JosÃ© A Romagnoli

List of Publications by Year
in descending order

108	2,139	257450 24	276875 41
papers	citations	h-index	g-index

110	110	110	1661
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Integrated flexibility and controllability analysis in design of chemical processes. AICHE Journal, 1997, 43, 997-1015.	3.6	116
2	Antisolvent crystallization: Model identification, experimental validation and dynamic simulation. Chemical Engineering Science, 2008, 63, 5457-5467.	3.8	109
3	Continuous control of a polymerization system with deep reinforcement learning. Journal of Process Control, 2019, 75, 40-47.	3.3	100
4	Real-time implementation of multi-linear model-based control strategiesâ€“â€“an application to a bench-scale pH neutralization reactor. Journal of Process Control, 2004, 14, 571-579.	3.3	83
5	Gap Metric Concept and Implications for Multilinear Model-Based Controller Design. Industrial & Engineering Chemistry Research, 2003, 42, 2189-2197.	3.7	76
6	Effect of disturbances in optimizing control: Steady-state open-loop backoff problem. AICHE Journal, 1996, 42, 983-994.	3.6	71
7	Sonocrystallisation of sodium chloride particles for inhalation. Chemical Engineering Science, 2007, 62, 2445-2453.	3.8	61
8	Data mining and clustering in chemical process databases for monitoring and knowledge discovery. Journal of Process Control, 2018, 67, 160-175.	3.3	58
9	Robust Hâˆž control of nonlinear plants based on multi-linear models: an application to a bench-scale pH neutralization reactor. Chemical Engineering Science, 2000, 55, 4435-4450.	3.8	56
10	Model-Based Optimal Strategies for Controlling Particle Size in Antisolvent Crystallization Operations. Crystal Growth and Design, 2008, 8, 2698-2706.	3.0	53
11	A Framework for Robust Data Reconciliation Based on a Generalized Objective Function. Industrial & Engineering Chemistry Research, 2003, 42, 3075-3084.	3.7	52
12	Optimization in seeded cooling crystallization: A parameter estimation and dynamic optimization study. Chemical Engineering and Processing: Process Intensification, 2007, 46, 1096-1106.	3.6	50
13	Multiscale modeling, simulation and validation of batch cooling crystallization. Separation and Purification Technology, 2007, 53, 153-163.	7.9	47
14	Robust PCA and normal region in multivariate statistical process monitoring. AICHE Journal, 1996, 42, 3563-3566.	3.6	45
15	Refinery scheduling of crude oil unloading, storage and processing using a model predictive control strategy. Computers and Chemical Engineering, 2010, 34, 1671-1686.	3.8	41
16	Wavelet-based density estimation and application to process monitoring. AICHE Journal, 1997, 43, 1227-1241.	3.6	38
17	A robust strategy for real-time process monitoring. Journal of Process Control, 2001, 11, 343-359.	3.3	38
18	On-line multi-variable predictive control of molar mass and particle size distributions in free-radical emulsion copolymerization. Chemical Engineering Science, 2005, 60, 6596-6606.	3.8	38

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19	A multiobjective optimization framework for design of integrated biorefineries under uncertainty. AICHE Journal, 2015, 61, 3208-3222.	3.6	37
20	Investigation of transfer learning for image classification and impact on training sample size. Chemometrics and Intelligent Laboratory Systems, 2021, 211, 104269.	3.5	33
21	Adaptive k-Nearest-Neighbor Method for Process Monitoring. Industrial & Engineering Chemistry Research, 2018, 57, 2574-2586.	3.7	32
22	Detecting abnormal process trends by wavelet-domain hidden Markov models. AICHE Journal, 2003, 49, 140-150.	3.6	31
23	A Deep Learning Approach for Process Data Visualization Using t-Distributed Stochastic Neighbor Embedding. Industrial & Engineering Chemistry Research, 2019, 58, 9564-9575.	3.7	28
24	Machine-learning-based simulation and fed-batch control of cyanobacterial-phycocyanin production in Plectonema by artificial neural network and deep reinforcement learning. Computers and Chemical Engineering, 2020, 142, 107016.	3.8	28
25	On the topological modeling and analysis of industrial process data using the SOM. Computers and Chemical Engineering, 2010, 34, 2022-2032.	3.8	26
26	Operation optimization of a cryogenic NGL recovery unit using deep learning based surrogate modeling. Computers and Chemical Engineering, 2020, 137, 106815.	3.8	26
27	Process design and operation. Computer Aided Chemical Engineering, 2004, , 264-305.	0.5	25
28	A Deep Learning Image-Based Sensor for Real-Time Crystal Size Distribution Characterization. Industrial & Engineering Chemistry Research, 2019, 58, 23175-23186.	3.7	25
29	Wavelet-based robust filtering of process data. Computers and Chemical Engineering, 2001, 25, 1549-1559.	3.8	24
30	Deep learning for pyrolysis reactor monitoring: From thermal imaging toward smart monitoring system. AICHE Journal, 2019, 65, 582-591.	3.6	24
31	Large-scale expansion of cytomegalovirus-specific cytotoxic T cells in suspension culture. Biotechnology and Bioengineering, 2004, 85, 138-146.	3.3	22
32	Cluster Analysis for Autocorrelated and Cyclic Chemical Process Data. Industrial & Engineering Chemistry Research, 2007, 46, 3610-3622.	3.7	22
33	A Decision Support Tool for Optimal Design of Integrated Biorefineries under Strategic and Operational Level Uncertainties. Industrial & Engineering Chemistry Research, 2016, 55, 1667-1676.	3.7	22
34	A strategy for detection and isolation of sensor failures and process upsets. Chemometrics and Intelligent Laboratory Systems, 2001, 55, 109-123.	3.5	21
35	A multi-resolution approach for line-edge roughness detection. Microelectronic Engineering, 2009, 86, 340-351.	2.4	21
36	Use of Predictive Solubility Models for Isothermal Antisolvent Crystallization Modeling and Optimization. Industrial & Engineering Chemistry Research, 2011, 50, 8304-8313.	3.7	21

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37	Facilitating process control teaching and learning in a virtual laboratory environment. Computer Applications in Engineering Education, 2002, 10, 79-87.	3.4	20
38	Orthogonal Nonlinear Partial Least-Squares Regression. Industrial & Engineering Chemistry Research, 2003, 42, 5836-5849.	3.7	20
39	Line Edge Detection and Characterization in SEM Images Using Wavelets. IEEE Transactions on Semiconductor Manufacturing, 2009, 22, 180-187.	1.7	19
40	Rapid, Large-Scale Generation of Highly Pure Cytomegalovirus-Specific Cytotoxic T Cells for Adoptive Immunotherapy. Journal of Hematotherapy and Stem Cell Research, 2003, 12, 93-105.	1.8	18
41	Online control of molar mass and particle-size distributions in emulsion polymerization. AICHE Journal, 2006, 52, 1770-1779.	3.6	18
42	Time evolution of the PSD in crystallization operations: An analytical solution based on Ornsteinâ€Uhlenbeck process. AICHE Journal, 2012, 58, 3731-3739.	3.6	18
43	Wavelet-based adaptive robust M-estimator for nonlinear system identification. AICHE Journal, 2000, 46, 1607-1615.	3.6	17
44	Image-Based Multiresolution-ANN Approach for Online Particle Size Characterization. Industrial & Engineering Chemistry Research, 2014, 53, 7008-7018.	3.7	17
45	Electrochemical Pumping for Challenging Hydrogen Separations. ACS Energy Letters, 2022, 7, 1322-1329.	17.4	17
46	Stochastic Approach for the Prediction of PSD in Crystallization Processes: Formulation and Comparative Assessment of Different Stochastic Models. Industrial & Engineering Chemistry Research, 2011, 50, 2133-2143.	3.7	16
47	Stochastic approach for the calculation of anti-solvent addition policies in crystallization operations: An application to a bench-scale semi-batch crystallizer. Chemical Engineering Science, 2010, 65, 1797-1810.	3.8	15
48	Development of Shale Gas Supply Chain Network under Market Uncertainties. Energies, 2017, 10, 246.	3.1	15
49	Monitoring roughness and edge shape on semiconductors through multiresolution and multivariate image analysis. AICHE Journal, 2009, 55, 1147-1160.	3.6	14
50	A stochastic approach for the prediction of PSD in crystallization processes: Analytical solution for the asymptotic behavior and parameter estimation. Computers and Chemical Engineering, 2011, 35, 2318-2325.	3.8	14
51	On the Influence of Hydrogen Bond Interactions in Isothermal and Nonisothermal Antisolvent Crystallization Processes. Industrial & Engineering Chemistry Research, 2013, 52, 9612-9619.	3.7	14
52	Onâ€line control of crystal properties in nonisothermal antisolvent crystallization. AICHE Journal, 2015, 61, 2188-2201.	3.6	14
53	Online Optimal Feedback Control of Polymerization Reactors: Application to Polymerization of Acrylamideâ€“Waterâ€“Potassium Persulfate (KPS) System. Industrial & Engineering Chemistry Research, 2017, 56, 7322-7335.	3.7	14
54	Machine learning for guiding high-temperature PEM fuel cells with greater power density. Patterns, 2021, 2, 100187.	5.9	14

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55	Stochastic approach for the prediction of PSD in nonisothermal antisolvent crystallization processes. AIChE Journal, 2013, 59, 2843-2851.	3.6	13
56	Combining On-Line Characterization Tools with Modern Software Environments for Optimal Operation of Polymerization Processes. Processes, 2016, 4, 5.	2.8	13
57	Optimization of Renewable Energy Businesses under Operational Level Uncertainties through Extensive Sensitivity Analysis and Stochastic Global Optimization. Industrial & Engineering Chemistry Research, 2017, 56, 3360-3372.	3.7	13
58	DCS implementation of optimal operational policies: a crystallisation case study. International Journal of Computer Applications in Technology, 2006, 25, 198.	0.5	12
59	A qualitative comparison between population balances and stochastic models for non-isothermal antisolvent crystallization processes. Computers and Chemical Engineering, 2014, 63, 82-90.	3.8	12
60	Controllability of Semibatch Nonisothermal Antisolvent Crystallization Processes. Industrial & Engineering Chemistry Research, 2014, 53, 7056-7065.	3.7	11
61	Learning to navigate a crystallization model with Deep Reinforcement Learning. Chemical Engineering Research and Design, 2022, 178, 111-123.	5.6	11
62	Data-Derived Analysis and Inference for an Industrial Deethanizer. Industrial & Engineering Chemistry Research, 2012, 51, 13732-13742.	3.7	10
63	A modeling approach for the non-isothermal antisolvent crystallization of a solute with weak temperature dependent solubility. Crystal Research and Technology, 2012, 47, 491-504.	1.3	10
64	Modular Framework for Simulation-Based Multi-objective Optimization of a Cryogenic Air Separation Unit. ACS Omega, 2022, 7, 11696-11709.	3.5	10
65	Self-Organizing Self-Clustering Network: A Strategy for Unsupervised Pattern Classification with Its Application to Fault Diagnosis. Industrial & Engineering Chemistry Research, 2008, 47, 4209-4219.	3.7	9
66	A multi-objective evolutionary optimization framework for a natural gas liquids recovery unit. Computers and Chemical Engineering, 2021, 151, 107363.	3.8	9
67	Trade-offs in robust controller design. International Journal of Control, 1993, 58, 1265-1278.	1.9	8
68	Generic Process Visualization Using Parametric t-SNE. IFAC-PapersOnLine, 2018, 51, 803-808.	0.9	8
69	Inferential Conversion and Composition Monitoring via Microcalorimetric Measurements in Emulsion Terpolymerization. Polymer-Plastics Technology and Engineering, 2007, 47, 13-22.	1.9	6
70	Data-Driven Estimation of Significant Kinetic Parameters Applied to the Synthesis of Polyolefins. Processes, 2019, 7, 309.	2.8	6
71	PemNet: A Transfer Learning-Based Modeling Approach of High-Temperature Polymer Electrolyte Membrane Electrochemical Systems. Industrial & Engineering Chemistry Research, 2022, 61, 3350-3357.	3.7	6
72	Effect of the Chaotropic Nature of Supporting Electrolytes on the Electrochemical Properties of Conducting Polymers: A Study Using anIn-Situ/Real TimeTechnique. International Journal of Polymer Analysis and Characterization, 1998, 4, 267-281.	1.9	5

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73	A Clustering Approach for the Separation of Touching Edges in Particle Images. Particle and Particle Systems Characterization, 2008, 25, 143-152.	2.3	5
74	Effects of operating conditions on particle size in sonocrystallization. Asia-Pacific Journal of Chemical Engineering, 2010, 5, 599-608.	1.5	5
75	A generalized stochastic modelling approach for crystal size distribution in antisolvent crystallization operations. AICHE Journal, 2017, 63, 551-559.	3.6	5
76	Trade-Offs in Robust Controller Design. , 1992, , .		5
77	A transformation approach to nonlinear process control. AICHE Journal, 1991, 37, 1082-1092.	3.6	4
78	Advanced controller design for a distillation column. International Journal of Control, 1994, 59, 817-839.	1.9	4
79	Modeling/Simulation of the Dividing Wall Column by Using the Rigorous Model. Processes, 2019, 7, 26.	2.8	4
80	Real-Time Chemical Process Monitoring with UMAP. Computer Aided Chemical Engineering, 2021, 50, 2077-2082.	0.5	4
81	General Feature Extraction for Process Monitoring Using Transfer Learning Approaches. Industrial & Engineering Chemistry Research, 2022, 61, 5202-5214.	3.7	4
82	Data mining and knowledge discovery in chemical processes: Effect of alternative processing techniques. Data-Centric Engineering, 2022, 3, .	2.3	4
83	A modelling environment for the advanced operation of crystallisation processes. Computer Aided Chemical Engineering, 2003, 15, 1250-1255.	0.5	3
84	Experimental Verification of Gap Metric as a Tool for Model Selection in Multi-Linear Model-Based Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 257-261.	0.4	3
85	Characterization of Surface Coats of Bacterial Spores with Atomic Force Microscopy and Wavelets. Industrial & Engineering Chemistry Research, 2011, 50, 2876-2882.	3.7	3
86	Control Strategies for Natural Gas Liquids Recovery Plants. Computer Aided Chemical Engineering, 2020, 48, 1291-1296.	0.5	3
87	Reinforcement Learning-Based Fed-Batch Optimization with Reaction Surrogate Model. , 2021, , .		3
88	Benchmark study of reinforcement learning in controlling and optimizing batch processes. Journal of Advanced Manufacturing and Processing, 2022, 4, .	2.4	3
89	Short-term Planning Model for Petroleum Refinery Production. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 308-313.	0.4	2
90	Modeling and Multiresolution Characterization for Microfabrication Applications. Industrial & Engineering Chemistry Research, 2010, 49, 548-558.	3.7	2

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91	Many-Objective Simulation-Based Optimization of an Air Separation Unit. IFAC-PapersOnLine, 2021, 54, 522-527.	0.9	2
92	Control of A Polyol Process Using Reinforcement Learning. IFAC-PapersOnLine, 2021, 54, 498-503.	0.9	2
93	On the Prediction and Shaping of the PSD in Crystallization Operations. Computer Aided Chemical Engineering, 2010, 28, 805-810.	0.5	1
94	Development of Shale Gas Supply Chain Network under Market Uncertainties. Computer Aided Chemical Engineering, 2016, , 901-906.	0.5	1
95	A Strategy for the Nonlinear Control of Affine Systems using Multiple Neural Networks. , 1993, , .		1
96	A Study of the Controller Tuning for Stabilizing Nonlinear Feedback Systems based on Generalized Models. , 1990, , .		0
97	A Hybrid Nonlinear Controller - Case Study of a CSTR. , 1992, , .		0
98	Disturbance rejection with bounded control action: Loop-shaping methodology. AICHE Journal, 1996, 42, 466-476.	3.6	0
99	Dynamic modeling of a polymeric composite interface: An introduction to in-situ neurocomputing in composite-based PH sensors. Composite Interfaces, 2000, 8, 127-134.	2.3	0
100	Modelling and optimisation of a high density fermentation process using multi-linear models: An application to a bench scale bioreactor. Computer Aided Chemical Engineering, 2001, 9, 141-146.	0.5	0
101	A Theoretical Nucleation Study of the Combined Effect of Seeding and Temperature Profile in Cooling Crystallization. Computer Aided Chemical Engineering, 2009, 27, 423-428.	0.5	0
102	A Stochastic Approach for Anti-Solvent Addition Policy in Crystallization Operations: An Application to a Bench-Scale Fed-Batch Crystallizer. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 189-194.	0.4	0
103	Framework for Integrated Model-Centric Process Support. Industrial & Engineering Chemistry Research, 2011, 50, 10533-10548.	3.7	0
104	A Machine Learning Approach for Device Design from Materials and Operation Data. Computer Aided Chemical Engineering, 2021, 50, 279-285.	0.5	0
105	Variable Structure Control Strategies: Application to a MIMO Nonlinear Steam Generating Unit. , 1992, , .		0
106	Design of Controllers with Disturbance Rejection Capabilities: A Loop Shaping Methodology. , 1993, , .		0
107	A Modeling Framework for Optimal Design of Renewable Energy Processes Under Market Uncertainty. Computer Aided Chemical Engineering, 2015, 37, 353-358.	0.5	0
108	Process Optimization and Control. , 2020, , 511-540.		0