Yoshiaki Kawajiri

List of Publications by Year
in descending order

82	1,635	279487	344852
papers	citations	23 h-index	36 g-index

83	83	83	1266
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Systems Design and Economic Analysis of Direct Air Capture of CO₂ through Temperature Vacuum Swing Adsorption Using MIL-101(Cr)-PEI-800 and mmen-Mg₂(dobpdc) MOF Adsorbents. Industrial & Engineering Chemistry Research, 2017, 56, 750-764.	1.8	161
2	Optimization strategies for simulated moving bed and PowerFeed processes. AICHE Journal, 2006, 52, 1343-1350.	1.8	147
3	Nonlinear Programming Superstructure for Optimal Dynamic Operations of Simulated Moving Bed Processes. Industrial & Engineering Chemistry Research, 2006, 45, 8503-8513.	1.8	72
4	Critical limitations on the efficiency of two-step thermochemical cycles. Solar Energy, 2016, 123, 57-73.	2.9	59
5	Modeling of rapid temperature swing adsorption using hollow fiber sorbents. Chemical Engineering Science, 2014, 113, 62-76.	1.9	57
6	How Well Do Approximate Models of Adsorption-Based CO₂ Capture Processes Predict Results of Detailed Process Models?. Industrial & Engineering Chemistry Research, 2020, 59, 7097-7108.	1.8	51
7	Modeling of Nucleation and Growth Kinetics for Unseeded Batch Cooling Crystallization. Industrial & Engineering Chemistry Research, 2017, 56, 4060-4073.	1.8	47
8	Comparison of various ternary simulated moving bed separation schemes by multi-objective optimization. Journal of Chromatography A, 2012, 1238, 105-113.	1.8	45
9	Large scale nonlinear optimization for asymmetric operation and design of Simulated Moving Beds. Journal of Chromatography A, 2006, 1133, 226-240.	1.8	40
10	Thermally moderated hollow fiber sorbent modules in rapidly cycled pressure swing adsorption mode for hydrogen purification. International Journal of Hydrogen Energy, 2012, 37, 15227-15240.	3.8	40
11	Application of an Empirical FBRM Model to Estimate Crystal Size Distributions in Batch Crystallization. Crystal Growth and Design, 2014, 14, 607-616.	1.4	39
12	Development of an empirical method relating crystal size distributions and FBRM measurements. Chemical Engineering Science, 2013, 89, 142-151.	1.9	37
13	Cost and Energy Savings Using an Optimal Design of Reverse Osmosis Membrane Pretreatment for Dilute Bioethanol Purification. Industrial & Engineering Chemistry Research, 2013, 52, 11132-11141.	1.8	34
14	Modeling and experimental validation of carbon dioxide sorption on hollow fibers loaded with silica-supported poly(ethylenimine). Chemical Engineering Journal, 2015, 259, 737-751.	6.6	31
15	Data-Driven Modeling and Dynamic Programming Applied to Batch Cooling Crystallization. Industrial & Engineering Chemistry Research, 2016, 55, 1361-1372.	1.8	31
16	CO₂ Sorption Performance of Composite Polymer/Aminosilica Hollow Fiber Sorbents: An Experimental and Modeling Study. Industrial & Engineering Chemistry Research, 2015, 54, 1783-1795.	1.8	30
17	Predictionâ€correction method for optimization of simulated moving bed chromatography. AICHE Journal, 2013, 59, 736-746.	1.8	26
18	Multi-column chromatographic process development using simulated moving bed superstructure and simultaneous optimization â€“ Model correction framework. Chemical Engineering Science, 2014, 116, 428-441.	1.9	26

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19	Bayesian estimation of parametric uncertainties, quantification and reduction using optimal design of experiments for CO2 adsorption on amine sorbents. Computers and Chemical Engineering, 2015, 81, 376-388.	2.0	26
20	Simultaneous modeling and optimization of nonlinear simulated moving bed chromatography by the predictionâ€“correction method. Journal of Chromatography A, 2013, 1280, 51-63.	1.8	24
21	Uncertainty quantification via bayesian inference using sequential monte carlo methods for CO₂ adsorption process. AIChE Journal, 2016, 62, 3352-3368.	1.8	24
22	Design for dynamic operation - A review and new perspectives for an increasingly dynamic plant operating environment. Computers and Chemical Engineering, 2019, 128, 329-339.	2.0	24
23	A new solar fuels reactor concept based on a liquid metal heat transfer fluid: Reactor design and efficiency estimation. Solar Energy, 2015, 122, 547-561.	2.9	23
24	Optimization of simulated moving bed chromatography with fractionation and feedback: Part II. Fractionation of both outlets. Journal of Chromatography A, 2010, 1217, 5349-5357.	1.8	22
25	Large scale optimization strategies for zone configuration of simulated moving beds. Computers and Chemical Engineering, 2008, 32, 135-144.	2.0	20
26	Optimization of reactive simulated moving bed systems with modulation of feed concentration for production of glycol ether ester. Journal of Chromatography A, 2014, 1360, 196-208.	1.8	20
27	Hierarchical Bayesian estimation for adsorption isotherm parameter determination. Chemical Engineering Science, 2020, 214, 115435.	1.9	20
28	Optimization of simulated moving bed chromatography with fractionation and feedback: Part I. Fractionation of one outlet. Journal of Chromatography A, 2010, 1217, 5337-5348.	1.8	19
29	Systematic optimization and experimental validation of ternary simulated moving bed chromatography systems. Journal of Chromatography A, 2014, 1356, 82-95.	1.8	19
30	Model-based design and experimental validation of simulated moving bed reactor for production of glycol ether ester. Chemical Engineering Journal, 2016, 301, 188-199.	6.6	19
31	Reaction Kinetics of Concentrated-Acid Hydrolysis for Cellulose and Hemicellulose and Effect of Crystallinity. BioResources, 2015, 11, .	0.5	18
32	Comparison of configurations of a four-column simulated moving bed process by multi-objective optimization. Adsorption, 2008, 14, 433-442.	1.4	17
33	Transesterification of propylene glycol methyl ether in chromatographic reactors using anion exchange resin as a catalyst. Journal of Chromatography A, 2016, 1466, 84-95.	1.8	17
34	Determination of Kinetic Parameters for CO₂ Methanation (Sabatier Reaction) over Ni/ZrO₂ at a Stoichiometric Feed-Gas Composition under Elevated Pressure. Energy & Fuels, 2021, 35, 20216-20223.	2.5	17
35	Conversion improvement for catalytic synthesis of propylene glycol methyl ether acetate by reactive chromatography: Experiments and parameter estimation. Chemical Engineering Journal, 2015, 259, 397-409.	6.6	15
36	Bayesian design of experiments for adsorption isotherm modeling. Computers and Chemical Engineering, 2020, 135, 106774.	2.0	15

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37	Robust multicomponent IR-to-concentration model regression. Chemical Engineering Science, 2014, 116, 77-90.	1.9	14
38	Massâ€“count plots for crystal size control. Chemical Engineering Science, 2015, 137, 338-351.	1.9	14
39	Using MC plots for control of paracetamol crystallization. Chemical Engineering Science, 2017, 164, 344-360.	1.9	14
40	Development of Phase-Change-Based Thermally Modulated Fiber Sorbents. Industrial & Engineering Chemistry Research, 2019, 58, 5768-5776.	1.8	14
41	Uncertainty quantification for chromatography model parameters by Bayesian inference using sequential Monte Carlo method. Chemical Engineering Research and Design, 2021, 175, 223-237.	2.7	14
42	Model-based optimization strategies for chromatographic processes: a review. Adsorption, 2021, 27, 1-26.	1.4	13
43	Reduced building energy consumption by combined indoor CO2 and H2O composition control. Applied Energy, 2022, 322, 119526.	5.1	13
44	Optimization of startup and shutdown operation of simulated moving bed chromatographic processes. Journal of Chromatography A, 2011, 1218, 3876-3889.	1.8	12
45	Feedback Control of Multicomponent Salt Crystallization. Crystal Growth and Design, 2015, 15, 305-317.	1.4	12
46	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. Industrial & Engineering Chemistry Research, 2019, 58, 5750-5767.	1.8	12
47	Optimizing the separation of gaseous enantiomers byÂsimulatedÂmoving bed and pressure swing adsorption. Adsorption, 2011, 17, 159-170.	1.4	11
48	Optimal Design of Integrated SMB-Crystallization Hybrid Separation Process Using a Binary Solvent. Organic Process Research and Development, 2017, 21, 31-43.	1.3	11
49	Full Superstructure for Multiobjective Optimization of Multicolumn Chromatography for Ternary Separations. Chemical Engineering and Technology, 2015, 38, 1677-1682.	0.9	10
50	Application of critical path method to stochastic processes with historical operation data. Chemical Engineering Research and Design, 2019, 149, 195-208.	2.7	10
51	Using Site Heterogeneity in Metalâ€“Organic Frameworks with Bimetallic Open Metal Sites for Olefin/Paraffin Separations. ACS Applied Nano Materials, 2020, 3, 5291-5300.	2.4	10
52	Correction to â€œSystems Design and Economic Analysis of Direct Air Capture of CO₂ through Temperature Vacuum Swing Adsorption Using MIL-101(Cr)-PEI-800 and mmen-Mg₂(dobpdc) MOF Adsorbentsâ€• Industrial & Engineering Chemistry Research, 2020, 59, 503-505.	1.8	10
53	Direct Air Capture of CO 2 in Enclosed Environments: Design under Uncertainty and Techno-Economic Analysis. Computer Aided Chemical Engineering, 2018, 44, 2179-2184.	0.3	8
54	Aromatics/Alkanes separation: Simulated moving bed process model development by a concurrent approach and its validation in a mini-plant. Separation and Purification Technology, 2019, 215, 410-421.	3.9	8

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55	Experimental evaluation of simulated moving bed reactor for transesterification reaction synthesis of glycol ether ester. Adsorption, 2019, 25, 795-807.	1.4	8
56	Chapter 1 Large-scale optimization strategies for zone configuration of simulated moving beds. Computer Aided Chemical Engineering, 2006, 21, 131-136.	0.3	7
57	Experimental Validation of Optimized Model-Based Startup Acceleration Strategies for Simulated Moving Bed Chromatography. Industrial & Engineering Chemistry Research, 2014, 53, 12063-12076.	1.8	7
58	Analysis of energetics and economics of subâ€ambient hybrid <scp>postâ€combustion carbon dioxide</scp> capture. AICHE Journal, 2021, 67, e17403.	1.8	7
59	Simulated moving bed chromatography designs for lanthanide and actinide separations using Reillex HPQâ„¢ resin. Separation and Purification Technology, 2014, 136, 50-57.	3.9	6
60	Optimization of two-stage cooling profile in unseeded batch crystallizationâˆ—âˆ—Financial support from C. J. â€œPeteâ€•Silas Chair, Georgia Research Alliance, Air Products, and the Consortium for Risk Evaluation with Stakeholder Participation (CRESP) is gratefully appreciated.. IFAC-PapersOnLine, 2015, 48, 297-302.	0.5	6
61	A concurrent approach for process design and multicomponent adsorption modeling with local isotherms. Chemical Engineering Science, 2017, 171, 426-439.	1.9	6
62	Process integration for simulated moving bed reactor for the production of glycol ether acetate. Chemical Engineering and Processing: Process Intensification, 2019, 140, 1-10.	1.8	6
63	Integration of Material and Process Design for Kinetic Adsorption Separation. Industrial & Engineering Chemistry Research, 2021, 60, 2536-2546.	1.8	6
64	Discrepancy quantification between experimental and simulated data of CO2 adsorption isotherm using hierarchical Bayesian estimation. Separation and Purification Technology, 2022, 296, 121371.	3.9	6
65	Bayesian Estimation, Uncertainty Propagation and Design of Experiments for CO2 Adsorption on Amine Sorbents. Computer Aided Chemical Engineering, 2014, 34, 345-350.	0.3	3
66	Solid-Phase Reactive Chromatographic Separation System: Optimization-Based Design and Its Potential Application to Biomass Saccharification via Acid Hydrolysis. Industrial & Engineering Chemistry Research, 2014, 53, 15946-15961.	1.8	3
67	Optimization and Technoeconomic Analysis of Rapid Temperature Swing Adsorption Process for Carbon Capture from Coal-Fired Power Plant. Computer Aided Chemical Engineering, 2015, 36, 253-278.	0.3	3
68	Combining ATR-FTIR and FBRM for feedback on crystal size. , 2015, , .		3
69	Transesterification of propylene glycol methyl ether by reactive simulated moving bed chromatography using homogeneous catalyst. Adsorption, 2018, 24, 309-324.	1.4	3
70	Utilization of operation data for parameter estimation of simulated moving bed chromatography. Journal of Advanced Manufacturing and Processing, 2022, 4, .	1.4	3
71	Unification of an empirical and a physically-based approach to crystallization monitoring. , 2018, , .		2
72	Interactive Multiobjective Optimization of Superstructure SMB Processes. Lecture Notes in Economics and Mathematical Systems, 2009, , 221-230.	0.3	2

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73	Optimal startup operation of simulated moving bed chromatographic processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 733-738.	0.4	1
74	Optimization and heat integration of hollow fiber based thermal swing adsorption process for CO2 capture from flue gas. Computer Aided Chemical Engineering, 2014, , 633-638.	0.3	1
75	Evaluation of tertiary pyridine resin for the separation of lanthanides by simulated movingâ€bed chromatography. Journal of Separation Science, 2014, 37, 2892-2899.	1.3	1
76	Efficient Evaluation of Vacuum Pressure-swing Cycle Performance using Surrogate-based, Multi-objective Optimization Algorithm. Computer Aided Chemical Engineering, 2020, , 1801-1806.	0.3	1
77	Linearizing Control of CSTR and Its Robust Stabilization by H.INF., Controller.. Journal of Chemical Engineering of Japan, 1998, 31, 780-786.	0.3	1
78	Process development for advanced simulated moving bed (ASMB) chromatography by parameter refinement using pilot plant experimental data. Separation and Purification Technology, 2022, 281, 119932.	3.9	1
79	Optimal Process Configurations of Bioethanol Dehydration for Different Ethanol Inlet Concentrations and Throughputs. Computer Aided Chemical Engineering, 2012, , 425-429.	0.3	0
80	Design for dynamic operation â€“ A review and new perspectives for a dynamic manufacturing environment. Computer Aided Chemical Engineering, 2018, 44, 43-52.	0.3	0
81	Optimization of simulated moving bed chromatography with fractionation and feedback incorporating an enrichment step. Computer Aided Chemical Engineering, 2011, 29, 818-822.	0.3	0
82	Dynamic Modelling and Optimal Design of the Solid-Phase Reactive Chromatographic Separation System for Biomass Saccharification via Acid Hydrolysis. Computer Aided Chemical Engineering, 2015, 37, 929-934.	0.3	0