Marianthi G Ierapetritou

List of Publications by Year in Descending Order

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	Ambient-pressure lignin valorization to high-performance polymers by intensified reductive catalytic deconstruction.. *Science Advances*, **2022**, 8, eabj7523	14.3	4
252	Developing process models of an open-loop integrated system **2022**, 229-250		
251	Integrating tactical planning, operational planning and scheduling using data-driven feasibility analysis. *Computers and Chemical Engineering*, **2022**, 161, 107759	4	0
250	Using residence time distribution in pharmaceutical solid dose manufacturing - A critical review. *International Journal of Pharmaceutics*, **2021**, 610, 121248	6.5	2
249	A novel framework of surrogate-based feasibility analysis for establishing design space of twin-column continuous chromatography. *International Journal of Pharmaceutics*, **2021**, 609, 121161	6.5	1
248	Techno-economic and Life Cycle Analysis of MixAlco Processes for Mixed Alcohol Production from Brown Algae. *Applied Biochemistry and Biotechnology*, **2021**, 193, 2964-2982	3.2	
247	Hybrid multi-zonal compartment modeling for continuous powder blending processes. *International Journal of Pharmaceutics*, **2021**, 602, 120643	6.5	3
246	Modular supply chain optimization considering demand uncertainty to manage risk. *AICHE Journal*, **2021**, 67, e17367	3.6	2
245	Improving Feedability of Highly Adhesive Active Pharmaceutical Ingredients by Silication. *Journal of Pharmaceutical Innovation*, **2021**, 16, 279-292	1.8	4
244	Residence time distribution modelling and in line monitoring of drug concentration in a tablet press feed frame containing dead zones. *International Journal of Pharmaceutics*, **2021**, 592, 120048	6.5	6
243	A framework for supply chain optimization for modular manufacturing with production feasibility analysis. *Computers and Chemical Engineering*, **2021**, 145, 107175	4	10
242	One-step lignocellulose depolymerization and saccharification to high sugar yield and less condensed isolated lignin. *Green Chemistry*, **2021**, 23, 1200-1211	10	8
241	A novel adaptive sampling based methodology for feasible region identification of compute intensive models using artificial neural network. *AICHE Journal*, **2021**, 67, e17095	3.6	2
240	Multi-zonal compartmentalization methodology for surrogate modelling in continuous pharmaceutical manufacturing. *Computer Aided Chemical Engineering*, **2021**, 50, 725-731	0.6	1
239	mAb Production Modeling and Design Space Evaluation Including Glycosylation Process. *Processes*, **2021**, 9, 324	2.9	7
238	Multiobjective Modular Biorefinery Configuration under Uncertainty. *Industrial & Engineering Chemistry Research*, **2021**, 60, 12956-12969	3.9	3
237	Experimental investigation and modelling of tensile strength of pharmaceutical tablets based on shear force applied by feed frame paddles. *International Journal of Pharmaceutics*, **2021**, 606, 120908	6.5	

236	Cost and energy efficient cyclic separation of 5-hydroxymethyl furfural from an aqueous solution. *Green Chemistry*, **2021**, 23, 4008-4023	10	3
235	The Future is Garbage: Repurposing of Food Waste to an Integrated Biorefinery. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 8124-8136	8.3	20
234	A review of existing mixing indices in solid-based continuous blending operations. *Powder Technology*, **2020**, 373, 195-209	5.2	18
233	Modular Design Optimization using Machine Learning-based Flexibility Analysis. *Journal of Process Control*, **2020**, 90, 18-34	3.9	11
232	Integration of planning, scheduling and control problems using data-driven feasibility analysis and surrogate models. *Computers and Chemical Engineering*, **2020**, 134, 106714	4	11
231	110th Anniversary: Integration of Scheduling and Robust Model Predictive Control. *Industrial & Engineering Chemistry Research*, **2020**, 59, 265-280	3.9	3
230	Efficient Data-based Methodology for Model enhancement and Flowsheet analyses for Continuous Pharmaceutical Manufacturing. *Computer Aided Chemical Engineering*, **2020**, 48, 127-132	0.6	2
229	Effect of material properties on the residence time distribution (RTD) of a tablet press feed frame. *International Journal of Pharmaceutics*, **2020**, 591, 119961	6.5	5
228	Discrete element modeling for continuous powder feeding operation: Calibration and system analysis. *International Journal of Pharmaceutics*, **2020**, 585, 119427	6.5	13
227	A framework of hybrid model development with identification of plant-model mismatch. *AICHE Journal*, **2020**, 66, e16996	3.6	13
226	Digital Twins in Pharmaceutical and Biopharmaceutical Manufacturing: A Literature Review. *Processes*, **2020**, 8, 1088	2.9	38
225	Comparison between Different Hybrid Life Cycle Assessment Methodologies: A Review and Case Study of Biomass-based p-Xylene Production. *Industrial & Engineering Chemistry Research*, **2020**, 59, 22313-22329	3.9	3
224	A Computationally Efficient Surrogate-Based Reduction of a Multiscale Comill Process Model. *Journal of Pharmaceutical Innovation*, **2020**, 15, 424-444	1.8	7
223	A discontinuous derivative-free optimization framework for multi-enterprise supply chain. *Optimization Letters*, **2020**, 14, 959-988	1.1	3
222	Comparison between Batch and Continuous Monoclonal Antibody Production and Economic Analysis. *Industrial & Engineering Chemistry Research*, **2019**, 58, 5851-5863	3.9	29
221	Renewable lubricants with tailored molecular architecture. *Science Advances*, **2019**, 5, eaav5487	14.3	30
220	Design space maintenance by online model adaptation in pharmaceutical manufacturing. *Computers and Chemical Engineering*, **2019**, 127, 254-271	4	11
219	Biomass-based chemical production using techno-economic and life cycle analysis. *AICHE Journal*, **2019**, 65, e16660	3.6	14

218	Dynamic Flowsheet Model Development and Sensitivity Analysis of a Continuous Pharmaceutical Tablet Manufacturing Process Using the Wet Granulation Route. *Processes*, **2019**, 7, 234	2.9	28
217	Data-driven feasibility analysis for the integration of planning and scheduling problems. *Optimization and Engineering*, **2019**, 20, 1029-1066	2.1	10
216	Real-time design space description in pharmaceutical manufacturing. *Computer Aided Chemical Engineering*, **2019**, 46, 661-666	0.6	
215	Discrete Element Modeling (DEM) Parametric Study of Feeder Unit in Continuous Pharmaceutical Industry. *Computer Aided Chemical Engineering*, **2019**, 341-346	0.6	5
214	Effect of material properties on the residence time distribution (RTD) characterization of powder blending unit operations. Part II of II: Application of models. *Powder Technology*, **2019**, 344, 525-544	5.2	23
213	Optimal operation and control of intensified processes Challenges and opportunities. *Current Opinion in Chemical Engineering*, **2019**, 25, 82-86	5.4	16
212	Effect of tracer material properties on the residence time distribution (RTD) of continuous powder blending operations. Part I of II: Experimental evaluation. *Powder Technology*, **2019**, 342, 744-763	5.2	33
211	Combined Feedforward/Feedback Control of an Integrated Continuous Granulation Process. *Journal of Pharmaceutical Innovation*, **2019**, 14, 259-285	1.8	7
210	Techno-economic and life cycle analysis of different types of hydrolysis process for the production of p-Xylene. *Computers and Chemical Engineering*, **2019**, 121, 685-695	4	18
209	Economic Analysis of Batch and Continuous Biopharmaceutical Antibody Production: A Review. *Journal of Pharmaceutical Innovation*, **2019**, 14, 1-19	1.8	27
208	Surrogate-based feasibility analysis for black-box stochastic simulations with heteroscedastic noise. *Journal of Global Optimization*, **2018**, 71, 957-985	1.5	5
207	A simulation-based optimization framework for integrating scheduling and model predictive control, and its application to air separation units. *Computers and Chemical Engineering*, **2018**, 113, 139-151	4	47
206	A multiscale DEM-PBM approach for a continuous comilling process using a mechanistically developed breakage kernel. *Chemical Engineering Science*, **2018**, 178, 211-221	4.4	23
205	Modeling the effects of material properties on tablet compaction: A building block for controlling both batch and continuous pharmaceutical manufacturing processes. *International Journal of Pharmaceutics*, **2018**, 543, 274-287	6.5	22
204	Advances in surrogate based modeling, feasibility analysis, and optimization: A review. *Computers and Chemical Engineering*, **2018**, 108, 250-267	4	247
203	Model development and prediction of particle size distribution, density and friability of a comilling operation in a continuous pharmaceutical manufacturing process. *International Journal of Pharmaceutics*, **2018**, 549, 271-282	6.5	17
202	Constrained optimization of black-box stochastic systems using a novel feasibility enhanced Kriging-based method. *Computers and Chemical Engineering*, **2018**, 118, 210-223	4	15
201	A Systematic Framework for Data Management and Integration in a Continuous Pharmaceutical Manufacturing Processing Line. *Processes*, **2018**, 6, 53	2.9	10

200	Using a material property library to find surrogate materials for pharmaceutical process development. *Powder Technology*, **2018**, 339, 659-676	5.2	25
199	Dimensionality reduction in feasibility analysis by latent variable modeling. *Computer Aided Chemical Engineering*, **2018**, 44, 1477-1482	0.6	
198	HPC enabled parallel, multi-scale & mechanistic model for high shear granulation using a coupled DEM-PBM framework. *Computer Aided Chemical Engineering*, **2018**, 44, 1459-1464	0.6	
197	A parallel unidirectional coupled DEM-PBM model for the efficient simulation of computationally intensive particulate process systems. *Computers and Chemical Engineering*, **2018**, 119, 128-142	4	5
196	A Framework for the Development of Integrated and Computationally Feasible Models of Large-Scale Mammalian Cell Bioreactors. *Processes*, **2018**, 6, 82	2.9	3
195	A novel and systematic approach to identify the design space of pharmaceutical processes. *Computers and Chemical Engineering*, **2018**, 115, 309-322	4	14
194	Discrete Element Modeling (DEM) for mixing of cohesive solids in rotating cylinders. *Powder Technology*, **2018**, 335, 124-136	5.2	22
193	A novel feasibility analysis method for black-box processes using a radial basis function adaptive sampling approach. *AICHE Journal*, **2017**, 63, 532-550	3.6	38
192	Process analysis and optimization of continuous pharmaceutical manufacturing using flowsheet models. *Computers and Chemical Engineering*, **2017**, 107, 77-91	4	56
191	Advanced Model Predictive Feedforward/Feedback Control of a Tablet Press. *Journal of Pharmaceutical Innovation*, **2017**, 12, 110-123	1.8	15
190	From process control to supply chain management: An overview of integrated decision making strategies. *Computers and Chemical Engineering*, **2017**, 106, 826-835	4	53
189	Process Intensification for Cellulosic Biorefineries. *ChemSusChem*, **2017**, 10, 2566-2572	8.3	25
188	Integrated modeling to capture the interaction of physiology and fluid dynamics in biopharmaceutical bioreactors. *Computers and Chemical Engineering*, **2017**, 97, 271-282	4	7
187	Surrogate-based Optimization for Pharmaceutical Manufacturing Processes. *Computer Aided Chemical Engineering*, **2017**, 2797-2802	0.6	4
186	A Novel Surrogate-Based Optimization Method for Black-Box Simulation with Heteroscedastic Noise. *Industrial & Engineering Chemistry Research*, **2017**, 56, 10720-10732	3.9	11
185	Methods and Tools for Design Space Identification in Pharmaceutical Development **2017**, 95-123		2
184	Design of an Integrated Continuous Manufacturing System **2017**, 405-446		6
183	Process Simulation and Control for Continuous Pharmaceutical Manufacturing of Solid Drug Products **2017**, 33-105		4

182	Review of the important challenges and opportunities related to modeling of mammalian cell bioreactors. *AICHE Journal*, **2017**, 63, 398-408	3.6	8
181	Process flowsheet optimization of chemicals production from biomass derived glucose solutions. *Computers and Chemical Engineering*, **2017**, 102, 258-267	4	11
180	Integrated model of refining and petrochemical plant for enterprise-wide optimization. *Computers and Chemical Engineering*, **2017**, 97, 194-207	4	21
179	Near infrared spectroscopic calibration models for real time monitoring of powder density. *International Journal of Pharmaceutics*, **2016**, 512, 61-74	6.5	42
178	Integration of scheduling and control under uncertainties: Review and challenges. *Chemical Engineering Research and Design*, **2016**, 116, 98-113	5.5	55
177	A Decomposition Approach for the Solution of Scheduling Including Process Dynamics of Continuous Processes. *Industrial & Engineering Chemistry Research*, **2016**, 55, 1266-1280	3.9	16
176	Production planning optimization of an ethylene plant considering process operation and energy utilization. *Computers and Chemical Engineering*, **2016**, 87, 1-12	4	26
175	Burn trauma disrupts circadian rhythms in rat liver. *International Journal of Burns and Trauma*, **2016**, 6, 12-25	0.4	2
174	A Systematic Framework for the Design and Implementation of Sensing and Control Architecture for a Continuous Pharmaceutical Manufacturing Plant. *Computer Aided Chemical Engineering*, **2016**, 38, 1473-1478	0.6	1
173	Perspectives on the continuous manufacturing of powder-based pharmaceutical processes. *AICHE Journal*, **2016**, 62, 1846-1862	3.6	100
172	Multienterprise supply chain: Simulation and optimization. *AICHE Journal*, **2016**, 62, 3392-3403	3.6	9
171	Feasibility and flexibility analysis of black-box processes Part 1: Surrogate-based feasibility analysis. *Chemical Engineering Science*, **2015**, 137, 986-1004	4.4	29
170	Challenges and opportunities in modeling pharmaceutical manufacturing processes. *Computers and Chemical Engineering*, **2015**, 81, 32-39	4	40
169	Lagrangian decomposition approach to scheduling large-scale refinery operations. *Computers and Chemical Engineering*, **2015**, 79, 1-29	4	9
168	Real time monitoring of powder blend bulk density for coupled feed-forward/feed-back control of a continuous direct compaction tablet manufacturing process. *International Journal of Pharmaceutics*, **2015**, 495, 612-625	6.5	58
167	Plant-Wide Control of a Continuous Tablet Manufacturing for Quality-By-Design Based Pharmaceutical Manufacturing. *Computer Aided Chemical Engineering*, **2015**, 37, 2183-2188	0.6	3
166	Efficient Decomposition Approach for Large-Scale Refinery Scheduling. *Industrial & Engineering Chemistry Research*, **2015**, 54, 9964-9991	3.9	6
165	Feasibility and flexibility analysis of black-box processes part 2: Surrogate-based flexibility analysis. *Chemical Engineering Science*, **2015**, 137, 1005-1013	4.4	25

164	An integrated framework for scheduling and control using fast model predictive control. *AICHE Journal*, **2015**, 61, 3304-3319	3.6	30
163	Flexibility assessment and risk management in supply chains. *AICHE Journal*, **2015**, 61, 4166-4178	3.6	15
162	Phthalic anhydride production from hemicellulose solutions: Technoeconomic analysis and life cycle assessment. *AICHE Journal*, **2015**, 61, 3708-3718	3.6	9
161	A Combined Feed-Forward/Feed-Back Control System for a QbD-Based Continuous Tablet Manufacturing Process. *Processes*, **2015**, 3, 339-356	2.9	34
160	Modeling and Optimization of Continuous Pharmaceutical Manufacturing Processes. *Computer Aided Chemical Engineering*, **2015**, 37, 85-92	0.6	3
159	Integrated Moving Horizon-Based Dynamic Real-Time Optimization and Hybrid MPC-PID Control of a Direct Compaction Continuous Tablet Manufacturing Process. *Journal of Pharmaceutical Innovation*, **2015**, 10, 233-253	1.8	22
158	Life Cycle Assessment of Biobased p-Xylene Production. *Industrial & Engineering Chemistry Research*, **2015**, 54, 2366-2378	3.9	26
157	Closed-Loop Feedback Control of a Continuous Pharmaceutical Tablet Manufacturing Process via Wet Granulation. *Journal of Pharmaceutical Innovation*, **2014**, 9, 16-37	1.8	47
156	Discrete element reduced-order modeling of dynamic particulate systems. *AICHE Journal*, **2014**, 60, 3184-3194	3.6	26
155	Alternative Approaches for p-Xylene Production from Starch: Techno-Economic Analysis. *Industrial & Engineering Chemistry Research*, **2014**, 53, 10688-10699	3.9	46
154	Reactive Flow Simulation Based on the Integration of Automated Mechanism Generation and On-the-Fly Reduction. *Energy & Fuels*, **2014**, 28, 4801-4811	4.1	5
153	Hybrid Simulation Based Optimization Framework for Centralized and Decentralized Supply Chains. *Industrial & Engineering Chemistry Research*, **2014**, 53, 3996-4007	3.9	12
152	Implementation of an advanced hybrid MPC-PID control system using PAT tools into a direct compaction continuous pharmaceutical tablet manufacturing pilot plant. *International Journal of Pharmaceutics*, **2014**, 473, 38-54	6.5	73
151	Integration of scheduling and control for batch processes using multi-parametric model predictive control. *AICHE Journal*, **2014**, 60, 3169-3183	3.6	57
150	Synchronous and asynchronous decision making strategies in supply chains. *Computers and Chemical Engineering*, **2014**, 71, 116-129	4	6
149	A systematic framework for onsite design and implementation of a control system in a continuous tablet manufacturing process. *Computers and Chemical Engineering*, **2014**, 66, 186-200	4	73
148	Derivative-free optimization for expensive constrained problems using a novel expected improvement objective function. *AICHE Journal*, **2014**, 60, 2462-2474	3.6	42
147	Modeling and Optimization of Refinery Operations Considering Uncertainty **2014**, 219-235		

146	An Integrated Approach to Simulation of Pharmaceutical Processes for Solid Drug Manufacture. *Industrial & Engineering Chemistry Research*, **2014**, 53, 5128-5147	3.9	36
145	Aromatics from Lignocellulosic Biomass: Economic Analysis of the Production of p-Xylene from 5-Hydroxymethylfurfural. *AICHE Journal*, **2013**, 59, 2079-2087	3.6	52
144	Surrogate-Based Optimization of Expensive Flowsheet Modeling for Continuous Pharmaceutical Manufacturing. *Journal of Pharmaceutical Innovation*, **2013**, 8, 131-145	1.8	59
143	Improving Continuous Powder Blending Performance Using Projection to Latent Structures Regression. *Journal of Pharmaceutical Innovation*, **2013**, 8, 99-110	1.8	6
142	Reduced-order discrete element method modeling. *Chemical Engineering Science*, **2013**, 95, 12-26	4.4	37
141	Scale-up strategy for continuous powder blending process. *Powder Technology*, **2013**, 235, 55-69	5.2	18
140	Measurement of residence time distribution in a rotary calciner. *AICHE Journal*, **2013**, 59, 4068-4076	3.6	25
139	Flowsheet optimization of an integrated continuous purification-processing pharmaceutical manufacturing operation. *Chemical Engineering Science*, **2013**, 102, 56-66	4.4	39
138	Speed-up Benders decomposition using maximum density cut (MDC) generation. *Annals of Operations Research*, **2013**, 210, 101-123	3.2	22
137	Simulation and economic analysis of 5-hydroxymethylfurfural conversion to 2,5-furandicarboxylic acid. *Computers and Chemical Engineering*, **2013**, 52, 26-34	4	44
136	Use of genomic data in risk assessment case study: II. Evaluation of the dibutyl phthalate toxicogenomic data set. *Toxicology and Applied Pharmacology*, **2013**, 271, 349-62	4.6	32
135	Pathway modeling of microarray data: a case study of pathway activity changes in the testis following in utero exposure to dibutyl phthalate (DBP). *Toxicology and Applied Pharmacology*, **2013**, 271, 386-94	4.6	13
134	Computer-Aided Flowsheet Simulation of a Pharmaceutical Tablet Manufacturing Process Incorporating Wet Granulation. *Journal of Pharmaceutical Innovation*, **2013**, 8, 11-27	1.8	51
133	A hybrid kinetic mechanism reduction scheme based on the on-the-fly reduction and quasi-steady-state approximation. *Chemical Engineering Science*, **2013**, 93, 150-162	4.4	9
132	System-wide hybrid MPC-PID control of a continuous pharmaceutical tablet manufacturing process via direct compaction. *European Journal of Pharmaceutics and Biopharmaceutics*, **2013**, 85, 1164-82	5.7	78
131	Determination of the Confidence Interval of the Relative Standard Deviation Using Convolution. *Journal of Pharmaceutical Innovation*, **2013**, 8, 72-82	1.8	16
130	Supply chain management using an optimization driven simulation approach. *AICHE Journal*, **2013**, 59, 4612-4626	3.6	27
129	Branched-chain amino acid supplementation: impact on signaling and relevance to critical illness. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2013**, 5, 449-460	6.6	37

128	Effect of fasting on the metabolic response of liver to experimental burn injury. *PLoS ONE*, **2013**, 8, e54825	3.7	4
127	Modeling of Particulate Processes for the Continuous Manufacture of Solid-Based Pharmaceutical Dosage Forms. *Processes*, **2013**, 1, 67-127	2.9	64
126	Impact of burn priming on immune and metabolic functions of whole Liver in a rat cecal ligation and puncture model. *International Journal of Burns and Trauma*, **2013**, 3, 55-65	0.4	7
125	Hybrid advanced control of flexible multipurpose continuous tablet manufacturing process via direct compaction. *Computer Aided Chemical Engineering*, **2013**, 32, 757-762	0.6	3
124	A review of the Residence Time Distribution (RTD) applications in solid unit operations. *Powder Technology*, **2012**, 228, 416-423	5.2	138
123	Computational Approaches for Studying the Granular Dynamics of Continuous Blending Processes, 2 Population Balance and Data-Based Methods. *Macromolecular Materials and Engineering*, **2012**, 297, 9-19	3.9	38
122	Periodic section modeling of convective continuous powder mixing processes. *AICHE Journal*, **2012**, 58, 69-78	3.6	27
121	Exploring flux representations of complex kinetics networks. *AICHE Journal*, **2012**, 58, 553-567	3.6	4
120	Capacity expansion planning through augmented Lagrangian optimization and scenario decomposition. *AICHE Journal*, **2012**, 58, 871-883	3.6	15
119	Improvement of tablet coating uniformity using a quality by design approach. *AAPS PharmSciTech*, **2012**, 13, 231-46	3.9	17
118	An engineering study on the enhanced control and operation of continuous manufacturing of pharmaceutical tablets via roller compaction. *International Journal of Pharmaceutics*, **2012**, 438, 307-26	6.5	98
117	Dynamics of short-term gene expression profiling in liver following thermal injury. *Journal of Surgical Research*, **2012**, 176, 549-58	2.5	13
116	Dynamics of hepatic gene expression profile in a rat cecal ligation and puncture model. *Journal of Surgical Research*, **2012**, 176, 583-600	2.5	12
115	Long-term gene expression profile dynamics following cecal ligation and puncture in the rat. *Journal of Surgical Research*, **2012**, 178, 431-42	2.5	6
114	Comparison of Biodiesel Performance Based on HCCI Engine Simulation Using Detailed Mechanism with On-the-fly Reduction. *Energy & Fuels*, **2012**, 26, 976-983	4.1	15
113	Stoichiometry based steady-state hepatic flux analysis: computational and experimental aspects. *Metabolites*, **2012**, 2, 268-91	5.6	5
112	An integrated approach for dynamic flowsheet modeling and sensitivity analysis of a continuous tablet manufacturing process. *Computers and Chemical Engineering*, **2012**, 42, 30-47	4	137
111	Optimal design of sustainable chemical processes and supply chains: A review. *Computers and Chemical Engineering*, **2012**, 44, 94-103	4	84

110	Long-term dynamic profiling of inflammatory mediators in double-hit burn and sepsis animal models. *Cytokine*, **2012**, 58, 307-15	4	8
109	Optimizing continuous powder mixing processes using periodic section modeling. *Chemical Engineering Science*, **2012**, 80, 70-80	4.4	34
108	Hybrid simulation based optimization approach for supply chain management. *Computers and Chemical Engineering*, **2012**, 47, 183-193	4	55
107	Integration of Scheduling and Control with Closed Loop Implementation. *Industrial & Engineering Chemistry Research*, **2012**, 51, 8550-8565	3.9	90
106	Feasibility analysis of black-box processes using an adaptive sampling Kriging-based method. *Computers and Chemical Engineering*, **2012**, 36, 358-368	4	58
105	Integrated production planning and scheduling optimization of multisite, multiproduct process industry. *Computers and Chemical Engineering*, **2012**, 37, 214-226	4	55
104	Analysis of amino acid supplementation effects on hepatocyte cultures using flux balance analysis. *OMICS A Journal of Integrative Biology*, **2011**, 15, 449-60	3.8	8
103	Comparison of the cytokine and chemokine dynamics of the early inflammatory response in models of burn injury and infection. *Cytokine*, **2011**, 55, 362-71	4	31
102	The dynamics of the early inflammatory response in double-hit burn and sepsis animal models. *Cytokine*, **2011**, 56, 494-502	4	16
101	Integrated production planning and scheduling optimization of multi-site, multi-product process industry. *Computer Aided Chemical Engineering*, **2011**, 29, 1015-1019	0.6	1
100	Petroleum Refining Operations: Key Issues, Advances, and Opportunities. *Industrial & Engineering Chemistry Research*, **2011**, 50, 1161-1170	3.9	85
99	Model-Based Control-Loop Performance of a Continuous Direct Compaction Process. *Journal of Pharmaceutical Innovation*, **2011**, 6, 249-263	1.8	41
98	Computational Approaches for Studying the Granular Dynamics of Continuous Blending Processes, 1 DEM Based Methods. *Macromolecular Materials and Engineering*, **2011**, 296, 290-307	3.9	61
97	Characterization of feeder effects on continuous solid mixing using fourier series analysis. *AICHE Journal*, **2011**, 57, 1144-1153	3.6	28
96	Short-term scheduling of a large-scale oil-refinery operations: Incorporating logistics details. *AICHE Journal*, **2011**, 57, 1570-1584	3.6	28
95	Investigation on the effect of blade patterns on continuous solid mixing performance. *Canadian Journal of Chemical Engineering*, **2011**, 89, 969-984	2.3	14
94	Metabolic response of perfused livers to various oxygenation conditions. *Biotechnology and Bioengineering*, **2011**, 108, 2947-57	4.9	9
93	Characterizing continuous powder mixing using residence time distribution. *Chemical Engineering Science*, **2011**, 66, 417-425	4.4	150

92	Sensitivity-Based Product Portfolio and Design Integration. *Industrial & Engineering Chemistry Research*, **2011**, 50, 3919-3927	3.9	1
91	Numerical Investigation of Homogeneous Charge Compression Ignition (HCCI) Combustion with Detailed Chemical Kinetics Using On-the-Fly Reduction. *Energy & Fuels*, **2011**, 25, 3369-3376	4.1	9
90	Dynamic Data-Driven Modeling of Pharmaceutical Processes. *Industrial & Engineering Chemistry Research*, **2011**, 50, 6743-6754	3.9	41
89	Pathway analysis of liver metabolism under stressed condition. *Journal of Theoretical Biology*, **2011**, 272, 131-40	2.3	13
88	Computer Aided Design and Analysis of Continuous Pharmaceutical Manufacturing Processes. *Computer Aided Chemical Engineering*, **2011**, 29, 216-220	0.6	16
87	Feasibility analysis of black-box processes using an adaptive sampling kriging based method. *Computer Aided Chemical Engineering*, **2011**, 29, 432-436	0.6	1
86	Accelerating Benders method using covering cut bundle generation. *International Transactions in Operational Research*, **2010**, 17, 221-237	2.9	71
85	Multi-element Flux Analysis for the Incorporation of Detailed Kinetic Mechanisms in Reactive Simulations. *Energy & Fuels*, **2010**, 24, 309-317	4.1	15
84	Incorporation of Detailed Chemical Mechanisms in Reactive Flow Simulations Using Element-Flux Analysis. *Industrial & Engineering Chemistry Research*, **2010**, 49, 10471-10478	3.9	5
83	Investigation of the effect of impeller rotation rate, powder flow rate, and cohesion on powder flow behavior in a continuous blender using PEPT. *Chemical Engineering Science*, **2010**, 65, 5658-5668	4.4	67
82	A method for solving the general parametric linear complementarity problem. *Annals of Operations Research*, **2010**, 181, 485-501	3.2	13
81	Design Space of Pharmaceutical Processes Using Data-Driven-Based Methods. *Journal of Pharmaceutical Innovation*, **2010**, 5, 119-137	1.8	65
80	Transcriptional and metabolic flux profiling of triadimefon effects on cultured hepatocytes. *Toxicology and Applied Pharmacology*, **2010**, 248, 165-77	4.6	15
79	Predictive modeling of pharmaceutical processes with missing and noisy data. *AICHE Journal*, **2010**, 56, 2860-2872	3.6	27
78	Effects of glucose and insulin on HepG2-C3A cell metabolism. *Biotechnology and Bioengineering*, **2010**, 107, 347-56	4.9	38
77	Metabolic flux determination in perfused livers by mass balance analysis: effect of fasting. *Biotechnology and Bioengineering*, **2010**, 107, 825-35	4.9	13
76	On-the-fly reduction of kinetic mechanisms using element flux analysis. *Chemical Engineering Science*, **2010**, 65, 1173-1184	4.4	45
75	Rolling horizon based planning and scheduling integration with production capacity consideration. *Chemical Engineering Science*, **2010**, 65, 5887-5900	4.4	57

74	Improving benders decomposition using maximum feasible subsystem (MFS) cut generation strategy. *Computers and Chemical Engineering*, **2010**, 34, 1237-1245	4	55
73	Production planning and scheduling integration through augmented Lagrangian optimization. *Computers and Chemical Engineering*, **2010**, 34, 996-1006	4	49
72	Effects of amino acid transport limitations on cultured hepatocytes. *Biophysical Chemistry*, **2010**, 152, 89-98	3.5	10
71	A centroid-based sampling strategy for kriging global modeling and optimization. *AICHE Journal*, **2009**, 56, NA-NA	3.6	3
70	Similarities and differences between the concepts of operability and flexibility: The steady-state case. *AICHE Journal*, **2009**, 56, NA-NA	3.6	13
69	Integration of on-the-fly kinetic reduction with multidimensional CFD. *AICHE Journal*, **2009**, 56, NA-NA	3.6	1
68	A rational design approach for amino acid supplementation in hepatocyte culture. *Biotechnology and Bioengineering*, **2009**, 103, 1176-91	4.9	22
67	A kriging based method for the solution of mixed-integer nonlinear programs containing black-box functions. *Journal of Global Optimization*, **2009**, 43, 191-205	1.5	50
66	A mixed-integer optimization framework for the synthesis and analysis of regulatory networks. *Journal of Global Optimization*, **2009**, 43, 263-276	1.5	9
65	Predictive Modeling for Pharmaceutical Processes Using Kriging and Response Surface. *Journal of Pharmaceutical Innovation*, **2009**, 4, 174-186	1.8	31
64	Effects of rotation rate, mixing angle, and cohesion in two continuous powder mixers□A statistical approach. *Powder Technology*, **2009**, 194, 217-227	5.2	64
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