52	Continuous precipitation of <scp>L</scp>â€asparagine monohydrate in a micromixer: Estimation of nucleation and growth kinetics. AICHE Journal, 2011, 57, 942-950.	1.8	40
53	Overcoming time scale and finite size limitations to compute nucleation rates from small scale well tempered metadynamics simulations. Journal of Chemical Physics, 2016, 145, 211925.	1.2	40
54	Analysis of direct capture of $${hbox {CO}}_{2}$$ from ambient air via steam-assisted temperatureâ€“vacuum swing adsorption. Adsorption, 2020, 26, 1183-1197.	1.4	38

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55	Carbon dioxide capture, transport and storage supply chains: Optimal economic and environmental performance of infrastructure rollout. International Journal of Greenhouse Gas Control, 2022, 117, 103635.	2.3	37
56	A model for enhanced coal bed methane recovery aimed at carbon dioxide storage. Adsorption, 2011, 17, 889-900.	1.4	36
57	Hydrogen from wood gasification with CCS â€“ a techno-environmental analysis of production and use as transport fuel. Sustainable Energy and Fuels, 2021, 5, 2602-2621.	2.5	36
58	Combinatorial Strategy for Studying Biochemical Pathways in Double Emulsion Templated Cellâ€sized Compartments. Advanced Materials, 2020, 32, e2004804.	11.1	34
59	Population-Based Mathematical Model of Solid-State Deracemization via Temperature Cycles. Crystal Growth and Design, 2018, 18, 7122-7131.	1.4	33
60	Formation of solids in ammonia-based CO2 capture processes â€" Identification of criticalities through thermodynamic analysis of the CO2â€“NH3â€“H2O system. Chemical Engineering Science, 2015, 133, 170-180.	1.9	32
61	Tuning the Particle Sizes in Spherical Agglomeration. Crystal Growth and Design, 2018, 18, 6257-6265.	1.4	32
62	Estimating speciation of aqueous ammonia solutions of ammonium bicarbonate: application of least squares methods to infrared spectra. Reaction Chemistry and Engineering, 2019, 4, 1284-1302.	1.9	31
63	Antisolvent Precipitation of PDI 747:â€‰ Kinetics of Particle Formation and Growth. Crystal Growth and Design, 2007, 7, 1653-1661.	1.4	30
64	Phase Diagram of a Chiral Substance Exhibiting Oiling Out in Cyclohexane. Crystal Growth and Design, 2010, 10, 4005-4013.	1.4	30
65	Agglomeration of Needle-like Crystals in Suspension: I. Measurements. Crystal Growth and Design, 2015, 15, 1923-1933.	1.4	30
66	A low-energy chilled ammonia process exploiting controlled solid formation for post-combustion CO₂capture. Faraday Discussions, 2016, 192, 59-83.	1.6	30
67	Intermittent Simulated Moving Bed Processes for Chromatographic Three-Fraction Separation. Organic Process Research and Development, 2012, 16, 311-322.	1.3	28
68	Statistical Analysis of Series of Detection Time Measurements for the Estimation of Nucleation Rates. Crystal Growth and Design, 2017, 17, 5488-5498.	1.4	28
69	Agglomeration of Needle-like Crystals in Suspension. II. Modeling. Crystal Growth and Design, 2015, 15, 4296-4310.	1.4	27
70	Estimating Crystal Growth Rates Using in situ ATR-FTIR and Raman Spectroscopy in a Calibration-Free Manner. Industrial & Engineering Chemistry Research, 2009, 48, 10740-10745.	1.8	26
71	Crystallization Process Design Using Thermodynamics To Avoid Oiling Out in a Mixture of Vanillin and Water. Crystal Growth and Design, 2014, 14, 5617-5625.	1.4	26
72	On the Effect of Initial Conditions in Viedma Ripening. Crystal Growth and Design, 2014, 14, 2488-2493.	1.4	25

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73	An Experimental and Modeling Study of the Adsorption Equilibrium and Dynamics of Water Vapor on Activated Carbon. Industrial & Engineering Chemistry Research, 2015, 54, 12165-12176.	1.8	25
74	Novel Adsorption Process for Co-Production of Hydrogen and CO₂ from a Multicomponent Stream. Industrial & Engineering Chemistry Research, 2019, 58, 17489-17506.	1.8	25
75	Population Balance Modeling of Growth and Secondary Nucleation by Attrition and Ripening. Crystal Growth and Design, 2020, 20, 307-319.	1.4	25
76	Solid state deracemisation through growth, dissolution and solution-phase racemisation. CrystEngComm, 2013, 15, 2319.	1.3	23
77	Effect of needleâ€like crystal shape on measured particle size distributions. AICHE Journal, 2016, 62, 2974-2985.	1.8	23
78	110th Anniversary: Evaluation of CO₂-Based and CO₂-Free Synthetic Fuel Systems Using a Net-Zero-CO₂-Emission Framework. Industrial & Engineering Chemistry Research, 2019, 58, 19958-19972.	1.8	23
79	Novel Adsorption Process for Co-Production of Hydrogen and CO₂ from a Multicomponent Streamâ€”Part 2: Application to Steam Methane Reforming and Autothermal Reforming Gases. Industrial & Engineering Chemistry Research, 2020, 59, 10093-10109.	1.8	23
80	Adsorption for efficient low carbon hydrogen production: part 1â€”adsorption equilibrium and breakthrough studies for H2/CO2/CH4 on zeolite 13X. Adsorption, 2021, 27, 541-558.	1.4	23
81	Determination of the Dimerization Equilibrium Constants of Omeprazole andPirkle's Alcohol through Optical-Rotation Measurements. Helvetica Chimica Acta, 2004, 87, 1917-1926.	1.0	22
82	Design of Simulated-Moving-Bed Chromatography with Enriched Extract Operation (EE-SMB):Â Langmuir Isotherms. Industrial & Engineering Chemistry Research, 2006, 45, 6289-6301.	1.8	22
83	Optimizing control of an experimental simulated moving bed unit. AICHE Journal, 2006, 52, 1481-1494.	1.8	22
84	Modeling water vapor adsorption/desorption cycles. Adsorption, 2014, 20, 359-371.	1.4	22
85	MO-MCS, a Derivative-Free Algorithm for the Multiobjective Optimization of Adsorption Processes. Industrial & Engineering Chemistry Research, 2018, 57, 9977-9993.	1.8	22
86	Modeling of circulating fluidized beds systems for postâ€combustion CO₂ capture via temperature swing adsorption. AICHE Journal, 2018, 64, 1744-1759.	1.8	20
87	Effect of Initial Conditions on Solid-State Deracemization via Temperature Cycles: A Model-Based Study. Crystal Growth and Design, 2019, 19, 6552-6559.	1.4	20
88	Local Equilibrium Theory for the Binary Chromatography of Species Subject to a Generalized Langmuir Isotherm. 2. Wave Interactions and Chromatographic Cycle. Industrial & Engineering Chemistry Research, 2011, 50, 352-377.	1.8	19
89	Influence of Liquidâ€Liquid Phase Separation on the Crystallization of Lâ€Menthol from Water. Chemical Engineering and Technology, 2017, 40, 1339-1346.	0.9	19
90	Feedback Control for the Size and Shape Evolution of Needle-like Crystals in Suspension. I. Concepts and Simulation Studies. Crystal Growth and Design, 2018, 18, 4470-4483.	1.4	19

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91	Naphthalene crystal shape prediction from molecular dynamics simulations. CrystEngComm, 2019, 21, 3280-3288.	1.3	19
92	Modeling the extra-column volume in a small column setup for bulk gas adsorption. Adsorption, 2012, 18, 381-393.	1.4	18
93	CO₂ Capture from a Binary CO₂/N₂ and a Ternary CO₂/N₂/H₂ Mixture by PSA: Experiments and Predictions. Industrial & Engineering Chemistry Research, 2015, 54, 6035-6045.	1.8	18
94	Advanced configurations for post-combustion CO2 capture processes using an aqueous ammonia solution as absorbent. Separation and Purification Technology, 2021, 274, 118959.	3.9	18
95	High Pressure Homogenization as a Novel Approach for the Preparation of Co-Crystals. Crystal Growth and Design, 2013, 13, 2013-2024.	1.4	17
96	Equilibrium Theory Analysis of a Binary Chromatographic System Subject to a Mixed Generalized Bi-Langmuir Isotherm. Industrial & Engineering Chemistry Research, 2015, 54, 11420-11437.	1.8	17
97	Solubility and Growth Kinetics of Ammonium Bicarbonate in Aqueous Solution. Crystal Growth and Design, 2017, 17, 3048-3054.	1.4	17
98	Phase Diagram of a Chiral Substance Exhibiting Oiling Out. 2. Racemic Compound Forming Ibuprofen in Water. Crystal Growth and Design, 2012, 12, 5298-5310.	1.4	16
99	Feedback Control for the Size and Shape Evolution of Needle-like Crystals in Suspension. II. Cooling Crystallization Experiments. Crystal Growth and Design, 2018, 18, 6185-6196.	1.4	16
100	Near-critical adsorption of CO2 on 13X zeolite and N2O onÂsilicaÂgel: lack of evidence of critical phenomena. Adsorption, 2008, 14, 133-141.	1.4	15
101	Prediction of competitive adsorption on coal by a lattice DFTÂmodel. Adsorption, 2010, 16, 37-46.	1.4	15
102	Three column intermittent simulated moving bed chromatography: 1. Process description and comparative assessment. Journal of Chromatography A, 2014, 1361, 125-138.	1.8	15
103	Three column intermittent simulated moving bed chromatography: 3. Cascade operation for center-cut separations. Journal of Chromatography A, 2015, 1378, 37-49.	1.8	15
104	Experimental Characterization and Mathematical Modeling of Breakage of Needle-like Crystals in a Continuous Rotor-Stator Wet Mill. Crystal Growth and Design, 2018, 18, 5957-5972.	1.4	15
105	A Stochastic Population Balance Equation Model for Nucleation and Growth of Crystals with Multiple Polymorphs. Crystal Growth and Design, 2019, 19, 4698-4709.	1.4	15
106	Optimizing control of an experimental simulated moving bed unit. AICHE Journal, 2006, 52, 1481.	1.8	14
107	Sorption and Swelling of Poly(D,Lâ€lactic acid) and Poly(lacticâ€coâ€glycolic acid) in Supercritical CO₂. Macromolecular Symposia, 2007, 259, 197-202.	0.4	14
108	Manipulation of Particle Morphology by Crystallization, Milling, and Heating Cycles: Experimental Characterization. Industrial & Engineering Chemistry Research, 0, , .	1.8	14

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109	An Alternative Approach to Estimate Solute Concentration: Exploiting the Information Embedded in the Solid Phase. Journal of Physical Chemistry Letters, 2018, 9, 4210-4214.	2.1	14
110	Estimation of the Growth and the Dissolution Kinetics of Ammonium Bicarbonate in Aqueous Ammonia Solutions from Batch Crystallization Experiments. Crystal Growth and Design, 2019, 19, 5907-5922.	1.4	14
111	Feedback Control for the Size and Shape Evolution of Needle-like Crystals in Suspension. III. Wet Milling. Crystal Growth and Design, 2019, 19, 2845-2861.	1.4	14
112	Solubility Prediction of Organic Molecules with Molecular Dynamics Simulations. Crystal Growth and Design, 2021, 21, 5198-5205.	1.4	14
113	Techno-economic assessment of post-combustion CO2 capture using aqueous piperazine at different flue gas compositions and flowrates via a general optimization methodology. International Journal of Greenhouse Gas Control, 2022, 114, 103587.	2.3	14
114	Growth Kinetics of S-Mandelic Acid in Aqueous Solutions in the Presence of R-Mandelic Acid. Crystal Growth and Design, 2013, 13, 652-663.	1.4	13
115	Secondary Nucleation by Interparticle Energies. I. Thermodynamics. Crystal Growth and Design, 2022, 22, 87-97.	1.4	13
116	Optimizing control of simulated moving bed separations ofÂmixtures subject to the generalized Langmuir isotherm. Adsorption, 2008, 14, 423-432.	1.4	12
117	Design of Crystallization Processes for the Resolution of Conglomerate-Forming Chiral Compounds Exhibiting Oiling Out. Organic Process Research and Development, 2012, 16, 294-310.	1.3	12
118	Solubility of Î²-carotene in poly-(É›-caprolactone) particles produced in colloidal state by Supercritical Fluid Extraction of Emulsions (SFEE). Journal of Supercritical Fluids, 2013, 84, 105-112.	1.6	12
119	Three-column intermittent simulated moving bed chromatography: 2. Experimental implementation for the separation of TrÃ¶ger's Base. Journal of Chromatography A, 2014, 1364, 107-116.	1.8	12
120	Feedback Control for the Size and Shape Evolution of Needle-like Crystals in Suspension. IV. Modeling and Control of Dissolution. Crystal Growth and Design, 2019, 19, 4029-4043.	1.4	12
121	Characterization of shapes and volumes of droplets generated in PDMS T-junctions to study nucleation. Chemical Engineering Research and Design, 2018, 138, 444-457.	2.7	11
122	Statistical Analysis and Nucleation Parameter Estimation from Nucleation Experiments in Flowing Microdroplets. Crystal Growth and Design, 2019, 19, 6159-6174.	1.4	11
123	Study of Secondary Nucleation by Attrition of Potassium Alum Crystals Suspended in Different Solvents. Crystal Growth and Design, 2020, 20, 2570-2577.	1.4	11
124	Adsorption for efficient low carbon hydrogen production: part 2â€"Cyclic experiments and model predictions. Adsorption, 2021, 27, 559-575.	1.4	11
125	MO-MCS: An Efficient Multi-objective Optimization Algorithm for the Optimization of Temperature/Pressure Swing Adsorption Cycles. Computer Aided Chemical Engineering, 2016, 38, 1467-1472.	0.3	10
126	Interconversion and chromatographic separation of carbohydrate stereoisomers on polystyrene-divinylbenzene resins. Journal of Chromatography A, 2017, 1517, 54-65.	1.8	10

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127	Optimization of low-carbon multi-energy systems with seasonal geothermal energy storage: The Anergy Grid of ETH Zurich. Energy Conversion and Management: X, 2020, 8, 100052.	0.9	10
128	Stochastic shelf-scale modeling framework for the freezing stage in freeze-drying processes. International Journal of Pharmaceutics, 2022, 613, 121276.	2.6	10
129	Secondary Nucleation by Interparticle Energies. II. Kinetics. Crystal Growth and Design, 2022, 22, 74-86.	1.4	10
130	Prediction of non-isothermal ternary gas-phase breakthrough experiments based on binary data. Adsorption, 2014, 20, 493-510.	1.4	9
131	Study of the Preparation of Amorphous Itraconazole Formulations. Crystal Growth and Design, 2015, 15, 2686-2694.	1.4	9
132	Growth Kinetics of Synthetic Hydromagnesite at 90 Â°C. Crystal Growth and Design, 2017, 17, 317-327.	1.4	9
133	1,3,5-tris(4-bromophenyl)-benzene Nucleation: From Dimers to Needle-like Clusters. Crystal Growth and Design, 2017, 17, 4137-4143.	1.4	9
134	Multi-Objective Path Planning for Single Crystal Size and Shape Modification. Crystal Growth and Design, 2017, 17, 4873-4886.	1.4	9
135	Performance Analysis and Model-Free Design of Deracemization via Temperature Cycles. Organic Process Research and Development, 2020, 24, 1515-1522.	1.3	9
136	A MILP model for the design of multi-energy systems with long-term energy storage. Computer Aided Chemical Engineering, 2017, 40, 2437-2442.	0.3	8
137	Postcombustion CO₂ Capture from Wet Flue Gas by Temperature Swing Adsorption. Industrial & Engineering Chemistry Research, 0, , .	1.8	8
138	Process Synthesis, Modeling and Optimization of Continuous Cooling Crystallization with Heat Integrationâ€"Application to the Chilled Ammonia CO₂ Capture Process. Industrial & Engineering Chemistry Research, 2018, 57, 11712-11727.	1.8	8
139	Nearâ€stoichiometric O₂ binding on metal centers in Co(salen) nanoparticles. AICHE Journal, 2009, 55, 1040-1045.	1.8	7
140	Equilibrium theory analysis of liquid chromatography with non-constant velocity. Journal of Chromatography A, 2014, 1373, 131-140.	1.8	7
141	Modeling for optimal operation of PEM fuel cells and electrolyzers. , 2016, , .		7
142	On the optimal design of forward osmosis desalination systems with NH₃â€“CO₂â€“H₂O solutions. Environmental Science: Water Research and Technology, 2017, 3, 811-829.	1.2	7
143	Characterizing Ensembles of Platelike Particles via Machine Learning. Industrial & Engineering Chemistry Research, 2021, 60, 473-483.	1.8	7
144	Absence of experimental evidence of a delta-shock in the system phenetole and 4-tert-butylphenol on Zorbax 300SB-C18. Journal of Chromatography A, 2015, 1425, 116-128.	1.8	6

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145	Characterization of a vibromixer: Experimental and modelling study of mixing in a batch reactor. Chemical Engineering Research and Design, 2018, 137, 534-543.	2.7	6
146	Giant Polymer Compartments for Confined Reactions. Chemistry, 2020, 2, 470-489.	0.9	6
147	Rigorous rate-based model for CO₂ capture via monoethanolamine-based solutions: effect of kinetic models, mass transfer, and holdup correlations on prediction accuracy. Separation Science and Technology, 2021, 56, 1491-1509.	1.3	6
148	Optimizing the Yield of a Pure Enantiomer by Integrating Chiral SMB Chromatography and Racemization. Part 1: Experiments. Industrial & Engineering Chemistry Research, 2021, 60, 10710-10719.	1.8	6
149	Accounting for the Presence of Molecular Clusters in Modeling and Interpreting Nucleation and Growth. Crystal Growth and Design, 2022, 22, 661-672.	1.4	6
150	Fully amorphous atactic and isotactic block copolymers and their self-assembly into nano- and microscopic vesicles. Polymer Chemistry, 2021, 12, 5377-5389.	1.9	5
151	Solid-State Deracemization via Temperature Cycles in Continuous Operation: Model-Based Process Design. Crystal Growth and Design, 2022, 22, 1846-1856.	1.4	5
152	Secondary Nucleation by Interparticle Energies. III. Nucleation Rate Model. Crystal Growth and Design, 2022, 22, 3625-3636.	1.4	5
153	Occurrence of a delta-shock in non-linear chromatography. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2040073-2040074.	0.2	4
154	Two-Phase Flow in Liquid Chromatography, Part 1: Experimental Investigation and Theoretical Description. Industrial & Engineering Chemistry Research, 2018, 57, 3274-3291.	1.8	4
155	Two-Phase Flow in Liquid Chromatography, Part 2: Modeling. Industrial & Engineering Chemistry Research, 2018, 57, 3292-3307.	1.8	4
156	Description of Adsorption in Liquid Chromatography under Nonideal Conditions. Langmuir, 2018, 34, 5655-5671.	1.6	4
157	Deracemization via Periodic and Non-periodic Temperature Cycles: Rationalization and Experimental Validation of a Simplified Process Design Approach. Organic Process Research and Development, 2021, 25, 2551-2565.	1.3	4
158	Online Monitoring of the Concentrations of Amorphous and Crystalline Mesoscopic Species Present in Solution. Crystal Growth and Design, 2022, 22, 5071-5080.	1.4	4
159	A methodology for the heuristic optimization of solvent-based CO2 capture processes when applied to new flue gas compositions: A case study of the Chilled Ammonia Process for capture in cement plants. Chemical Engineering Science: X, 2020, 8, 100074.	1.5	3
160	Optimizing the Yield of a Pure Enantiomer by Integrating Chiral SMB Chromatography and Racemization. Part 2: Theory. Industrial & Engineering Chemistry Research, 2021, 60, 10720-10735.	1.8	3
161	Selective Dissolution Process Featuring a Classification Device for the Removal of Fines in Crystallization: Experiments. Industrial & Engineering Chemistry Research, 2021, 60, 15752-15765.	1.8	3
162	A Selective Dissolution Process Featuring a Classification Device for the Removal of Fines in Crystallization. Industrial & Engineering Chemistry Research, 2021, 60, 614-628.	1.8	3

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163	Crystallization-Induced Deracemization: Experiments and Modeling. Crystal Growth and Design, 2022, 22, 1427-1436.	1.4	3
164	Solubility of Organic Salts in Solventâ€“Antisolvent Mixtures: A Combined Experimental and Molecular Dynamics Simulations Approach. Journal of Chemical Theory and Computation, 2022, 18, 4952-4959.	2.3	3
165	A Time-series-based approach for robust design of multi-energy systems with energy storage. Computer Aided Chemical Engineering, 2018, 43, 525-530.	0.3	2
166	IDENTIFICATION AND PREDICTIVE CONTROL OF A SIMULATED MOVING BED PROCESS. , 2003, , .		2
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168	Estimation of the Growth and Dissolution Kinetics of Ammonium Bicarbonate in Aqueous Ammonia Solutions from Batch Crystallization Experiments. 2. The Effect of Sulfate Impurity. Crystal Growth and Design, 2020, 20, 948-963.	1.4	1
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