Jay H Lee

List of Publications by Year
in descending order

292	13,141	38742 50	27406 106
papers	citations	h-index	g-index

296	296	296	8929
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Model predictive control: past, present and future. Computers and Chemical Engineering, 1999, 23, 667-682.	3.8	1,726
2	Model predictive control: Review of the three decades of development. International Journal of Control, Automation and Systems, 2011, 9, 415-424.	2.7	482
3	Cellulose crystallinityâ€ƒâ€“â€ƒa key predictor of the enzymatic hydrolysis rate. FEBS Journal, 2010, 277, 1571-1582.	4.7	473
4	Constrained linear state estimationâ€”a moving horizon approach. Automatica, 2001, 37, 1619-1628.	5.0	458
5	Model-based iterative learning control with a quadratic criterion for time-varying linear systems. Automatica, 2000, 36, 641-657.	5.0	402
6	Worst-case formulations of model predictive control for systems with bounded parameters. Automatica, 1997, 33, 763-781.	5.0	379
7	Modeling cellulase kinetics on lignocellulosic substrates. Biotechnology Advances, 2009, 27, 833-848.	11.7	347
8	Optimal design and global sensitivity analysis of biomass supply chain networks for biofuels under uncertainty. Computers and Chemical Engineering, 2011, 35, 1738-1751.	3.8	309
9	A moving horizon-based approach for least-squares estimation. AICHE Journal, 1996, 42, 2209-2224.	3.6	300
10	Extended Kalman Filter Based Nonlinear Model Predictive Control. Industrial & Engineering Chemistry Research, 1994, 33, 1530-1541.	3.7	290
11	State-space interpretation of model predictive control. Automatica, 1994, 30, 707-717.	5.0	276
12	Machine learning: Overview of the recent progresses and implications for the process systems engineering field. Computers and Chemical Engineering, 2018, 114, 111-121.	3.8	254
13	Iterative learning control applied to batch processes: An overview. Control Engineering Practice, 2007, 15, 1306-1318.	5.5	248
14	Model predictive control technique combined with iterative learning for batch processes. AICHE Journal, 1999, 45, 2175-2187.	3.6	220
15	Design of biomass processing network for biofuel production using an MILP model. Biomass and Bioenergy, 2011, 35, 853-871.	5.7	201
16	Nonlinear model predictive control of the Tennessee Eastman challenge process. Computers and Chemical Engineering, 1995, 19, 961-981.	3.8	162
17	Reinforcement Learning â€“ Overview of recent progress and implications for process control. Computers and Chemical Engineering, 2019, 127, 282-294.	3.8	155
18	Multivariate statistical analysis of X-ray data from cellulose: A new method to determine degree of crystallinity and predict hydrolysis rates. Bioresource Technology, 2010, 101, 4461-4471.	9.6	150

#	Article	IF	Citations
19	Carbon capture from stationary power generation sources: A review of the current status of the technologies. Korean Journal of Chemical Engineering, 2013, 30, 1497-1526.	2.7	128
20	Process systems engineering â€“ The generation next?. Computers and Chemical Engineering, 2021, 147, 107252.	3.8	128
21	Fault detection and classification using artificial neural networks. IFAC-PapersOnLine, 2018, 51, 470-475.	0.9	122
22	A model-based predictive control approach to repetitive control of continuous processes with periodic operations. Journal of Process Control, 2001, 11, 195-207.	3.3	121
23	Approximate dynamic programming-based approaches for inputâ€“output data-driven control of nonlinear processes. Automatica, 2005, 41, 1281-1288.	5.0	121
24	Tuning of model predictive controllers for robust performance. Computers and Chemical Engineering, 1994, 18, 15-37.	3.8	115
25	Iterative learning control-based batch process control technique for integrated control of end product properties and transient profiles of process variables. Journal of Process Control, 2003, 13, 607-621.	3.3	111
26	The carbon footprint of the carbon feedstock CO₂. Energy and Environmental Science, 2020, 13, 2979-2992.	30.8	110
27	Nonlinear modeling and state estimation for the Tennessee Eastman challenge process. Computers and Chemical Engineering, 1995, 19, 983-1005.	3.8	107
28	Optimal design of microalgae-based biorefinery: Economics, opportunities and challenges. Applied Energy, 2015, 150, 69-79.	10.1	107
29	Model predictive control of multi-rate sampled-data systems: a state-space approach. International Journal of Control, 1992, 55, 153-191.	1.9	106
30	Repetitive model predictive control applied to a simulated moving bed chromatography system. Computers and Chemical Engineering, 2000, 24, 1127-1133.	3.8	106
31	Automatic Control of Simulated Moving Beds. Industrial & Engineering Chemistry Research, 2004, 43, 405-421.	3.7	101
32	Receding Horizon Recursive State Estimation. , 1993, , .		93
33	Convergence of constrained model-based predictive control for batch processes. IEEE Transactions on Automatic Control, 2000, 45, 1928-1932.	5.7	89
34	User-friendly graphical user interface software for ideal adsorbed solution theory calculations. Korean Journal of Chemical Engineering, 2018, 35, 214-221.	2.7	88
35	Operational planning and optimal sizing of microgrid considering multi-scale wind uncertainty. Applied Energy, 2017, 195, 616-633.	10.1	86
36	Dynamic programming in a heuristically confined state space: a stochastic resource-constrained project scheduling application. Computers and Chemical Engineering, 2004, 28, 1039-1058.	3.8	76

#	Article	IF	Citations
37	An introduction to a dynamic plant-wide optimization strategy for an integrated plant. Computers and Chemical Engineering, 2004, 29, 199-208.	3.8	75
38	Recursive data-based prediction and control of batch product quality. AICHE Journal, 1998, 44, 2442-2458.	3.6	73
39	Early-stage evaluation of emerging CO₂utilization technologies at low technology readiness levels. Green Chemistry, 2020, 22, 3842-3859.	9.0	71
40	Optimal processing pathway for the production of biodiesel from microalgal biomass: A superstructure based approach. Computers and Chemical Engineering, 2013, 58, 305-314.	3.8	65
41	A least squares formulation for state estimation. Journal of Process Control, 1995, 5, 291-299.	3.3	64
42	Reinforcement learning based optimal control of batch processes using Monte-Carlo deep deterministic policy gradient with phase segmentation. Computers and Chemical Engineering, 2021, 144, 107133.	3.8	64
43	Experimental application of a quadratic optimal iterative learning control method for control of wafer temperature uniformity in rapid thermal processing. IEEE Transactions on Semiconductor Manufacturing, 2003, 16, 36-44.	1.7	63
44	On the use of constraints in least squares estimation and control. Automatica, 2002, 38, 1113-1123.	5.0	59
45	Approximate dynamic programming based approach to process control and scheduling. Computers and Chemical Engineering, 2006, 30, 1603-1618.	3.8	58
46	Choice of approximator and design of penalty function for an approximate dynamic programming based control approach. Journal of Process Control, 2006, 16, 135-156.	3.3	58
47	Elucidation of cellulose accessibility, hydrolysability and reactivity as the major limitations in the enzymatic hydrolysis of cellulose. Bioresource Technology, 2012, 107, 243-250.	9.6	58
48	Biological pretreatment of cellulose: Enhancing enzymatic hydrolysis rate using cellulose-binding domains from cellulases. Bioresource Technology, 2011, 102, 2910-2915.	9.6	57
49	A Technique for Integrated Quality Control, Profile Control, and Constraint Handling for Batch Processes. Industrial & Engineering Chemistry Research, 2000, 39, 693-705.	3.7	56
50	Simplifying biodiesel production from microalgae via wet in situ transesterification: A review in current research and future prospects. Algal Research, 2019, 41, 101557.	4.6	56
51	Diagnostic Tools for Multivariable Model-Based Control Systems. Industrial & Engineering Chemistry Research, 1997, 36, 2725-2738.	3.7	54
52	Optimal control of a fed-batch bioreactor using simulation-based approximate dynamic programming. IEEE Transactions on Control Systems Technology, 2005, 13, 786-790.	5.2	53
53	Screening tools for robust control structure selection. Automatica, 1995, 31, 229-235.	5.0	52
54	Protein engineering of cellulases. Current Opinion in Biotechnology, 2014, 29, 139-145.	6.6	52

#	Article	IF	Citations
55	Minâ€“max predictive control techniques for a linear state-space system with a bounded set of input matrices. Automatica, 2000, 36, 463-473.	5.0	51
56	Integrating operations and control: A perspective and roadmap for future research. Computers and Chemical Engineering, 2018, 115, 179-184.	3.8	50
57	Control of product quality for batch nylon 6,6 autoclaves. Chemical Engineering Science, 1998, 53, 3685-3702.	3.8	49
58	Approximate dynamic programming approach for process control. Journal of Process Control, 2010, 20, 1038-1048.	3.3	49
59	ITERATIVE LEARNING CONTROL APPLIED TO BATCH PROCESSES: AN OVERVIEW. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1037-1046.	0.4	48
60	Two-stage stochastic programming formulation for optimal design and operation of multi-microgrid system using data-based modeling of renewable energy sources. Applied Energy, 2021, 291, 116830.	10.1	48
61	Control of Wafer Temperature Uniformity in Rapid Thermal Processing Using an Optimal Iterative Learning Control Technique. Industrial & Engineering Chemistry Research, 2001, 40, 1661-1672.	3.7	47
62	An approximate dynamic programming based approach to dual adaptive control. Journal of Process Control, 2009, 19, 859-864.	3.3	47
63	A methodological framework for the development of feasible CO 2 conversion processes. International Journal of Greenhouse Gas Control, 2016, 47, 250-265.	4.6	46
64	Nonlinear inferential control of pulp digesters. AICHE Journal, 1994, 40, 50-64.	3.6	45
65	Subspace identification based inferential control applied to a continuous pulp digester. Journal of Process Control, 1999, 9, 397-406.	3.3	45
66	Optimization of the various modes of flexible operation for post-combustion CO2 capture plant. Computers and Chemical Engineering, 2015, 75, 14-27.	3.8	44
67	Control-relevant experiment design for multivariable systems described by expansions in orthonormal bases. Automatica, 2001, 37, 273-281.	5.0	43
68	Process systems engineering issues and applications towards reducing carbon dioxide emissions through conversion technologies. Chemical Engineering Research and Design, 2016, 116, 27-47.	5.6	43
69	A model-based deep reinforcement learning method applied to finite-horizon optimal control of nonlinear control-affine system. Journal of Process Control, 2020, 87, 166-178.	3.3	41
70	Robust inferential control of multi-rate sampled-data systems. Chemical Engineering Science, 1992, 47, 865-885.	3.8	40
71	Facile fabrication of silver nanoparticle embedded CaCO₃microspheres via microalgae-templated CO₂biomineralization: application in antimicrobial paint development. RSC Advances, 2014, 4, 32562.	3.6	40
72	Design and evaluation of CO2 capture plants for the steelmaking industry by means of amine scrubbing and membrane separation. International Journal of Greenhouse Gas Control, 2018, 74, 259-270.	4.6	40

#	Article	IF	Citations
73	Energy supply planning and supply chain optimization under uncertainty. Journal of Process Control, 2014, 24, 323-331.	3.3	39
74	A methodology for the sustainable design and implementation strategy of CO2 utilization processes. Computers and Chemical Engineering, 2016, 91, 407-421.	3.8	39
75	Sustainability analysis of CO2 capture and utilization processes using a computer-aided tool. Journal of CO2 Utilization, 2018, 26, 60-69.	6.8	39
76	New performance indicators for adsorbent evaluation derived from a reduced order model of an idealized PSA process for CO 2 capture. Computers and Chemical Engineering, 2017, 102, 188-212.	3.8	37
77	Robust measurement selection. Automatica, 1991, 27, 519-527.	5.0	36
78	Softâ€constrained model predictive control based on <scp>dataâ€driven</scp> distributionally robust optimization. AIChE Journal, 2020, 66, e16546.	3.6	36
79	Integrated run-to-run and on-line model-based control of particle size distribution for a semi-batch precipitation reactor. Computers and Chemical Engineering, 2002, 26, 1117-1131.	3.8	35
80	Development of Optimal Decoking Scheduling Strategies for an Industrial Naphtha Cracking Furnace System. Industrial & Engineering Chemistry Research, 2006, 45, 5738-5747.	3.7	35
81	Comparative Techno-Economic Analysis of Transesterification Technologies for Microalgal Biodiesel Production. Industrial & Engineering Chemistry Research, 2019, 58, 18772-18779.	3.7	35
82	Hydrogen generation in a reverse-flow microreactor: 1. Model formulation and scaling. AIChE Journal, 2005, 51, 2254-2264.	3.6	34
83	Three-stage design of high-resolution microalgae-based biofuel supply chain using geographic information system. Applied Energy, 2020, 265, 114773.	10.1	34
84	Monitoring of batch processes through state-space models. AIChE Journal, 2004, 50, 1198-1210.	3.6	33
85	Modeling of a Biobutanol Adsorption Process for Designing an Extractive Fermentor. Industrial & Engineering Chemistry Research, 2013, 52, 603-611.	3.7	33
86	Two stage stochastic bilevel programming model of a pre-established timberlands supply chain with biorefinery investment interests. Computers and Chemical Engineering, 2015, 73, 141-153.	3.8	33
87	Improving computational efficiency of model predictive control algorithm using wavelet transformation. International Journal of Control, 1995, 61, 859-883.	1.9	32
88	Control relevant identification of ill-conditioned systems: Estimation of gain directionalyty. Computers and Chemical Engineering, 1996, 20, 1023-1042.	3.8	32
89	Dynamically scheduled MPC of nonlinear processes using hinging hyperplane models. AIChE Journal, 1998, 44, 2658-2674.	3.6	32
90	Optimal feedback control strategies for state-space systems with stochastic parameters. IEEE Transactions on Automatic Control, 1998, 43, 1469-1475.	5.7	32

#	Article	IF	Citations
91	Pooling for Improved Screening of Combinatorial Libraries for Directed Evolution. Biotechnology Progress, 2006, 22, 961-967.	2.6	31
92	Reinforcement learning for batch process control: Review and perspectives. Annual Reviews in Control, 2021, 52, 108-119.	7.9	31
93	Genome-scale metabolic model of the fission yeast Schizosaccharomyces pombe and the reconciliation of in silico/in vivo mutant growth. BMC Systems Biology, 2012, 6, 49.	3.0	30
94	Techno-economic and environmental evaluation of CO2 mineralization technology based on bench-scale experiments. Journal of CO2 Utilization, 2018, 26, 522-536.	6.8	30
95	Partial least squares (PLS) based monitoring and control of batch digesters. Journal of Process Control, 2000, 10, 229-236.	3.3	29
96	Catholyte-free electroreduction of CO₂ for sustainable production of CO: concept, process development, techno-economic analysis, and CO₂ reduction assessment. Green Chemistry, 2021, 23, 2397-2410.	9.0	29
97	Simulation based strategy for nonlinear optimal control: application to a microbial cell reactor. International Journal of Robust and Nonlinear Control, 2003, 13, 347-363.	3.7	28
98	A robust NMPC scheme for semi-batch polymerization reactors. IFAC-PapersOnLine, 2016, 49, 37-42.	0.9	28
99	A model-based optimization of microalgal cultivation strategies for lipid production under photoautotrophic condition. Computers and Chemical Engineering, 2019, 121, 57-66.	3.8	28
100	Optimizationâ€based identification of CO₂ capture and utilization processing paths for life cycle greenhouse gas reduction and economic benefits. AICHE Journal, 2019, 65, e16580.	3.6	27
101	Techno-economic Analysis of Microalgae-Based Lipid Production: Considering Influences of Microalgal Species. Industrial & Engineering Chemistry Research, 2019, 58, 944-955.	3.7	27
102	A set based approach to detection and isolation of faults in multivariable systems. Computers and Chemical Engineering, 2001, 25, 925-940.	3.8	26
103	Dynamic Modeling of a Fermentation Process with Ex situ Butanol Recovery (ESBR) for Continuous Biobutanol Production. Energy & Fuels, 2015, 29, 7254-7265.	5.1	26
104	Building inferential prediction models of batch processes using subspace identification. Journal of Process Control, 2003, 13, 397-406.	3.3	25
105	Progress and Challenges in Control of Chemical Processes. Annual Review of Chemical and Biomolecular Engineering, 2014, 5, 383-404.	6.8	25
106	Techno-economic and environmental evaluation of nano calcium carbonate production utilizing the steel slag. Journal of CO2 Utilization, 2020, 37, 113-121.	6.8	25
107	Frequency-domain closed-loop identification of multivariable systems for feedback control. AICHE Journal, 1996, 42, 2813-2827.	3.6	24
108	Two-step procedure for data-based modeling for inferential control applications. AICHE Journal, 2000, 46, 1974-1988.	3.6	24

#	Article	IF	Citations
109	Period-robust repetitive model predictive control. Journal of Process Control, 2006, 16, 545-555.	3.3	24
110	Screening plant designs and control structures for uncertain systems. Computers and Chemical Engineering, 1996, 20, 463-468.	3.8	23
111	Proactive Scheduling Strategy Applied to Decoking Operations of an Industrial Naphtha Cracking Furnace System. Industrial & Engineering Chemistry Research, 2009, 48, 3024-3032.	3.7	23
112	Inputâ€“Output Surrogate Models for Efficient Economic Evaluation of Amine Scrubbing CO₂ Capture Processes. Industrial & Engineering Chemistry Research, 2020, 59, 18951-18964.	3.7	22
113	A mathematical model of intracellular behavior of microalgae for predicting growth and intracellular components syntheses under nutrientâ€replete and â€deplete conditions. Biotechnology and Bioengineering, 2018, 115, 2441-2455.	3.3	21
114	Parallel neural networks for improved nonlinear principal component analysis. Computers and Chemical Engineering, 2019, 127, 1-10.	3.8	21
115	Value function-based approach to the scheduling of multiple controllers. Journal of Process Control, 2008, 18, 533-542.	3.3	20
116	Fault Diagnosis Using the Hybrid Method of Signed Digraph and Partial Least Squares with Time Delay:Â The Pulp Mill Process. Industrial & Engineering Chemistry Research, 2006, 45, 9061-9074.	3.7	19
117	Economic assessment and optimization of the Selexol process with novel additives. International Journal of Greenhouse Gas Control, 2015, 42, 109-116.	4.6	19
118	Development of sustainable CO2 conversion processes for the methanol production. Computer Aided Chemical Engineering, 2015, , 1145-1150.	0.5	19
119	State estimation based model predictive control applied to shell control problem: a case study. Chemical Engineering Science, 1994, 49, 285-301.	3.8	18
120	Simulation-based learning of cost-to-go for control of nonlinear processes. Korean Journal of Chemical Engineering, 2004, 21, 338-344.	2.7	18
121	A Q-Learning-based method applied to stochastic resource constrained project scheduling with new project arrivals. International Journal of Robust and Nonlinear Control, 2007, 17, 1214-1231.	3.7	18
122	Analysis and comparison of single period single level and bilevel programming representations of a pre-existing timberlands supply chain with a new biorefinery facility. Computers and Chemical Engineering, 2014, 68, 242-254.	3.8	18
123	Immobilization of Carbonic Anhydrase on Modified Electrospun Poly(Lactic Acid) Membranes: Quest for Optimum Biocatalytic Performance. Catalysis Letters, 2015, 145, 519-526.	2.6	18
124	Optimal processing pathway selection for microalgae-based biorefinery under uncertainty. Computers and Chemical Engineering, 2015, 82, 362-373.	3.8	18
125	Statistical Process Monitoring of the Tennessee Eastman Process Using Parallel Autoassociative Neural Networks and a Large Dataset. Processes, 2019, 7, 411.	2.8	18
126	Dynamic analysis and linear model predictive control for operational flexibility of post-combustion CO2 capture processes. Computers and Chemical Engineering, 2020, 140, 106968.	3.8	18

#	Article	IF	Citations
127	Forty years of computers & chemical engineering: A bibliometric analysis. Computers and Chemical Engineering, 2020, 141, 106978.	3.8	18
128	Use of two-stage optimization in model predictive control of stable and integrating systems. Computers and Chemical Engineering, 2000, 24, 1591-1596.	3.8	17
129	Data-based construction of feedback-corrected nonlinear prediction model using feedback neural networks. Control Engineering Practice, 2001, 9, 859-867.	5.5	17
130	Support vector machines for learning to identify the critical positions of a protein. Journal of Theoretical Biology, 2005, 234, 351-361.	1.7	17
131	From robust model predictive control to stochastic optimal control and approximate dynamic programming: A perspective gained from a personal journey. Computers and Chemical Engineering, 2014, 70, 114-121.	3.8	17
132	Reinforcement Learning â€“ Overview of Recent Progress and Implications for Process Control. Computer Aided Chemical Engineering, 2018, , 71-85.	0.5	17
133	Design and Evaluation of Sustainable Lactide Production Process with an One-Step Gas Phase Synthesis Route. ACS Sustainable Chemistry and Engineering, 2019, 7, 6178-6184.	6.7	17
134	An algorithmic framework for improving heuristic solutions. Computers and Chemical Engineering, 2004, 28, 1297-1307.	3.8	16
135	Biomimetically Synthesized Hierarchical TiO₂-Graphitic Carbon as Anodic Catalysts for Direct Alkaline Sulfide Fuel Cell. ACS Sustainable Chemistry and Engineering, 2015, 3, 1764-1770.	6.7	16
136	Multi-timescale, multi-period decision-making model development by combining reinforcement learning and mathematical programming. Computers and Chemical Engineering, 2019, 121, 556-573.	3.8	16
137	Analysis and model-based optimization of a pectin extraction process. Journal of Food Engineering, 2019, 244, 159-169.	5.2	16
138	CFD analysis and scale up of a baffled membrane reactor for hydrogen production by steam methane reforming. Computers and Chemical Engineering, 2022, 165, 107912.	3.8	16
139	Model predictive control for nonlinear batch processes with asymptotically perfect tracking. Computers and Chemical Engineering, 1997, 21, S873-S879.	3.8	15
140	Realistic disturbance modeling using Hidden Markov Models: Applications in model-based process control. Journal of Process Control, 2009, 19, 1438-1450.	3.3	15
141	Fault Detection and Diagnosis Using Hidden Markov Disturbance Models. Industrial & Engineering Chemistry Research, 2010, 49, 7901-7908.	3.7	15
142	Technoeconomic and Environmental Evaluation of Sodium Bicarbonate Production Using CO₂ from Flue Gas of a Coal-Fired Power Plant. Industrial & Engineering Chemistry Research, 2019, 58, 15533-15541.	3.7	15
143	Approximate dynamic programming: Application to process supply chain management. AICHE Journal, 2006, 52, 2473-2485.	3.6	14
144	Design, simulation and feasibility study of a combined CO2 mineralization and brackish water desalination process. Journal of CO2 Utilization, 2019, 34, 446-464.	6.8	14

#	Article	IF	Citations
145	Integrated quality and tracking control of a batch PMMA reactor using a QBMPC technique. Computers and Chemical Engineering, 2000, 24, 953-958.	3.8	13
146	Model-based quality monitoring of batch and semi-batch processes. Journal of Process Control, 2000, 10, 317-332.	3.3	13
147	Recursive data-based prediction and control of product quality for a PMMA batch process. Chemical Engineering Science, 2003, 58, 3215-3221.	3.8	13
148	Pseudo-random binary sequence design for finite impulse response identification. Control Engineering Practice, 2003, 11, 935-947.	5.5	13
149	Operability Analysis and Design of a Reverse-Flow Microreactor for Hydrogen Generation via Methane Partial Oxidation. Industrial & Engineering Chemistry Research, 2005, 44, 8323-8333.	3.7	13
150	Integrated design and control of reactive distillation processes using the driving force approach. AICHE Journal, 2021, 67, e17227.	3.6	13
151	Modeling and Identification for NonlinearModel Predictive Control: Requirements,Current Status and Future Research Needs. , 2000, , 269-293.		13
152	Robust Adaptive Predictive Control of Nonlinear Processes Using Nonlinear Moving Average System Models. Industrial & Engineering Chemistry Research, 2000, 39, 2010-2023.	3.7	12
153	Identification and Control of Processes with Periodic Operations or Disturbances. Industrial & Engineering Chemistry Research, 2003, 42, 1938-1947.	3.7	12
154	Hydrogen generation in a reverse-flow microreactor: 2. Simulation and analysis. AICHE Journal, 2005, 51, 2265-2272.	3.6	12
155	Reducing the computational effort of optimal process controllers for continuous state spaces by using incremental learning and post-decision state formulations. Journal of Process Control, 2014, 24, 133-143.	3.3	12
156	Parameter subset selection and biased estimation for a class of ill-conditioned estimation problems. Journal of Process Control, 2019, 81, 65-75.	3.3	12
157	Improved Microalgae Production by Using a Heat Supplied Open Raceway Pond. Industrial & Engineering Chemistry Research, 2019, 58, 9099-9108.	3.7	12
158	Multi-phase particle-in-cell coupled with population balance equation (MP-PIC-PBE) method for multiscale computational fluid dynamics simulation. Computers and Chemical Engineering, 2020, 134, 106686.	3.8	12
159	Subspace Identification Based Inferential Control of A Continuous Pulp Digester. Computers and Chemical Engineering, 1997, 21, S1143-S1148.	3.8	12
160	Subspace identification based inferential control of a continuous pulp digester. Computers and Chemical Engineering, 1997, 21, S1143-S1148.	3.8	11
161	Integrated identification and robust control. Journal of Process Control, 1998, 8, 431-440.	3.3	11
162	A reinforcement learningâ€based scheme for direct adaptive optimal control of linear stochastic systems. Optimal Control Applications and Methods, 2010, 31, 365-374.	2.1	11

#	Article	IF	Citations
163	Sustainable Process Design. Computer Aided Chemical Engineering, 2015, 36, 175-195.	0.5	11
164	Model-Based Optimization of Cyclic Operation of Acetone-Butanol-Ethanol (ABE) Fermentation Process with ex Situ Butanol Recovery (ESBR) for Continuous Biobutanol Production. Industrial & Engineering Chemistry Research, 2017, 56, 2071-2082.	3.7	11
165	Change of Hydrocarbon Structure Type in Lube Hydroprocessing and Correlation Model for Viscosity Index. Industrial & Engineering Chemistry Research, 2017, 56, 8016-8028.	3.7	11
166	Control structure selection and robust control system design for a high-purity distillation column. IEEE Transactions on Control Systems Technology, 1997, 5, 402-416.	5.2	10
167	An on-line batch span minimization and quality control strategy for batch and semi-batch processes. Control Engineering Practice, 2001, 9, 901-909.	5.5	10
168	An algorithmic framework for improving heuristic solutions. Computers and Chemical Engineering, 2004, 28, 1285-1296.	3.8	10
169	Simulation Modeling of Pooling for Combinatorial Protein Engineering. Journal of Biomolecular Screening, 2005, 10, 856-864.	2.6	10
170	Approximate dynamic programming based optimal control applied to an integrated plant with a reactor and a distillation column with recycle. AICHE Journal, 2009, 55, 919-930.	3.6	10
171	Fast moving horizon estimation for a two-dimensional distributed parameter system. Computers and Chemical Engineering, 2014, 63, 159-172.	3.8	10
172	Mathematical Modeling of Acetoneâ€“Butanolâ€“Ethanol Fermentation with Simultaneous Utilization of Glucose and Xylose by RecombinantClostridium acetobutylicum. Energy & Fuels, 2019, 33, 8620-8631.	5.1	10
173	Robust Batch-to-Batch Optimization with Scenario Adaptation. Industrial & Engineering Chemistry Research, 2019, 58, 13664-13674.	3.7	10
174	Modeling, simulation and optimization of the rotating packed bed (RPB) absorber and stripper for MEA-based carbon capture. Computers and Chemical Engineering, 2020, 143, 107102.	3.8	10
175	Computer-aided identification and evaluation of technologies for sustainable carbon capture and utilization using a superstructure approach. Journal of CO2 Utilization, 2022, 61, 102032.	6.8	10
176	On Interfacing Model Predictive Controllers with Low-Level Loops. Industrial & Engineering Chemistry Research, 2000, 39, 92-102.	3.7	9
177	Bilevel Optimizing Control Structure for a Simulated Moving Bed Process Based on a Reduced-Order Model Using the Cubic Spline Collocation Method. Industrial & Engineering Chemistry Research, 2010, 49, 3689-3699.	3.7	9
178	Optimal design for flexible operation of the post-combustion CO2 capture plant with uncertain economic factors. Computers and Chemical Engineering, 2016, 84, 199-207.	3.8	9
179	Deep reinforcement learning based finite-horizon optimal tracking control for nonlinear system. IFAC-PapersOnLine, 2018, 51, 257-262.	0.9	9
180	Isotherm parameter library and evaluation software for CO2 capture adsorbents. Computers and Chemical Engineering, 2020, 143, 107105.	3.8	9

#	Article	IF	Citations
181	New model for S-shaped isotherm data and its application to process modeling using IAST. Chemical Engineering Journal, 2021, 420, 127580.	12.7	9
182	A Dynamic Penalty Function Approach for Constraint-Handling in Reinforcement Learning. IFAC-PapersOnLine, 2021, 54, 487-491.	0.9	9
183	Techno-economic and environmental feasibility of mineral carbonation technology for carbon neutrality: A Perspective. Korean Journal of Chemical Engineering, 2021, 38, 1757-1767.	2.7	9
184	Model predictive control for amine-based CO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1196" altimg="si3.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math> capture process with advanced flash stripper. Control Engineering Practice, 2021, 114, 104885.	5.5	9
185	Modeling and inferential control of the batch acetylation of cellulose. AICHE Journal, 2006, 52, 2149-2160.	3.6	8
186	Strategic capacity decisionâ€making in a stochastic manufacturing environment using realâ€time approximate dynamic programming. Naval Research Logistics, 2010, 57, 211-224.	2.2	8
187	An effective chemical pretreatment method for lignocellulosic biomass with substituted imidazoles. Biotechnology Progress, 2015, 31, 25-34.	2.6	8
188	Multi-time scale procurement planning considering multiple suppliers and uncertainty in supply and demand. Computers and Chemical Engineering, 2016, 91, 114-126.	3.8	8
189	Dynamic Modeling and Analysis of Amine-based Carbon Capture Systems. IFAC-PapersOnLine, 2018, 51, 91-96.	0.9	8
190	Integrated scheduling of vessel dispatching and port operations in the closed-loop shipping system for transporting petrochemicals. Computers and Chemical Engineering, 2019, 126, 485-498.	3.8	8
191	Mathematical Modeling of Microalgal Internal Metabolic Behaviors under Heterotrophic Conditions and Its Application. Industrial & Engineering Chemistry Research, 2020, 59, 1631-1645.	3.7	8
192	An investigation into the hydrodynamics of a spinning cone column: CFD simulations by an Eulerian-Lagrangian approach. Computers and Chemical Engineering, 2020, 132, 106635.	3.8	8
193	Neuro-dynamic programming method for MPC 1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 143-148.	0.4	7
194	Hybrid cybernetic model-based simulation of continuous production of lignocellulosic ethanol: Rejecting abruptly changing feed conditions. Control Engineering Practice, 2010, 18, 177-189.	5.5	7
195	Postdecision-State-Based Approximate Dynamic Programming for Robust Predictive Control of Constrained Stochastic Processes. Industrial & Engineering Chemistry Research, 2011, 50, 1389-1399.	3.7	7
196	Move blocking strategy applied to re-entrant manufacturing line scheduling. International Journal of Control, Automation and Systems, 2015, 13, 410-418.	2.7	7
197	Identification of significant proxy variable for the physiological status affecting salt stress-induced lipid accumulation in Chlorella sorokiniana HS1. Biotechnology for Biofuels, 2019, 12, 242.	6.2	7
198	Kinetic modeling of diesel autothermal reforming for fuel cell auxiliary power units. Chemical Engineering Journal, 2021, 424, 130564.	12.7	7

#	Article	IF	Citations
199	Multiscale modeling of fiber deformation: Application to a batch pulp digester for model predictive control of fiber strength. Computers and Chemical Engineering, 2022, 158, 107640.	3.8	7
200	Modified subspace identification for long-range prediction model for inferential control. Control Engineering Practice, 2008, 16, 1487-1500.	5.5	6
201	Control Structure Selection for the Elevated-Pressure Air Separation Unit in an IGCC Power Plant: Self-Optimizing Control Structure for Economical Operation. Industrial & Engineering Chemistry Research, 2014, 53, 7479-7488.	3.7	6
202	Design and sustainability analysis of a combined CO2 mineralization and desalination process. IFAC-PapersOnLine, 2018, 51, 85-90.	0.9	6
203	Saline water electrolysis system with double-layered cation exchange membrane for low-energy consumption and its application for CO2 mineralization. Journal of CO2 Utilization, 2020, 41, 101269.	6.8	6
204	Global evaluation of economics of microalgae-based biofuel supply chain using GIS-based framework. Korean Journal of Chemical Engineering, 2022, 39, 1524-1541.	2.7	6
205	Control-relevant design of periodic test input signals for iterative open-loop identification of multivariable FIR systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 903-908.	0.4	5
206	Process monitoring for continuous process with periodic characteristics. Journal of Chemometrics, 2004, 18, 69-75.	1.3	5
207	Robust forecasts and run-to-run control for processes with linear drifts. Journal of Process Control, 2009, 19, 636-643.	3.3	5
208	Optimal design of heat and water recovery system utilizing waste flue gases for refinery CO2 reduction. Computers and Chemical Engineering, 2019, 124, 140-152.	3.8	5
209	Multi-scale fluid dynamics simulation based on MP-PIC-PBE method for PMMA suspension polymerization. Computers and Chemical Engineering, 2021, 152, 107391.	3.8	5
210	Model-Based Predictive Control Combined with Iterative Learning for Batch or Repetitive Processes. , 1998, , 313-334.		5
211	Stochastic Dynamic Programming with Localized Cost-to-go Approximators. Chemical Engineering Research and Design, 2005, 83, 752-758.	5.6	4
212	Fault detection and diagnosis of pulp mill process. Computer Aided Chemical Engineering, 2006, 21, 1461-1466.	0.5	4
213	Approximate dynamic programming approach for process control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 26-35.	0.4	4
214	Regularized maximum likelihood estimation of sparse stochastic monomolecular biochemical reaction networks. Computers and Chemical Engineering, 2016, 90, 111-120.	3.8	4
215	Development of batch proportional-integral-derivative controller. Korean Journal of Chemical Engineering, 2018, 35, 1240-1246.	2.7	4
216	Impacts of deploying co-electrolysis of CO2 and H2O in the power generation sector: A case study for South Korea. Energy Reports, 2020, 6, 761-770.	5.1	4

#	Article	IF	Citations
217	Machine learning-based discovery of molecules, crystals, and composites: A perspective review. Korean Journal of Chemical Engineering, 2021, 38, 1971-1982.	2.7	4
218	Risk-based uncertainty assessment to identify key sustainability hurdles for emerging CO₂ utilization technologies. Green Chemistry, 2022, 24, 4588-4605.	9.0	4
219	An Extended Kalman Filter Formulation for Systematic Transfer of Information from Batch to Batch. Industrial & Engineering Chemistry Research, 2003, 42, 1753-1760.	3.7	3
220	A real time adaptive dynamic programming approach for planning and scheduling. Computer Aided Chemical Engineering, 2006, 21, 1179-1184.	0.5	3
221	Identifying the interacting positions of a protein using Boolean learning and support vector machines. Computational Biology and Chemistry, 2006, 30, 268-279.	2.3	3
222	Synthesis of run-to-run repetitive control methods using finite impulse response models. Journal of Process Control, 2009, 19, 364-369.	3.3	3
223	Controlled exploration of state space in off-line ADP and its application to stochastic shortest path problems. Computers and Chemical Engineering, 2009, 33, 2111-2122.	3.8	3
224	Optimal design of periodic test input signals for multivariable impulse response models. Optimal Control Applications and Methods, 2010, 31, 451-469.	2.1	3
225	Multiloop Control Strategies for a Dry Feeding Gasifier in the Integrated Gasification Combined Cycle. Industrial & Engineering Chemistry Research, 2015, 54, 11113-11125.	3.7	3
226	An optimization based strategy for crude selection in a refinery with lube hydro-processing. Computers and Chemical Engineering, 2018, 116, 91-111.	3.8	3
227	Multi-objective optimization of operation of lignocellulosic acetone-butanol-ethanol fermentation with ex situ butanol recovery (ESBR). Computers and Chemical Engineering, 2020, 140, 106915.	3.8	3
228	Optimal design and evaluation of electrochemical CO2 reduction system with renewable energy generation using two-stage stochastic programming. Journal of CO2 Utilization, 2022, 61, 102026.	6.8	3
229	A method for the estimation of infrequent abrupt changes in nonlinear systems. Automatica, 1998, 34, 261-270.	5.0	2
230	PLS Based Monitoring and Control of Batch Digesters. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 737-744.	0.4	2
231	Simulation based approach for improving heuristics in stochastic resource-constrained project scheduling problem. Computer Aided Chemical Engineering, 2003, 15, 439-444.	0.5	2
232	Simulation-Based Dual Mode Controller for Nonlinear Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 209-214.	0.4	2
233	A reinforcement learning-based scheme for adaptive optimal control of linear stochastic systems. , 2008, , .		2
234	Gray-Box Model Identification of an Integrated Plant with Recycle. Industrial & Engineering Chemistry Research, 2008, 47, 8273-8281.	3.7	2

#	Article	IF	Citations
235	Fault Detection in Process Systems using Hidden Markov Disturbance Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 291-296.	0.4	2
236	Optimal decision-oriented Bayesian design of experiments. Journal of Process Control, 2010, 20, 1084-1091.	3.3	2
237	Energy Supply Chain Optimization: A Challenge for Control Engineers?1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 361-370.	0.4	2
238	MILP based value backups in partially observed Markov decision processes (POMDPs) with very large or continuous action and observation spaces. Computers and Chemical Engineering, 2013, 56, 101-113.	3.8	2
239	Optimization of the Cyclic Operation of a Continuous Biobutanol Fermentation Process Integrated with Ex-Situ Adsorption Recovery. IFAC-PapersOnLine, 2015, 48, 1204-1209.	0.9	2
240	Synthesis of Optimal Processing Pathway for Microalgae-based Biorefinery under Uncertainty. Computer Aided Chemical Engineering, 2015, 37, 2303-2308.	0.5	2
241	Comments on â€œDynamic modeling and simulation of Shell gasifier in IGCCâ€• Fuel Processing Technology, 2015, 129, 75.	7.2	2
242	New Performance Indicators for Evaluation of Adsorbents for CO2 Capture with PSA processes. IFAC-PapersOnLine, 2016, 49, 651-656.	0.9	2
243	Dynamic Modeling of Acetoneâ€“Butanolâ€“Ethanol Fermentation with ex Situ Butanol Recovery using Glucose/Xylose Mixtures. Industrial & Engineering Chemistry Research, 2020, 59, 2581-2592.	3.7	2
244	Two Stage Bilevel Programming Approach for Representation of Biorefinery Investment Decision Making in a Pre-Established Timberlands Supply Chain. Computer Aided Chemical Engineering, 2014, 34, 645-650.	0.5	2
245	Linear Model Predictive Control of an Entrained-flow Gasifier for an IGCC Power Plant. Korean Chemical Engineering Research, 2014, 52, 592-602.	0.2	2
246	Robust Adaptive Control with Active Learning for Fed-Batch Process based on Approximate Dynamic Programming. IFAC-PapersOnLine, 2020, 53, 5201-5206.	0.9	2
247	A dynamic penalty approach to state constraint handling in deep reinforcement learning. Journal of Process Control, 2022, 115, 157-166.	3.3	2
248	APPROXIMATE DYNAMIC PROGRAMMING STRATEGY FOR DUAL ADAPTIVE CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 459-464.	0.4	1
249	A Risk based Approach to Estimate Key Uncertainties. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 583-588.	0.4	1
250	On defect propagation in multi-machine stochastically deteriorating systems with incomplete information. Journal of Process Control, 2012, 22, 1478-1489.	3.3	1
251	An Extended Constrained Total Least-Squares Method for the Identification of Genetic Networks from Noisy Measurements. Industrial & Engineering Chemistry Research, 2015, 54, 10583-10592.	3.7	1
252	Notice of Retraction - Synthesis of self-triggered receding horizon controllers: A relaxed dynamic programming approach. , 2015, , .		1

#	Article	IF	Citations
253	Procurement scheduling under supply and demand uncertainty: Case study for comparing classical, reactive, and proactive scheduling. , 2015, , .		1
254	MDP formulation and solution algorithms for inventory management with multiple suppliers and supply and demand uncertainty. Computer Aided Chemical Engineering, 2015, , 1907-1912.	0.5	1
255	Optimal Harvest Management AdaptationÂfor a New Biorefinery Investment inÂa Timberlands SupplyÂChain Using a Modified Cyclic Scheduling Model. Computer Aided Chemical Engineering, 2015, 36, 521-554.	0.5	1
256	Stochastic optimization with value function approximation for micro-grid operation. , 2016, , .		1
257	Deep Reinforcement Learning Based Finite-Horizon Optimal Control for a Discrete-Time Affine Nonlinear System. , 2018, , .		1
258	Improved Parameter Estimation of Ill-Conditioned Problems. , 2018, , .		1
259	110th Anniversary: Modeling and Optimization of a Butyl Glycol Ether Plant Based on an Experimental Kinetic Study. Industrial & Engineering Chemistry Research, 2019, 58, 13260-13273.	3.7	1
260	In-situ FT-IR quantitative analysis of amine concentrations and CO2 loading amount in solvent mixtures for CO2 capture. International Journal of Greenhouse Gas Control, 2020, 94, 102920.	4.6	1
261	Superstructure optimization of microalgal biorefinery producing biodiesel. , 2022, , 713-738.		1
262	Issues in the Application of Nonlinear Estimation for Improving Product Quality Control in Batch and Semi-Batch Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 5841-5846.	0.4	0
263	A Two-Step Approach to Control-Relevant Design of Test Input Signals for Iterative System Identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 1197-1202.	0.4	0
264	An On-line Batch Span Minimization and Quality Control Strategy for Batch and Semi-Batch Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 681-688.	0.4	0
265	Selective intermittent adaptive control of processes subject to large infrequent changes. Chemical Engineering Science, 2000, 55, 5471-5483.	3.8	0
266	Particle size distribution control of a semi-batch reactor using model predictive control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 305-310.	0.4	0
267	A generic framework for integrated quality and profile control for industrial batch processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 53-63.	0.4	0
268	SIMULATION-BASED OPTIMIZATION FOR NONLINEAR OPTIMAL CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 387-392.	0.4	0
269	OPTIMAL ITERATIVE LEARNING CONTROL OF WAFER TEMPERATURE UNIFORMITY IN RAPID THERMAL PROCESSING. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 333-338.	0.4	0
270	Inferential product quality control of a multistage batch plant. AICHE Journal, 2004, 50, 136-148.	3.6	0

#	Article	IF	Citations
271	Simulationâ€Based Design of Dualâ€Mode Controller for Nonâ€Linear Processes. Canadian Journal of Chemical Engineering, 2007, 85, 506-511.	1.7	0
272	Identifying interacting residues using Boolean Learning and Support Vector Machines: Case study on mRFP and DsRed proteins. Biotechnology Journal, 2008, 3, 63-73.	3.5	0
273	A Hidden Markov disturbance model for Offset-free linear model predictive control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 1940-1945.	0.4	0
274	Successive Linearization-based Stochastic Repetitive Control Technique and its Applications to SMB and CATOFIN Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 13468-13473.	0.4	0
275	Processing History Dependent Control Parameter Estimation in Multi-step Batch Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 750-755.	0.4	0
276	Optimal design and operation of an extractive fermentation process for continuous biobutanol production. , 2014, , .		0
277	Sparse identification in chemical master equations for monomolecular reaction networks. , 2014, , .		0
278	Special issue in Honor of Manfred Morari's 60th Birthday. Computers and Chemical Engineering, 2014, 70, 1-2.	3.8	0
279	An auto-framing method for stochastic process signal by using a hidden Markov model based approach. International Journal of Control, Automation and Systems, 2014, 12, 251-258.	2.7	0
280	On integrating the Droop model with the flux balance model for predicting metabolic shifts in microalgae growth. , 2014, , .		0
281	State estimation for a carbon nanotube-based sensor array system. , 2015, , .		0
282	Shortcut formula for the evaluation of adsorbents in pressure swing adsorption. , 2015, , .		0
283	Open Loop Optimal Operation and Sensitivity Analysis of a Continuous Biobutanol Fermentation Process with Ex-Situ Adsorption Recovery. IFAC-PapersOnLine, 2016, 49, 925-930.	0.9	0
284	Estimation of local concentration from measurements of stochastic adsorption dynamics using carbon nanotube-based sensors. Korean Journal of Chemical Engineering, 2016, 33, 33-45.	2.7	0
285	Crude Selection Integrated with Optimal Refinery Operation by Combining Optimal Learning and Mathematical Programming. IFAC-PapersOnLine, 2017, 50, 9032-9037.	0.9	0
286	Synthesis of the optimal heat and water recovery system for reduction of the refinery CO2 emission. , 2017, , .		0
287	Erratum to â€œForty years of computers & chemical engineering: A bibliometric analysisâ€•[Computers & Chemical Engineering 141 (2020) 106978]. Computers and Chemical Engineering, 2021, 152, 107377.	3.8	0
288	A Survey on State Estimation of Nonlinear Systems. Journal of Institute of Control, Robotics and Systems, 2014, 20, 277-288.	0.2	0

#	Article	IF	Citations
289	State Estimation of the Time-Varying and Spatially Localized Concentration of Signal Molecules from the Stochastic Adsorption Dynamics on the Carbon Nanotube-Based Sensors and Its Application to Tumor Cell Detection. PLoS ONE, 2015, 10, e0141930.	2.5	0
290	Process Design and Evaluation Framework of the Algal Biomass Co-firing Plant to set Target R&D Parameters. , 2019, , .		0
291	Robust Dual Control of Batch Processes with Parametric Uncertainty using Proximal Policy Optimization. , 2020, , .		0
292	Algal-based feedstocks. , 2022, , 121-141.		0