

Marianthi G Ierapetritou

List of Publications by Citations

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253
papers

7,372
citations

48
h-index

70
g-index

261
ext. papers

8,444
ext. citations

3.7
avg. IF

6.76
L-index

#	Paper	IF	Citations
253	Process scheduling under uncertainty: Review and challenges. <i>Computers and Chemical Engineering</i> , 2008 , 32, 715-727	4	254
252	Advances in surrogate based modeling, feasibility analysis, and optimization: A review. <i>Computers and Chemical Engineering</i> , 2018 , 108, 250-267	4	247
251	Characterizing continuous powder mixing using residence time distribution. <i>Chemical Engineering Science</i> , 2011 , 66, 417-425	4.4	150
250	A review of the Residence Time Distribution (RTD) applications in solid unit operations. <i>Powder Technology</i> , 2012 , 228, 416-423	5.2	138
249	An integrated approach for dynamic flowsheet modeling and sensitivity analysis of a continuous tablet manufacturing process. <i>Computers and Chemical Engineering</i> , 2012 , 42, 30-47	4	137
248	Refinery Short-Term Scheduling Using Continuous Time Formulation: Crude-Oil Operations. <i>Industrial & Engineering Chemistry Research</i> , 2003 , 42, 3085-3097	3.9	131
247	Global Optimization in Design under Uncertainty: Feasibility Test and Flexibility Index Problems. <i>Industrial & Engineering Chemistry Research</i> , 2001 , 40, 4267-4282	3.9	115
246	Efficient short-term scheduling of refinery operations based on a continuous time formulation. <i>Computers and Chemical Engineering</i> , 2004 , 28, 1001-1019	4	106
245	Characterization of continuous convective powder mixing processes. <i>Powder Technology</i> , 2008 , 182, 368-378	5.2	104
244	Perspectives on the continuous manufacturing of powder-based pharmaceutical processes. <i>AICHE Journal</i> , 2016 , 62, 1846-1862	3.6	100
243	An engineering study on the enhanced control and operation of continuous manufacturing of pharmaceutical tablets via roller compaction. <i>International Journal of Pharmaceutics</i> , 2012 , 438, 307-26	6.5	98
242	A New Approach for Efficient Rescheduling of Multiproduct Batch Plants. <i>Industrial & Engineering Chemistry Research</i> , 2000 , 39, 4228-4238	3.9	94
241	Integration of Scheduling and Control with Closed Loop Implementation. <i>Industrial & Engineering Chemistry Research</i> , 2012 , 51, 8550-8565	3.9	90
240	Batch Plant Design and Operations under Uncertainty. <i>Industrial & Engineering Chemistry Research</i> , 1996 , 35, 772-787	3.9	86
239	Petroleum Refining Operations: Key Issues, Advances, and Opportunities. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 1161-1170	3.9	85
238	Optimal design of sustainable chemical processes and supply chains: A review. <i>Computers and Chemical Engineering</i> , 2012 , 44, 94-103	4	84
237	System-wide hybrid MPC-PID control of a continuous pharmaceutical tablet manufacturing process via direct compaction. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2013 , 85, 1164-82	5.7	78

236	Mixed-Integer Linear Programming Model for Gasoline Blending and Distribution Scheduling. <i>Industrial & Engineering Chemistry Research</i> , 2003 , 42, 825-835	3.9	75
235	Robust Optimization for Process Scheduling Under Uncertainty. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 4148-4157	3.9	74
234	Implementation of an advanced hybrid MPC-PID control system using PAT tools into a direct compaction continuous pharmaceutical tablet manufacturing pilot plant. <i>International Journal of Pharmaceutics</i> , 2014 , 473, 38-54	6.5	73
233	A systematic framework for onsite design and implementation of a control system in a continuous tablet manufacturing process. <i>Computers and Chemical Engineering</i> , 2014 , 66, 186-200	4	73
232	Accelerating Benders method using covering cut bundle generation. <i>International Transactions in Operational Research</i> , 2010 , 17, 221-237	2.9	71
231	Robust Short-Term Scheduling of Multiproduct Batch Plants under Demand Uncertainty. <i>Industrial & Engineering Chemistry Research</i> , 2001 , 40, 4543-4554	3.9	71
230	Investigation of the effect of impeller rotation rate, powder flow rate, and cohesion on powder flow behavior in a continuous blender using PEPT. <i>Chemical Engineering Science</i> , 2010 , 65, 5658-5668	4.4	67
229	Design Space of Pharmaceutical Processes Using Data-Driven-Based Methods. <i>Journal of Pharmaceutical Innovation</i> , 2010 , 5, 119-137	1.8	65
228	Modeling of Particulate Processes for the Continuous Manufacture of Solid-Based Pharmaceutical Dosage Forms. <i>Processes</i> , 2013 , 1, 67-127	2.9	64
227	Effects of rotation rate, mixing angle, and cohesion in two continuous powder mixers: a statistical approach. <i>Powder Technology</i> , 2009 , 194, 217-227	5.2	64
226	A kriging method for the solution of nonlinear programs with black-box functions. <i>AIChE Journal</i> , 2007 , 53, 2001-2012	3.6	62
225	Computational Approaches for Studying the Granular Dynamics of Continuous Blending Processes, 1 DEM Based Methods. <i>Macromolecular Materials and Engineering</i> , 2011 , 296, 290-307	3.9	61
224	Novel Optimization Approach of Stochastic Planning Models. <i>Industrial & Engineering Chemistry Research</i> , 1994 , 33, 1930-1942	3.9	61
223	Surrogate-Based Optimization of Expensive Flowsheet Modeling for Continuous Pharmaceutical Manufacturing. <i>Journal of Pharmaceutical Innovation</i> , 2013 , 8, 131-145	1.8	59
222	Real time monitoring of powder blend bulk density for coupled feed-forward/feed-back control of a continuous direct compaction tablet manufacturing process. <i>International Journal of Pharmaceutics</i> , 2015 , 495, 612-625	6.5	58
221	Feasibility analysis of black-box processes using an adaptive sampling Kriging-based method. <i>Computers and Chemical Engineering</i> , 2012 , 36, 358-368	4	58
220	Integration of scheduling and control for batch processes using multi-parametric model predictive control. <i>AIChE Journal</i> , 2014 , 60, 3169-3183	3.6	57
219	Rolling horizon based planning and scheduling integration with production capacity consideration. <i>Chemical Engineering Science</i> , 2010 , 65, 5887-5900	4.4	57

218	Process analysis and optimization of continuous pharmaceutical manufacturing using flowsheet models. <i>Computers and Chemical Engineering</i> , 2017 , 107, 77-91	4	56
217	Integration of scheduling and control under uncertainties: Review and challenges. <i>Chemical Engineering Research and Design</i> , 2016 , 116, 98-113	5.5	55
216	Hybrid simulation based optimization approach for supply chain management. <i>Computers and Chemical Engineering</i> , 2012 , 47, 183-193	4	55
215	Integrated production planning and scheduling optimization of multisite, multiproduct process industry. <i>Computers and Chemical Engineering</i> , 2012 , 37, 214-226	4	55
214	Improving benders decomposition using maximum feasible subsystem (MFS) cut generation strategy. <i>Computers and Chemical Engineering</i> , 2010 , 34, 1237-1245	4	55
213	From process control to supply chain management: An overview of integrated decision making strategies. <i>Computers and Chemical Engineering</i> , 2017 , 106, 826-835	4	53
212	Decomposition approaches for the efficient solution of short-term scheduling problems. <i>Computers and Chemical Engineering</i> , 2003 , 27, 1261-1276	4	53
211	Aromatics from Lignocellulosic Biomass: Economic Analysis of the Production of p-Xylene from 5-Hydroxymethylfurfural. <i>AIChE Journal</i> , 2013 , 59, 2079-2087	3.6	52
210	Computer-Aided Flowsheet Simulation of a Pharmaceutical Tablet Manufacturing Process Incorporating Wet Granulation. <i>Journal of Pharmaceutical Innovation</i> , 2013 , 8, 11-27	1.8	51
209	A kriging based method for the solution of mixed-integer nonlinear programs containing black-box functions. <i>Journal of Global Optimization</i> , 2009 , 43, 191-205	1.5	50
208	Generate Pareto optimal solutions of scheduling problems using normal boundary intersection technique. <i>Computers and Chemical Engineering</i> , 2007 , 31, 268-280	4	50
207	Reactive scheduling using parametric programming. <i>AIChE Journal</i> , 2008 , 54, 2610-2623	3.6	50
206	Production planning and scheduling integration through augmented Lagrangian optimization. <i>Computers and Chemical Engineering</i> , 2010 , 34, 996-1006	4	49
205	Design Optimization under Parameter Uncertainty for General Black-Box Models. <i>Industrial & Engineering Chemistry Research</i> , 2002 , 41, 6687-6697	3.9	48
204	A simulation-based optimization framework for integrating scheduling and model predictive control, and its application to air separation units. <i>Computers and Chemical Engineering</i> , 2018 , 113, 139-151	4.1	47
203	Closed-Loop Feedback Control of a Continuous Pharmaceutical Tablet Manufacturing Process via Wet Granulation. <i>Journal of Pharmaceutical Innovation</i> , 2014 , 9, 16-37	1.8	47
202	Integrated production planning and scheduling using a decomposition framework. <i>Chemical Engineering Science</i> , 2009 , 64, 3585-3597	4.4	47
201	Hierarchical approach for production planning and scheduling under uncertainty. <i>Chemical Engineering and Processing: Process Intensification</i> , 2007 , 46, 1129-1140	3.7	47

200	Alternative Approaches for p-Xylene Production from Starch: Techno-Economic Analysis. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 10688-10699	3.9	46
199	On-the-fly reduction of kinetic mechanisms using element flux analysis. <i>Chemical Engineering Science</i> , 2010 , 65, 1173-1184	4.4	45
198	New approach for quantifying process feasibility: Convex and 1-D quasi-convex regions. <i>AIChE Journal</i> , 2001 , 47, 1407-1417	3.6	45
197	Simulation and economic analysis of 5-hydroxymethylfurfural conversion to 2,5-furandicarboxylic acid. <i>Computers and Chemical Engineering</i> , 2013 , 52, 26-34	4	44
196	Process scheduling under uncertainty using multiparametric programming. <i>AIChE Journal</i> , 2007 , 53, 3183-3203	3.4	44
195	Determination of operability limits using simplicial approximation. <i>AIChE Journal</i> , 2002 , 48, 2902-2909	3.6	44
194	Near infrared spectroscopic calibration models for real time monitoring of powder density. <i>International Journal of Pharmaceutics</i> , 2016 , 512, 61-74	6.5	42
193	Derivative-free optimization for expensive constrained problems using a novel expected improvement objective function. <i>AIChE Journal</i> , 2014 , 60, 2462-2474	3.6	42
192	Model-Based Control-Loop Performance of a Continuous Direct Compaction Process. <i>Journal of Pharmaceutical Innovation</i> , 2011 , 6, 249-263	1.8	41
191	Dynamic Data-Driven Modeling of Pharmaceutical Processes. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 6743-6754	3.9	41
190	A New Methodology for the General Multiparametric Mixed-Integer Linear Programming (MILP) Problems. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 5141-5151	3.9	41
189	Challenges and opportunities in modeling pharmaceutical manufacturing processes. <i>Computers and Chemical Engineering</i> , 2015 , 81, 32-39	4	40
188	Flowsheet optimization of an integrated continuous purification-processing pharmaceutical manufacturing operation. <i>Chemical Engineering Science</i> , 2013 , 102, 56-66	4.4	39
187	A novel feasibility analysis method for black-box processes using a radial basis function adaptive sampling approach. <i>AIChE Journal</i> , 2017 , 63, 532-550	3.6	38
186	Computational Approaches for Studying the Granular Dynamics of Continuous Blending Processes, 2 Population Balance and Data-Based Methods. <i>Macromolecular Materials and Engineering</i> , 2012 , 297, 9-19	3.9	38
185	Effects of glucose and insulin on HepG2-C3A cell metabolism. <i>Biotechnology and Bioengineering</i> , 2010 , 107, 347-56	4.9	38
184	Hybrid DEM-compartment modeling approach for granular mixing. <i>AIChE Journal</i> , 2007 , 53, 119-128	3.6	38
183	Digital Twins in Pharmaceutical and Biopharmaceutical Manufacturing: A Literature Review. <i>Processes</i> , 2020 , 8, 1088	2.9	38

182	Reduced-order discrete element method modeling. <i>Chemical Engineering Science</i> , 2013 , 95, 12-26	4.4	37
181	Branched-chain amino acid supplementation: impact on signaling and relevance to critical illness. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , 2013 , 5, 449-460	6.6	37
180	Uncertainty reduction and characterization for complex environmental fate and transport models: An empirical Bayesian framework incorporating the stochastic response surface method. <i>Water Resources Research</i> , 2003 , 39,	5.4	37
179	An Integrated Approach to Simulation of Pharmaceutical Processes for Solid Drug Manufacture. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 5128-5147	3.9	36
178	Short-Term Scheduling under Uncertainty Using MILP Sensitivity Analysis. <i>Industrial & Engineering Chemistry Research</i> , 2004 , 43, 3782-3791	3.9	36
177	Parametric process synthesis for general nonlinear models. <i>Computers and Chemical Engineering</i> , 2003 , 27, 1499-1512	4	36
176	A Robust Event-Based Continuous Time Formulation for Tank Transfer Scheduling. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 9126-9136	3.9	35
175	A Combined Feed-Forward/Feed-Back Control System for a QbD-Based Continuous Tablet Manufacturing Process. <i>Processes</i> , 2015 , 3, 339-356	2.9	34
174	Optimizing continuous powder mixing processes using periodic section modeling. <i>Chemical Engineering Science</i> , 2012 , 80, 70-80	4.4	34
173	A graph-based approach to developing adaptive representations of complex reaction mechanisms. <i>Combustion and Flame</i> , 2008 , 155, 585-604	5.3	34
172	Centralized-decentralized optimization for refinery scheduling. <i>Computers and Chemical Engineering</i> , 2009 , 33, 2091-2105	4	33
171	Effect of tracer material properties on the residence time distribution (RTD) of continuous powder blending operations. Part I of II: Experimental evaluation. <i>Powder Technology</i> , 2019 , 342, 744-763	5.2	33
170	Use of genomic data in risk assessment case study: II. Evaluation of the dibutyl phthalate toxicogenomic data set. <i>Toxicology and Applied Pharmacology</i> , 2013 , 271, 349-62	4.6	32
169	Comparison of the cytokine and chemokine dynamics of the early inflammatory response in models of burn injury and infection. <i>Cytokine</i> , 2011 , 55, 362-71	4	31
168	Predictive Modeling for Pharmaceutical Processes Using Kriging and Response Surface. <i>Journal of Pharmaceutical Innovation</i> , 2009 , 4, 174-186	1.8	31
167	Renewable lubricants with tailored molecular architecture. <i>Science Advances</i> , 2019 , 5, eaav5487	14.3	30
166	An integrated framework for scheduling and control using fast model predictive control. <i>AIChE Journal</i> , 2015 , 61, 3304-3319	3.6	30
165	Comparison between Batch and Continuous Monoclonal Antibody Production and Economic Analysis. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 5851-5863	3.9	29

164	Feasibility and flexibility analysis of black-box processes Part 1: Surrogate-based feasibility analysis. <i>Chemical Engineering Science</i> , 2015 , 137, 986-1004	4.4	29
163	Using Compartment Modeling to Investigate Mixing Behavior of a Continuous Mixer. <i>Journal of Pharmaceutical Innovation</i> , 2008 , 3, 161-174	1.8	29
162	Feasibility Evaluation of Nonconvex Systems Using Shape Reconstruction Techniques. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 3638-3647	3.9	29
161	Process synthesis optimization and flexibility evaluation of air separation cycles. <i>AIChE Journal</i> , 2005 , 51, 1190-1200	3.6	29
160	Dynamic Flowsheet Model Development and Sensitivity Analysis of a Continuous Pharmaceutical Tablet Manufacturing Process Using the Wet Granulation Route. <i>Processes</i> , 2019 , 7, 234	2.9	28
159	Characterization of feeder effects on continuous solid mixing using fourier series analysis. <i>AIChE Journal</i> , 2011 , 57, 1144-1153	3.6	28
158	Short-term scheduling of a large-scale oil-refinery operations: Incorporating logistics details. <i>AIChE Journal</i> , 2011 , 57, 1570-1584	3.6	28
157	Periodic section modeling of convective continuous powder mixing processes. <i>AIChE Journal</i> , 2012 , 58, 69-78	3.6	27
156	Supply chain management using an optimization driven simulation approach. <i>AIChE Journal</i> , 2013 , 59, 4612-4626	3.6	27
155	Predictive modeling of pharmaceutical processes with missing and noisy data. <i>AIChE Journal</i> , 2010 , 56, 2860-2872	3.6	27
154	Economic Analysis of Batch and Continuous Biopharmaceutical Antibody Production: A Review. <i>Journal of Pharmaceutical Innovation</i> , 2019 , 14, 1-19	1.8	27
153	Production planning optimization of an ethylene plant considering process operation and energy utilization. <i>Computers and Chemical Engineering</i> , 2016 , 87, 1-12	4	26
152	Discrete element reduced-order modeling of dynamic particulate systems. <i>AIChE Journal</i> , 2014 , 60, 3184-3194	5.1	26
151	Life Cycle Assessment of Biobased p-Xylene Production. <i>Industrial & Engineering Chemistry Research</i> , 2015 , 54, 2366-2378	3.9	26
150	Framework for evaluating the feasibility/operability of nonconvex processes. <i>AIChE Journal</i> , 2003 , 49, 1233-1240	3.6	26
149	Process Intensification for Cellulosic Biorefineries. <i>ChemSusChem</i> , 2017 , 10, 2566-2572	8.3	25
148	Feasibility and flexibility analysis of black-box processes part 2: Surrogate-based flexibility analysis. <i>Chemical Engineering Science</i> , 2015 , 137, 1005-1013	4.4	25
147	Using a material property library to find surrogate materials for pharmaceutical process development. <i>Powder Technology</i> , 2018 , 339, 659-676	5.2	25

146	Measurement of residence time distribution in a rotary calciner. <i>AIChE Journal</i> , 2013 , 59, 4068-4076	3.6	25
145	Uncertainty analysis on the righthand side for MILP problems. <i>AIChE Journal</i> , 2006 , 52, 2486-2495	3.6	24
144	Characterizing powder mixing processes utilizing compartment models. <i>International Journal of Pharmaceutics</i> , 2006 , 320, 14-22	6.5	24
143	A multiscale DEM-PBM approach for a continuous comilling process using a mechanistically developed breakage kernel. <i>Chemical Engineering Science</i> , 2018 , 178, 211-221	4.4	23
142	Quality by Design Methodology for Development and Scale-up of Batch Mixing Processes. <i>Journal of Pharmaceutical Innovation</i> , 2008 , 3, 258-270	1.8	23
141	Design of flexible reduced kinetic mechanisms. <i>AIChE Journal</i> , 2001 , 47, 2461-2473	3.6	23
140	Effect of material properties on the residence time distribution (RTD) characterization of powder blending unit operations. Part II of II: Application of models. <i>Powder Technology</i> , 2019 , 344, 525-544	5.2	23
139	Modeling the effects of material properties on tablet compaction: A building block for controlling both batch and continuous pharmaceutical manufacturing processes. <i>International Journal of Pharmaceutics</i> , 2018 , 543, 274-287	6.5	22
138	Speed-up Benders decomposition using maximum density cut (MDC) generation. <i>Annals of Operations Research</i> , 2013 , 210, 101-123	3.2	22
137	Integrated Moving Horizon-Based Dynamic Real-Time Optimization and Hybrid MPC-PID Control of a Direct Compaction Continuous Tablet Manufacturing Process. <i>Journal of Pharmaceutical Innovation</i> , 2015 , 10, 233-253	1.8	22
136	A rational design approach for amino acid supplementation in hepatocyte culture. <i>Biotechnology and Bioengineering</i> , 2009 , 103, 1176-91	4.9	22
135	Development of an adaptive chemistry model considering micromixing effects. <i>Chemical Engineering Science</i> , 2003 , 58, 4537-4555	4.4	22
134	Discrete Element Modeling (DEM) for mixing of cohesive solids in rotating cylinders. <i>Powder Technology</i> , 2018 , 335, 124-136	5.2	22
133	Integrated model of refining and petrochemical plant for enterprise-wide optimization. <i>Computers and Chemical Engineering</i> , 2017 , 97, 194-207	4	21
132	A comparative assessment of efficient uncertainty analysis techniques for environmental fate and transport models: application to the FACT model. <i>Journal of Hydrology</i> , 2005 , 307, 204-218	6	21
131	The Future is Garbage: Repurposing of Food Waste to an Integrated Biorefinery. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 8124-8136	8.3	20
130	Scheduling of Loading and Unloading of Crude Oil in a Refinery with Optimal Mixture Preparation. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 2624-2633	3.9	19
129	A Kriging-Based Approach to MINLP Containing Black-Box Models and Noise. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 6101-6125	3.9	19

128	A review of existing mixing indices in solid-based continuous blending operations. <i>Powder Technology</i> , 2020 , 373, 195-209	5.2	18
127	Scale-up strategy for continuous powder blending process. <i>Powder Technology</i> , 2013 , 235, 55-69	5.2	18
126	Model Independent Parametric Decision Making. <i>Annals of Operations Research</i> , 2004 , 132, 135-155	3.2	18
125	Techno-economic and life cycle analysis of different types of hydrolysis process for the production of p-Xylene. <i>Computers and Chemical Engineering</i> , 2019 , 121, 685-695	4	18
124	Model development and prediction of particle size distribution, density and friability of a comilling operation in a continuous pharmaceutical manufacturing process. <i>International Journal of Pharmaceutics</i> , 2018 , 549, 271-282	6.5	17
123	Improvement of tablet coating uniformity using a quality by design approach. <i>AAPS PharmSciTech</i> , 2012 , 13, 231-46	3.9	17
122	A Decomposition Approach for the Solution of Scheduling Including Process Dynamics of Continuous Processes. <i>Industrial & Engineering Chemistry Research</i> , 2016 , 55, 1266-1280	3.9	16
121	Determination of the Confidence Interval of the Relative Standard Deviation Using Convolution. <i>Journal of Pharmaceutical Innovation</i> , 2013 , 8, 72-82	1.8	16
120	The dynamics of the early inflammatory response in double-hit burn and sepsis animal models. <i>Cytokine</i> , 2011 , 56, 494-502	4	16
119	Computer Aided Design and Analysis of Continuous Pharmaceutical Manufacturing Processes. <i>Computer Aided Chemical Engineering</i> , 2011 , 29, 216-220	0.6	16
118	On the global and efficient solution of stochastic batch plant design problems. <i>Computers and Chemical Engineering</i> , 1997 , 21, 1411-1431	4	16
117	Equation-free, coarse-grained computational optimization using timesteppers. <i>Chemical Engineering Science</i> , 2006 , 61, 779-793	4.4	16
116	Adaptive multiscale solution of dynamical systems in chemical processes using wavelets. <i>Computers and Chemical Engineering</i> , 2003 , 27, 131-142	4	16
115	Optimal operation and control of intensified processes [challenges and opportunities. <i>Current Opinion in Chemical Engineering</i> , 2019 , 25, 82-86	5.4	16
114	Advanced Model Predictive Feedforward/Feedback Control of a Tablet Press. <i>Journal of Pharmaceutical Innovation</i> , 2017 , 12, 110-123	1.8	15
113	Constrained optimization of black-box stochastic systems using a novel feasibility enhanced Kriging-based method. <i>Computers and Chemical Engineering</i> , 2018 , 118, 210-223	4	15
112	Capacity expansion planning through augmented Lagrangian optimization and scenario decomposition. <i>AIChE Journal</i> , 2012 , 58, 871-883	3.6	15
111	Flexibility assessment and risk management in supply chains. <i>AIChE Journal</i> , 2015 , 61, 4166-4178	3.6	15

110	Comparison of Biodiesel Performance Based on HCCI Engine Simulation Using Detailed Mechanism with On-the-fly Reduction. <i>Energy & Fuels</i> , 2012 , 26, 976-983	4.1	15
109	Multi-element Flux Analysis for the Incorporation of Detailed Kinetic Mechanisms in Reactive Simulations. <i>Energy & Fuels</i> , 2010 , 24, 309-317	4.1	15
108	Transcriptional and metabolic flux profiling of triadimefon effects on cultured hepatocytes. <i>Toxicology and Applied Pharmacology</i> , 2010 , 248, 165-77	4.6	15
107	Biomass-based chemical production using techno-economic and life cycle analysis. <i>AIChE Journal</i> , 2019 , 65, e16660	3.6	14
106	Investigation on the effect of blade patterns on continuous solid mixing performance. <i>Canadian Journal of Chemical Engineering</i> , 2011 , 89, 969-984	2.3	14
105	A novel and systematic approach to identify the design space of pharmaceutical processes. <i>Computers and Chemical Engineering</i> , 2018 , 115, 309-322	4	14
104	Pathway modeling of microarray data: a case study of pathway activity changes in the testis following in utero exposure to dibutyl phthalate (DBP). <i>Toxicology and Applied Pharmacology</i> , 2013 , 271, 386-94	4.6	13
103	Dynamics of short-term gene expression profiling in liver following thermal injury. <i>Journal of Surgical Research</i> , 2012 , 176, 549-58	2.5	13
102	Similarities and differences between the concepts of operability and flexibility: The steady-state case. <i>AIChE Journal</i> , 2009 , 56, NA-NA	3.6	13
101	Pathway analysis of liver metabolism under stressed condition. <i>Journal of Theoretical Biology</i> , 2011 , 272, 131-40	2.3	13
100	A method for solving the general parametric linear complementarity problem. <i>Annals of Operations Research</i> , 2010 , 181, 485-501	3.2	13
99	Metabolic flux determination in perfused livers by mass balance analysis: effect of fasting. <i>Biotechnology and Bioengineering</i> , 2010 , 107, 825-35	4.9	13
98	Stochastic MINLP optimization using simplicial approximation. <i>Computers and Chemical Engineering</i> , 2007 , 31, 1081-1087	4	13
97	Discrete element modeling for continuous powder feeding operation: Calibration and system analysis. <i>International Journal of Pharmaceutics</i> , 2020 , 585, 119427	6.5	13
96	A framework of hybrid model development with identification of plant-model mismatch. <i>AIChE Journal</i> , 2020 , 66, e16996	3.6	13
95	Hybrid Simulation Based Optimization Framework for Centralized and Decentralized Supply Chains. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 3996-4007	3.9	12
94	Dynamics of hepatic gene expression profile in a rat cecal ligation and puncture model. <i>Journal of Surgical Research</i> , 2012 , 176, 583-600	2.5	12
93	Design space maintenance by online model adaptation in pharmaceutical manufacturing. <i>Computers and Chemical Engineering</i> , 2019 , 127, 254-271	4	11

92	A Novel Surrogate-Based Optimization Method for Black-Box Simulation with Heteroscedastic Noise. <i>Industrial & Engineering Chemistry Research</i> , 2017 , 56, 10720-10732	3.9	11
91	Process flowsheet optimization of chemicals production from biomass derived glucose solutions. <i>Computers and Chemical Engineering</i> , 2017 , 102, 258-267	4	11
90	Modular Design Optimization using Machine Learning-based Flexibility Analysis. <i>Journal of Process Control</i> , 2020 , 90, 18-34	3.9	11
89	Integration of planning, scheduling and control problems using data-driven feasibility analysis and surrogate models. <i>Computers and Chemical Engineering</i> , 2020 , 134, 106714	4	11
88	A Systematic Framework for Data Management and Integration in a Continuous Pharmaceutical Manufacturing Processing Line. <i>Processes</i> , 2018 , 6, 53	2.9	10
87	Data-driven feasibility analysis for the integration of planning and scheduling problems. <i>Optimization and Engineering</i> , 2019 , 20, 1029-1066	2.1	10
86	Effects of amino acid transport limitations on cultured hepatocytes. <i>Biophysical Chemistry</i> , 2010 , 152, 89-98	3.5	10
85	Computational studies using a novel simplicial-approximation based algorithm for MINLP optimization. <i>Computers and Chemical Engineering</i> , 2004 , 28, 1771-1780	4	10
84	A framework for supply chain optimization for modular manufacturing with production feasibility analysis. <i>Computers and Chemical Engineering</i> , 2021 , 145, 107175	4	10
83	Lagrangian decomposition approach to scheduling large-scale refinery operations. <i>Computers and Chemical Engineering</i> , 2015 , 79, 1-29	4	9
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