Gerhard Schembecker

List of Publications by Year
in descending order

123	2,647	218677	243625
papers	citations	26 h-index	44 g-index

128	128	128	1967
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Developing the biofacility of the future based on continuous processing and single-use technology. Journal of Biotechnology, 2015, 213, 120-130.	3.8	146
2	Experimental study of the effect of bubbles on nucleation during batch cooling crystallization. Chemical Engineering Science, 2009, 64, 4155-4163.	3.8	101
3	Cost evaluation of antibody production processes in different operation modes. Chemical Engineering Science, 2016, 141, 63-74.	3.8	94
4	Small scale, modular and continuous: A new approach in plant design. Chemical Engineering and Processing: Process Intensification, 2012, 52, 140-150.	3.6	92
5	Process synthesis for reactive separations. Chemical Engineering and Processing: Process Intensification, 2003, 42, 179-189.	3.6	83
6	Investigations on the Synthesis of Methyl Acetate in a Heterogeneous Reactive Distillation Process. Chemical Engineering and Technology, 1998, 21, 393.	1.5	82
7	Sonocrystallization and crystallization with gassing of adipic acid. Chemical Engineering Science, 2010, 65, 1016-1027.	3.8	78
8	Low-cost small scale processing technologies for production applications in various environmentsâ€"Mass produced factories. Chemical Engineering and Processing: Process Intensification, 2012, 51, 32-52.	3.6	76
9	Measurement and Modeling Solubility of Aqueous Multisolute Amino-Acid Solutions. Industrial & Engineering Chemistry Research, 2010, 49, 1395-1401.	3.7	69
10	Towards an optimized crystallization with ultrasound: Effect of solvent properties and ultrasonic process parameters. Journal of Crystal Growth, 2008, 310, 4177-4184.	1.5	68
11	Modeling ultrasound-induced nucleation during cooling crystallization. Chemical Engineering Science, 2009, 64, 1635-1642.	3.8	65
12	Continuous viral inactivation at low pH value in antibody manufacturing. Chemical Engineering and Processing: Process Intensification, 2016, 102, 88-101.	3.6	58
13	Modeling induced nucleation processes during batch cooling crystallization: A sequential parameter determination procedure. Computers and Chemical Engineering, 2013, 52, 216-229.	3.8	54
14	Fast and isocratic HPLC-method for steviol glycosides analysis from Stevia rebaudiana leaves. Journal Fur Verbraucherschutz Und Lebensmittelsicherheit, 2012, 7, 147-154.	1.4	51
15	Analysis of Crystal Size Dispersion Effects in a Continuous Coiled Tubular Crystallizer: Experiments and Modeling. Crystal Growth and Design, 2018, 18, 1459-1473.	3.0	49
16	Establishment of a yeast-based VLP platform for antigen presentation. Microbial Cell Factories, 2018, 17, 17.	4.0	49
17	Modeling pH and Solubilities in Aqueous Multisolute Amino Acid Solutions. Industrial & Engineering Chemistry Research, 2011, 50, 3503-3509.	3.7	45
18	Influence of physical properties and operating parameters on hydrodynamics in Centrifugal Partition Chromatography. Journal of Chromatography A, 2011, 1218, 5401-5413.	3.7	39

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19	Information Technologies for Innovative Process and Plant Design. Chemie-Ingenieur-Technik, 2014, 86, 966-981.	0.8	39
20	Modules in process industry â˜ A life cycle definition. Chemical Engineering and Processing: Process Intensification, 2017, 111, 115-126.	3.6	37
21	Role of bubble size for the performance of continuous foam fractionation in stripping mode. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 473, 85-94.	4.7	34
22	Selection of operating parameters on the basis of hydrodynamics in centrifugal partition chromatography for the purification of nybomycin derivatives. Journal of Chromatography A, 2013, 1274, 54-64.	3.7	32
23	Agglomeration degree distribution as quality criterion to evaluate crystalline products. Chemical Engineering Science, 2015, 133, 157-169.	3.8	31
24	Shape-independent particle classification for discrimination of single crystals and agglomerates. Powder Technology, 2019, 345, 425-437.	4.2	31
25	A general approach to module-based plant design. Chemical Engineering Research and Design, 2018, 137, 125-140.	5.6	30
26	Virus study for continuous low pH viral inactivation inside a coiled flow inverter. Biotechnology and Bioengineering, 2019, 116, 857-869.	3.3	28
27	Investigation of structural changes of Î²-casein and lysozyme at the gasâ€“liquid interface during foam fractionation. Journal of Biotechnology, 2012, 161, 138-146.	3.8	27
28	Investigation, comparison and design of chambers used in centrifugal partition chromatography on the basis of flow pattern and separation experiments. Journal of Chromatography A, 2015, 1390, 39-49.	3.7	26
29	Variable selection and training set design for particle classification using a linear and a non-linear classifier. Chemical Engineering Science, 2017, 173, 131-144.	3.8	26
30	Influence of Gassing Crystallization Parameters on Induction Time and Crystal Size Distribution. Crystal Growth and Design, 2016, 16, 6797-6803.	3.0	25
31	Design of Median Crystal Diameter Using Gassing Crystallization and Different Process Concepts. Crystal Growth and Design, 2016, 16, 1320-1328.	3.0	25
32	Potential of gassing crystallization to control the agglomeration degree of crystalline products. Powder Technology, 2017, 320, 386-396.	4.2	25
33	Die 50â€‰%-Idee: Modularisierung im Planungsprozess. Chemie-Ingenieur-Technik, 2012, 84, 581-587.	0.8	24
34	A framework for the modeling and optimization of process superstructures under uncertainty. Chemical Engineering Science, 2014, 115, 225-237.	3.8	24
35	Model-based conceptual design and optimization tool support for the early stage development of chemical processes under uncertainty. Computers and Chemical Engineering, 2013, 59, 63-73.	3.8	23
36	Capacity Flexibility of Chemical Plants. Chemical Engineering and Technology, 2014, 37, 332-342.	1.5	23

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37	Techniques for the recovery of volatile aroma compounds from biochemical broth: A review. Flavour and Fragrance Journal, 2018, 33, 203-216.	2.6	23
38	Induced nucleation by gassing and its monitoring for the design and operation of an MSMPR cascade. Chemical Engineering Science, 2018, 192, 840-849.	3.8	23
39	Sideâ€byâ€side comparability of batch and continuous downstream for the production of monoclonal antibodies. Biotechnology and Bioengineering, 2020, 117, 1024-1036.	3.3	23
40	READPERT â€" development, selection and design of chemical reactors. Chemical Engineering and Processing: Process Intensification, 1995, 34, 317-322.	3.6	22
41	Design of equipment modules for flexibility. Chemical Engineering Science, 2017, 168, 271-288.	3.8	22
42	Selection of equipment modules for a flexible modular production plant by a multi-objective evolutionary algorithm. Computers and Chemical Engineering, 2019, 123, 196-221.	3.8	22
43	Continuous slug flow crystallization: Impact of design and operating parameters on product quality. Chemical Engineering Research and Design, 2021, 170, 290-303.	5.6	22
44	Multiphase flow modeling in centrifugal partition chromatography. Journal of Chromatography A, 2011, 1218, 6092-6101.	3.7	21
45	Real option framework for equipment wise expansion of modular plants applied to the design of a continuous multiproduct plant. Chemical Engineering Research and Design, 2015, 93, 511-521.	5.6	21
46	Fixed capital investment estimation for modular production plants. Chemical Engineering Science, 2017, 158, 395-410.	3.8	21
47	Characterization of slug formation towards the performance of air-liquid segmented flow. Chemical Engineering Science, 2019, 207, 1288-1298.	3.8	21
48	Comparison of process concepts for preparative chromatography. Chemical Engineering Science, 2010, 65, 5373-5381.	3.8	20
49	Enhanced Product Quality Control through Separation of Crystallization Phenomena in a Four-Stage MSMPR Cascade. Crystal Growth and Design, 2018, 18, 7323-7334.	3.0	20
50	Efficient conversion of pretreated brewerâ€™s spent grain and wheat bran by submerged cultivation of Hericium erinaceus. Bioresource Technology, 2016, 222, 123-129.	9.6	19
51	Amino-Acid Adsorption in MFI-Type Zeolites Enabled by the pH-Dependent Ability to Displace Water. Journal of Physical Chemistry C, 2013, 117, 18927-18935.	3.1	18
52	Continuous viral filtration for the production of monoclonal antibodies. Chemical Engineering Research and Design, 2019, 152, 336-347.	5.6	17
53	Scaling-up recycling chromatography. Chemical Engineering Science, 2009, 64, 4068-4080.	3.8	16
54	Generation of an equipment module database for heat exchangers by cluster analysis of industrial applications. Chemical Engineering Science, 2017, 167, 278-287.	3.8	16

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55	Tunable aqueous polymer-phase impregnated resins-technologyâ€"A novel approach to aqueous two-phase extraction. Journal of Chromatography A, 2014, 1329, 38-44.	3.7	15
56	Enzymatic hydrolysis in an aqueous organic two-phase system using centrifugal partition chromatography. Journal of Chromatography A, 2015, 1391, 72-79.	3.7	15
57	Mass Transfer of Proteins in Aqueous Two-Phase Systems. Scientific Reports, 2019, 9, 3692.	3.3	15
58	Knowledge Based Design of Piping and Instrumentation Diagrams. Chemie-Ingenieur-Technik, 2012, 84, 747-761.	0.8	14
59	Display of malaria transmission-blocking antigens on chimeric duck hepatitis B virus-derived virus-like particles produced in Hansenula polymorpha. PLoS ONE, 2019, 14, e0221394.	2.5	14
60	Molecular Interaction of Amino Acids with Acidic Zeolite BEA: The Effect of Water. Journal of Physical Chemistry C, 2014, 118, 5810-5819.	3.1	13
61	Preparative purification of rebaudioside A from aqueous extracts using chromatography: a process idea. Journal Fur Verbraucherschutz Und Lebensmittelsicherheit, 2012, 7, 295-303.	1.4	12
62	Intensified hydroformylation as an example for flexible intermediates production. Chemical Engineering and Processing: Process Intensification, 2014, 85, 1-9.	3.6	12
63	Growth Rate Measurements of Organic Crystals in a Coneâ€Shaped Fluidizedâ€Bed Cell. Chemical Engineering and Technology, 2018, 41, 1165-1172.	1.5	12
64	Cooling Crystallization: Does Gassing Compete with Seeding?. Crystal Growth and Design, 2018, 18, 4906-4910.	3.0	12
65	Recovery of Natural Î±-Ionone from Fermentation Broth. Journal of Agricultural and Food Chemistry, 2019, 67, 13412-13419.	5.2	12
66	Characterization of a Modular Continuous Vacuum Screw Filter for Small-Scale Solidâ€"Liquid Separation of Suspensions. Organic Process Research and Development, 2021, 25, 926-940.	2.7	12
67	Heat integration in batch processes including heat streams with time dependent temperature progression. Applied Thermal Engineering, 2014, 70, 321-327.	6.0	11
68	Production Rateâ€Dependent Key Performance Indicators for a Systematic Design of Biochemical Downstream Processes. Chemical Engineering and Technology, 2016, 39, 354-364.	1.5	11
69	Methodology for evaluating modular production concepts. Chemical Engineering Science, 2016, 155, 153-166.	3.8	11
70	Gassing Crystallization at Different Scales: Potential to Control Nucleation and Product Properties. Crystal Growth and Design, 2017, 17, 1028-1035.	3.0	11
71	Bioprocess optimization for purification of chimeric VLP displaying BVDV E2 antigens produced in yeast Hansenula polymorpha. Journal of Biotechnology, 2019, 306, 203-212.	3.8	11
72	Selection and Use of Poly Ethylene Glycol and Phosphate Based Aqueous Two-Phase Systems for the Separation of Proteins by Centrifugal Partition Chromatography. Journal of Liquid Chromatography and Related Technologies, 2015, 38, 929-941.	1.0	10

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73	Evaluating the potential for optimization of axial back-mixing in continuous pharmaceutical manufacturing. Computers and Chemical Engineering, 2021, 147, 107251.	3.8	10
74	Quantification and evaluation of operating parametersâ€™ effect on suspension behavior for slug flow crystallization. Chemical Engineering Science, 2021, 243, 116771.	3.8	10
75	Selection of reference components in reaction invariants. Chemical Engineering Science, 2005, 60, 7168-7171.	3.8	9
76	Erinacine C: A novel approach to produce the secondary metabolite by submerged cultivation of Hericium erinaceus. Fungal Biology, 2015, 119, 1334-1344.	2.5	9
77	A model to predict fugitive VOC emissions from liquid charged flange joints with graphite gaskets. Chemical Engineering Journal, 2010, 159, 11-16.	12.7	8
78	A Fully Automated Adâ€•and Desorption Method for Resin and Solvent Screening. Chemical Engineering and Technology, 2013, 36, 1157-1164.	1.5	8
79	Lead time estimation for modular production plants. Chemical Engineering Research and Design, 2017, 128, 96-106.	5.6	8
80	Aroma absorption in a rotating packed bed with a tailor-made archimedean spiral packing. Chemical Engineering Science, 2021, 231, 116334.	3.8	8
81	Challenges in tracing material flow passing a loss-in-weight feeder in continuous manufacturing processes. International Journal of Pharmaceutics, 2022, 612, 121304.	5.2	8
82	Die 50â€‰%-Idee: Vom Produkt zur Produktionsanlage in der halben Zeit. Chemie-Ingenieur-Technik, 2010, 82, 2031-2031.	0.8	7
83	Heterologous fermentation of a diterpene fromAlternaria brassisicola. Mycology, 2014, 5, 207-219.	4.4	7
84	Determining the soluteâ€“solid interactions in phytoextraction. Chemical Engineering Science, 2015, 134, 287-296.	3.8	7
85	Heuristic-numeric design of separation processes for azeotropic mixtures. Computers and Chemical Engineering, 1997, 21, S231-S236.	3.8	6
86	Molecular interactions of alcohols with zeolite BEA and MOR frameworks. Journal of Molecular Modeling, 2013, 19, 5611-5624.	1.8	6
87	Identification of parameter interactions influencing the precipitation of a monoclonal antibody with anionic polyelectrolytes. Separation and Purification Technology, 2014, 127, 165-173.	7.9	6
88	Multivariate risk analysis of an intensified modular hydroformylation process. Chemical Engineering and Processing: Process Intensification, 2015, 95, 124-134.	3.6	6
89	The influence of impurity proteins on the precipitation of a monoclonal antibody with an anionic polyelectrolyte. Separation and Purification Technology, 2015, 146, 252-260.	7.9	6
90	Automation of Solubility Measurements on a Robotic Platform. Chemical Engineering and Technology, 2016, 39, 1049-1057.	1.5	6

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91	Framework to decide for a volume flexible chemical plant during early phases of plant design. Chemical Engineering Research and Design, 2017, 128, 85-95.	5.6	6
92	Simulation of continuous low pH viral inactivation inside a coiled flow inverter. Biotechnology and Bioengineering, 2020, 117, 1048-1062.	3.3	6
93	AZEOPERT - A heuristic-numeric system for the prediction of azeotrope formation. Computers and Chemical Engineering, 1995, 19, 253-258.	3.8	5
94	Structuring of reactive distillation columns for non-ideal mixtures using MINLP-techniques. Computer Aided Chemical Engineering, 2004, 18, 493-498.	0.5	5
95	Die 50â€‰%-Idee: vom Produkt zur Produktionsanlage in der halben Zeit. Chemie-Ingenieur-Technik, 2012, 84, 563-563.	0.8	5
96	Simultaneous optimization of scheduling, equipment dimensions and operating conditions of sequential multi-purpose batch plants. Computers and Chemical Engineering, 2016, 94, 157-179.	3.8	5
97	Generation of an equipment module database â€” A maximum coverage problem. Chemical Engineering Research and Design, 2019, 148, 164-168.	5.6	5
98	Knowledgeâ€Based Conceptual Synthesis of Industrialâ€Scale Downstream Processes for Biochemical Products. Chemical Engineering and Technology, 2015, 38, 537-546.	1.5	4
99	Framework to decide for an expansion strategy of a small scale continuously operated modular multi-product plant. Chemical Engineering and Processing: Process Intensification, 2017, 113, 74-85.	3.6	4
100	Approach for the characterization of industrial process tasks as basis for the generation and application of an equipment module database. Chemical Engineering Science, 2018, 191, 42-55.	3.8	4
101	Comparison of capacity expansion strategies for chemical production plants. Chemical Engineering Research and Design, 2019, 143, 56-78.	5.6	4
102	Simulation of pH level distribution inside a coiled flow inverter for continuous low pH viral inactivation. Biotechnology and Bioengineering, 2020, 117, 429-437.	3.3	4
103	Tracking raw material flow through a continuous direct compression line Part I of II: Residence time distribution modeling and sensitivity analysis enabling increased process yield. International Journal of Pharmaceutics, 2022, 614, 121467.	5.2	4
104	Auswahl von Daten und Berechnungsmethoden fÃ¼r Reinstoffe und Gemische mit Hilfe eines heuristischnumerischen Beratungssystems. Chemie-Ingenieur-Technik, 1996, 68, 1307-1311.	0.8	3
105	Synthesis of reactive separation processes. , 2006, , 7-94.		3
106	Fugitive Emissions from Liquid-Charged Flange Joints: A Comparison of Laboratory and Field Data. Environmental Science & Technology, 2009, 43, 4498-4502.	10.0	3
107	A Model to Characterize and Predict Fugitive Emissions from Flange Joints. Chemical Engineering and Technology, 2014, 37, 1205-1210.	1.5	3
108	Synthesis of batch heat exchanger networks utilizing a match ranking matrix. Applied Thermal Engineering, 2016, 100, 78-83.	6.0	3

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109	Clarification of a monoclonal antibody with cationic polyelectrolytes: Analysis of influencing parameters. Biochemical Engineering Journal, 2017, 122, 60-70.	3.6	3
110	Application of rotating packed bed for inâ€line aroma stripping from cell slurry. Journal of Chemical Technology and Biotechnology, 2020, 95, 2834-2841.	3.2	3
111	Economic evaluation of rotating packed bed use for aroma absorption from bioreactor off-gas. Chemical Engineering and Processing: Process Intensification, 2020, 154, 108011.	3.6	3
112	Extraction on a Robotic Platformâ€‰â€“â€‰Autonomous Solvent Selection under Economic Evaluation Criteria. Chemical Engineering and Technology, 2021, 44, 1578-1584.	1.5	3
113	Multistage Processing of Tunable Aqueous Polymer Phase Impregnated Resins (TAPPIRÂ®). Chemical Engineering and Technology, 2018, 41, 1324-1330.	1.5	2
114	Using design spaces for more accurate cost estimation during early engineering phases. Chemical Engineering Research and Design, 2020, 153, 592-602.	5.6	2
115	Aroma absorption in rapeseed oil using rotating packed bed. Flavour and Fragrance Journal, 2021, 36, 137-147.	2.6	2
116	Application and evaluation of preselection approaches to decide on the use of equipment modules. Chemical Engineering Research and Design, 2021, 173, 89-107.	5.6	2
117	Generic model framework for the synthesis of structured reactive separation processes. Computer Aided Chemical Engineering, 2006, , 1075-1081.	0.5	1
118	Modeling the Quasi-Equilibrium of Multistage Phytoextractions. Industrial & Engineering Chemistry Research, 2016, 55, 1808-1812.	3.7	1
119	Tracking raw material flow through a continuous direct compression line. Part II of II: Predicting dynamic changes in quality attributes of tablets due to disturbances in raw material properties using an independent residence time distribution model. International Journal of Pharmaceutics, 2022, 615, 121528.	5.2	1
120	Reactor selection and design for heterogeneous reaction systems. Computer Aided Chemical Engineering, 2001, 9, 357-362.	0.5	0
121	INOSIM Bio - new approaches for bioprocess simulation and optimization. Computer Aided Chemical Engineering, 2013, 32, 865-870.	0.5	0
122	Research on industrial biotechnology within the CLIB-Graduate Clusterâ€”Part III. Journal of Biotechnology, 2013, 167, 73-74.	3.8	0
123	Development of an Automated Adsorbent Selection Strategy for Liquidâ€Phase Adsorption. Chemical Engineering and Technology, 0, , .	1.5	0