Marco Mazzotti

List of Publications by Year in descending order

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199 papers	11,002 citations	24978 57 h-index	35952 97 g-index
206 all docs	206 docs citations	206 times ranked	6737 citing authors

#	Article	IF	Citations
1	Optimal operation of simulated moving bed units for nonlinear chromatographic separations. Journal of Chromatography A, 1997, 769, 3-24.	1.8	537
2	Robust design of binary countercurrent adsorption separation processes. AICHE Journal, 1993, 39, 471-492.	1.8	358
3	Optimal design of multi-energy systems with seasonal storage. Applied Energy, 2018, 219, 408-424.	5.1	357
4	Simulated moving bed chromatography for the separation of enantiomers. Journal of Chromatography A, 2009, 1216, 709-738.	1.8	335
5	Simulated moving-bed chromatography and its application to chirotechnology. Trends in Biotechnology, 2000, 18, 108-118.	4.9	318
6	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
7	In Situ Monitoring and Modeling of the Solvent-Mediated Polymorphic Transformation ofl-Glutamic Acid. Crystal Growth and Design, 2006, 6, 881-891.	1.4	245
8	On the climate change mitigation potential of CO₂ conversion to fuels. Energy and Environmental Science, 2017, 10, 2491-2499.	15.6	225
9	Process design and energy requirements for the capture of carbon dioxide from air. Chemical Engineering and Processing: Process Intensification, 2006, 45, 1047-1058.	1.8	223
10	Modeling and Experimental Analysis of PSD Measurements through FBRM. Particle and Particle Systems Characterization, 2000, 17, 167-179.	1.2	206
11	Competitive adsorption equilibria of CO2 and CH4 on a dry coal. Adsorption, 2008, 14, 539-556.	1.4	204
12	Uncovering Molecular Details of Urea Crystal Growth in the Presence of Additives. Journal of the American Chemical Society, 2012, 134, 17221-17233.	6.6	182
13	Model-Based Optimization of Particle Size Distribution in Batch-Cooling Crystallization of Paracetamol. Crystal Growth and Design, 2004, 4, 891-903.	1.4	180
14	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
15	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
16	Design and Optimization of a Combined Cooling/Antisolvent Crystallization Process. Crystal Growth and Design, 2009, 9, 1124-1136.	1.4	154
17	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
18	Life cycle assessment of carbon dioxide removal technologies: a critical review. Energy and Environmental Science, 2021, 14, 1701-1721.	15.6	141

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19	A continuous chromatographic reactor: SMBR. Chemical Engineering Science, 1996, 51, 1827-1836.	1.9	138
20	Comparison of Technologies for CO2 Capture from Cement Productionâ€"Part 1: Technical Evaluation. Energies, 2019, 12, 559.	1.6	137
21	Seasonal energy storage for zero-emissions multi-energy systems via underground hydrogen storage. Renewable and Sustainable Energy Reviews, 2020, 121, 109629.	8.2	137
22	Comparison of Technologies for CO2 Capture from Cement Productionâ€"Part 2: Cost Analysis. Energies, 2019, 12, 542.	1.6	135
23	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
24	On the climate impacts of blue hydrogen production. Sustainable Energy and Fuels, 2021, 6, 66-75.	2.5	126
25	Quantitative Application of in Situ ATR-FTIR and Raman Spectroscopy in Crystallization Processes. Industrial & Engineering Chemistry Research, 2008, 47, 4870-4882.	1.8	121
26	Adsorption equilibrium of binary mixtures of carbon dioxide and nitrogen on zeolites ZSM-5 and 13X. Microporous and Mesoporous Materials, 2015, 215, 215-228.	2.2	121
27	Continuous chromatographic separation through simulated moving beds under linear and nonlinear conditions. Journal of Chromatography A, 1998, 827, 161-173.	1.8	117
28	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
29	Kinetics of Liquid-Phase Esterification Catalyzed by Acidic Resins. Industrial & Engineering Chemistry Research, 1997, 36, 3-10.	1.8	115
30	Fixed bed adsorption of CO2/H2 mixtures on activated carbon: experiments and modeling. Adsorption, 2012, 18, 143-161.	1.4	115
31	Assessment of carbon dioxide removal potential via BECCS in a carbon-neutral Europe. Energy and Environmental Science, 2021, 14, 3086-3097.	15.6	106
32	A parametric study of a PSA process for pre-combustion CO2 capture. Separation and Purification Technology, 2013, 104, 183-192.	3.9	102
33	Robust and optimal design of multi-energy systems with seasonal storage through uncertainty analysis. Applied Energy, 2019, 238, 1192-1210.	5.1	100
34	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
35	A Population Balance Model for Chiral Resolution via Viedma Ripening. Crystal Growth and Design, 2011, 11, 4611-4622.	1.4	96
36	Rational design of temperature swing adsorption cycles for post-combustion CO 2 capture. Chemical Engineering Science, 2017, 158, 381-394.	1.9	96

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37	Pure and binary adsorption of CO2, H2, and N2 on activated carbon. Adsorption, 2012, 18, 49-65.	1.4	91
38	Direct air capture of CO2 with chemicals: optimization of a two-loop hydroxide carbonate system using a countercurrent air-liquid contactor. Climatic Change, 2013, 118, 119-135.	1.7	90
39	Controlling and Predicting Crystal Shapes: The Case of Urea. Angewandte Chemie - International Edition, 2013, 52, 13369-13372.	7.2	89
40	Design of Optimal Operating Conditions of Simulated Moving Bed Adsorptive Separation Units. Industrial & Engineering Chemistry Research, 1995, 34, 288-301.	1.8	83
41	High accuracy online measurement of multidimensional particle size distributions during crystallization. Chemical Engineering Science, 2014, 105, 155-168.	1.9	80
42	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
43	On the potential of phase-change adsorbents for CO₂ capture by temperature swing adsorption. Faraday Discussions, 2016, 192, 153-179.	1.6	78
44	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
45	Effect of temperature on the nucleation kinetics of Î± l-glutamic acid. Journal of Crystal Growth, 2009, 311, 1178-1184.	0.7	75
46	Population Balance Modeling with Size-Dependent Solubility: Ostwald Ripening. Crystal Growth and Design, 2012, 12, 1489-1500.	1.4	71
47	Insight into the nucleation of urea crystals from the melt. Chemical Engineering Science, 2015, 121, 51-59.	1.9	70
48	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
49	Measuring multidimensional particle size distributions during crystallization. Chemical Engineering Science, 2012, 77, 130-142.	1.9	68
50	Continuous enantiomer separation of the volatile inhalation anesthetic enflurane with a gas chromatographic simulated moving bed unit. Journal of Chromatography A, 1998, 813, 333-347.	1.8	67
51	Precipitation of Î±l-glutamic acid: determination of growth kinetics. Faraday Discussions, 2007, 136, 247.	1.6	67
52	Intermittent simulated moving bed chromatography: 1. Design criteria and cyclic steady-state. Journal of Chromatography A, 2010, 1217, 1354-1361.	1.8	65
53	MOF and UiO-67/MCM-41 adsorbents for pre-combustion CO2 capture by PSA: Breakthrough experiments and process design. Separation and Purification Technology, 2013, 112, 34-48.	3.9	65
54	Two-fraction and three-fraction continuous simulated moving bed separation of nucleosides. Journal of Chromatography A, 2004, 1043, 201-210.	1.8	64

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55	Potential for hydrogen production from sustainable biomass with carbon capture and storage. Renewable and Sustainable Energy Reviews, 2022, 157, 112123.	8.2	64
56	Temperature Swing Adsorption for Postcombustion CO₂ Capture: Single- and Multicolumn Experiments and Simulations. Industrial & Engineering Chemistry Research, 2016, 55, 1401-1412.	1.8	62
57	Modelling the stochastic behaviour of primary nucleation. Faraday Discussions, 2015, 179, 359-382.	1.6	61
58	Measurement of 3D particle size distributions by stereoscopic imaging. Chemical Engineering Science, 2010, 65, 1362-1373.	1.9	60
59	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
60	<scp>l</scp>-Glutamic Acid Precipitation: Agglomeration Effects. Crystal Growth and Design, 2008, 8, 224-237.	1.4	57
61	Precipitation and Transformation of the Three Polymorphs of <scp>d</scp>-Mannitol. Industrial & Engineering Chemistry Research, 2010, 49, 5854-5862.	1.8	56
62	Ripening of Semiconductor Nanoplatelets. Nano Letters, 2017, 17, 6870-6877.	4.5	56
63	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
64	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
65	On the optimal design of membrane-based gas separation processes. Journal of Membrane Science, 2017, 526, 118-130.	4.1	54
66	Equilibrium Theoryâ€“Based Analysis of Nonlinear Waves in Separation Processes. Annual Review of Chemical and Biomolecular Engineering, 2013, 4, 119-141.	3.3	53
67	Reliable measurement of near-critical adsorption by gravimetric method. Adsorption, 2006, 12, 393-403.	1.4	52
68	Slowing the Growth Rate of Ibuprofen Crystals Using the Polymeric Additive Pluronic F127. Crystal Growth and Design, 2011, 11, 3813-3821.	1.4	52
69	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
70	Urea homogeneous nucleation mechanism is solvent dependent. Faraday Discussions, 2015, 179, 291-307.	1.6	50
71	Deracemization of NMPA via Temperature Cycles. Crystal Growth and Design, 2018, 18, 1873-1881.	1.4	50
72	Measurement of size and shape distributions of particles through image analysis. Chemical Engineering Science, 2008, 63, 5513-5521.	1.9	47

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73	A comprehensive shape analysis pipeline for stereoscopic measurements of particulate populations in suspension. Powder Technology, 2017, 321, 479-493.	2.1	45
74	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
75	Performance of a Six-Port Simulated Moving-Bed Pilot Plant for Vapor-Phase Adsorption Separations. Separation Science and Technology, 1992, 27, 1889-1916.	1.3	41
76	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
77	Design of Simulated Moving Bed Separations:Â Generalized Langmuir Isotherm. Industrial & Engineering Chemistry Research, 2006, 45, 6311-6324.	1.8	40
78	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
79	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
80	Gas chromatographic simulated moving bed separation of the enantiomers of the inhalation anesthetic enflurane. Chemical Engineering Science, 2000, 55, 4537-4547.	1.9	39
81	Complete solid state deracemization by High Pressure Homogenization. Chemical Engineering Science, 2014, 111, 106-111.	1.9	39
82	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
83	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
84	Extra-column dead volume in simulated moving bed separations: Theory and experiments. Journal of Chromatography A, 2009, 1216, 1084-1093.	1.8	36
85	Intermittent simulated moving bed chromatography: 2. Separation of TrÃ¶gerâ€™s base enantiomers. Journal of Chromatography A, 2010, 1217, 3067-3075.	1.8	36
86	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
87	Optimization of simulated moving bed and column chromatography for a plasmid DNA purification step and for a chiral separation. Journal of Chromatography A, 2007, 1142, 56-68.	1.8	35
88	Population-Based Mathematical Model of Solid-State Deracemization via Temperature Cycles. Crystal Growth and Design, 2018, 18, 7122-7131.	1.4	33
89	Carbon dioxide mineralization in recycled concrete aggregates can contribute immediately to carbon-neutrality. Resources, Conservation and Recycling, 2022, 184, 106436.	5.3	33
90	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

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91	Tuning the Particle Sizes in Spherical Agglomeration. Crystal Growth and Design, 2018, 18, 6257-6265.	1.4	32
92	Fault sealing and caprock integrity for CO₂ storage: an in situ injection experiment. Solid Earth, 2021, 12, 319-343.	1.2	32
93	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
94	Agglomeration of Needle-like Crystals in Suspension: I. Measurements. Crystal Growth and Design, 2015, 15, 1923-1933.	1.4	30
95	A low-energy chilled ammonia process exploiting controlled solid formation for post-combustion CO₂capture. Faraday Discussions, 2016, 192, 59-83.	1.6	30
96	Manipulation of Particle Morphology by Crystallization, Milling, and Heating Cyclesâ€”A Mathematical Modeling Approach. Industrial & Engineering Chemistry Research, 2017, 56, 9188-9201.	1.8	30
97	Filterability prediction of needle-like crystals based on particle size and shape distribution data. Separation and Purification Technology, 2019, 211, 768-781.	3.9	30
98	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
99	Stochasticity in Primary Nucleation: Measuring and Modeling Detection Times. Crystal Growth and Design, 2017, 17, 3625-3635.	1.4	28
100	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
101	On the Effect of Initial Conditions in Viedma Ripening. Crystal Growth and Design, 2014, 14, 2488-2493.	1.4	25
102	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
103	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
104	Population Balance Modeling of Growth and Secondary Nucleation by Attrition and Ripening. Crystal Growth and Design, 2020, 20, 307-319.	1.4	25
105	Optimal design of an MDEA <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e947" altimg="si92.svg"><mml:msub><mml:mrow><mml:mi mathvariant="normal">CO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math> capture plant for low-carbon hydrogen production â€” A rigorous process optimization approach. Separation and Purification Technology, 2021, 279, 119715.	3.9	25
106	Modeling chromatographic chiral separations under nonlinear competitive conditions. AICHE Journal, 2000, 46, 1530-1540.	1.8	24
107	Effect of needleâ€like crystal shape on measured particle size distributions. AICHE Journal, 2016, 62, 2974-2985.	1.8	23
108	Addressing the Criticalities for the Deployment of Adsorption-based CO2 Capture Processes. Energy Procedia, 2017, 114, 2497-2505.	1.8	23

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109	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
110	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
111	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
112	Synergistic material and process development: Application of a metal-organic framework, Cu-TDPAT, in single-cycle hydrogen purification and CO2 capture from synthesis gas. Chemical Engineering Journal, 2021, 414, 128778.	6.6	23
113	Modeling water vapor adsorption/desorption cycles. Adsorption, 2014, 20, 359-371.	1.4	22
114	Modeling the facet growth rate dispersion of Î² l-glutamic acidâ€"Combining single crystal experiments with nD particle size distribution data. Chemical Engineering Science, 2015, 133, 30-43.	1.9	22
115	MO-MCS, a Derivative-Free Algorithm for the Multiobjective Optimization of Adsorption Processes. Industrial & Engineering Chemistry Research, 2018, 57, 9977-9993.	1.8	22
116	Role of Racemization Kinetics in the Deracemization Process via Temperature Cycles. Crystal Growth and Design, 2019, 19, 3551-3558.	1.4	22
117	Modeling of circulating fluidized beds systems for postâ€combustion CO₂ capture via temperature swing adsorption. AIChE Journal, 2018, 64, 1744-1759.	1.8	20
118	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
119	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
120	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
121	Naphthalene crystal shape prediction from molecular dynamics simulations. CrystEngComm, 2019, 21, 3280-3288.	1.3	19
122	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
123	From needle-like toward equant particles: A controlled crystal shape engineering pathway. Computers and Chemical Engineering, 2019, 131, 106581.	2.0	18
124	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
125	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
126	Solubility and Growth Kinetics of Ammonium Bicarbonate in Aqueous Solution. Crystal Growth and Design, 2017, 17, 3048-3054.	1.4	17

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127	Technological Demonstration and Life Cycle Assessment of a Negative Emission Value Chain in the Swiss Concrete Sector. Frontiers in Climate, 2021, 3, .	1.3	17
128	Intermittent simulated moving bed chromatography: 3. Separation of TrÃ¶ger's base enantiomers under nonlinear conditions. Journal of Chromatography A, 2011, 1218, 9345-9352.	1.8	16
129	Stochastic Nucleation of Polymorphs: Experimental Evidence and Mathematical Modeling. Crystal Growth and Design, 2017, 17, 6703-6711.	1.4	16
130	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
131	Modeling of modifier-solute peak interactions in chromatography. AICHE Journal, 2006, 52, 565-573.	1.8	15
132	Three column intermittent simulated moving bed chromatography: 1. Process description and comparative assessment. Journal of Chromatography A, 2014, 1361, 125-138.	1.8	15
133	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
134	Solid state deracemisation of two imine-derivatives of phenylglycine derivatives via high-pressure homogenisation and temperature cycles. CrystEngComm, 2018, 20, 3828-3838.	1.3	15
135	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
136	Manipulation of Particle Morphology by Crystallization, Milling, and Heating Cycles: Experimental Characterization. Industrial & Engineering Chemistry Research, 0, , .	1.8	14
137	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
138	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
139	Combined water desalination and electricity generation through a humidification-dehumidification process integrated with photovoltaic-thermal modules: Design, performance analysis and techno-economic assessment. Energy Conversion and Management: X, 2019, 1, 100004.	0.9	14
140	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
141	Efficient assessment of combined crystallization, milling, and dissolution cycles for crystal size and shape manipulation. Chemical Engineering Science: X, 2019, 1, 100004.	1.5	14
142	Solubility Prediction of Organic Molecules with Molecular Dynamics Simulations. Crystal Growth and Design, 2021, 21, 5198-5205.	1.4	14
143	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
144	Secondary Nucleation by Interparticle Energies. I. Thermodynamics. Crystal Growth and Design, 2022, 22, 87-97.	1.4	13

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145	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
146	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
147	Separation of TrÃ¶gerâ€™s Base Enantiomers Through a Combination of Simulated Moving Bed Chromatography and Crystallization. Adsorption, 2005, 11, 893-897.	1.4	11
148	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
149	Statistical Analysis and Nucleation Parameter Estimation from Nucleation Experiments in Flowing Microdroplets. Crystal Growth and Design, 2019, 19, 6159-6174.	1.4	11
150	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
151	Adsorption for efficient low carbon hydrogen production: part 2â€”Cyclic experiments and model predictions. Adsorption, 2021, 27, 559-575.	1.4	11
152	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
153	Stochastic shelf-scale modeling framework for the freezing stage in freeze-drying processes. International Journal of Pharmaceutics, 2022, 613, 121276.	2.6	10
154	Secondary Nucleation by Interparticle Energies. II. Kinetics. Crystal Growth and Design, 2022, 22, 74-86.	1.4	10
155	Prediction of non-isothermal ternary gas-phase breakthrough experiments based on binary data. Adsorption, 2014, 20, 493-510.	1.4	9
156	Modeling and measurement of abraded particles. Powder Technology, 2015, 271, 134-140.	2.1	9
157	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
158	Multi-Objective Path Planning for Single Crystal Size and Shape Modification. Crystal Growth and Design, 2017, 17, 4873-4886.	1.4	9
159	Performance Analysis and Model-Free Design of Deracemization via Temperature Cycles. Organic Process Research and Development, 2020, 24, 1515-1522.	1.3	9
160	Solid Formation in Ammonia-based Processes for CO2 Capture â€“ Turning a Challenge into an Opportunity. Energy Procedia, 2017, 114, 866-872.	1.8	8
161	Postcombustion CO₂ Capture from Wet Flue Gas by Temperature Swing Adsorption. Industrial & Engineering Chemistry Research, 0, , .	1.8	8
162	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

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163	Equilibrium theory analysis of liquid chromatography with non-constant velocity. Journal of Chromatography A, 2014, 1373, 131-140.	1.8	7
164	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
165	Heat transfer intensification with packed open-cell foams in TSA processes for CO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1096" altimg="si43.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math> capture. Chemical Engineering Journal, 2022, 430, 131000.	6.6	7
166	Characterizing Ensembles of Platelike Particles via Machine Learning. Industrial & Engineering Chemistry Research, 2021, 60, 473-483.	1.8	7
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