GÃ¼rkan Sin

List of Publications by Year
in descending order

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261 papers	5,620 citations	81900 39 h-index	118850 62 g-index
265 all docs	265 docs citations	265 times ranked	4470 citing authors

#	Article	IF	Citations
1	Synergistic optimization framework for the process synthesis and design of biorefineries. Frontiers of Chemical Science and Engineering, 2022, 16, 251-273.	4.4	9
2	Model development for the optimization of operational conditions of the pretreatment of wheat straw. Chemical Engineering Journal, 2022, 430, 133106.	12.7	7
3	Conceptual Process Design of an Integrated Xylitol Biorefinery With Value-Added Co-Products. Frontiers in Chemical Engineering, 2022, 4, .	2.7	4
4	Plant-wide assessment of alternative activated sludge configurations for biological nutrient removal under uncertain influent characteristics. Science of the Total Environment, 2022, 822, 153678.	8.0	8
5	Monitoring and Modeling of Creaming in Oil-in-Water Emulsions. Industrial & Engineering Chemistry Research, 2022, 61, 4638-4647.	3.7	4
6	Uncertainty estimation in deep learningâ€based property models: Graph neural networks applied to the critical properties. AICHE Journal, 2022, 68, .	3.6	10
7	MOSKopt: A simulation-based data-driven digital twin optimizer with embedded uncertainty quantification. Computer Aided Chemical Engineering, 2021, 50, 649-654.	0.5	0
8	Data-Driven Control Strategies for the Autonomous Operation of the Pharmaceutical Crystallization Process. Computer Aided Chemical Engineering, 2021, 50, 1271-1276.	0.5	1
9	Integrated Model for Understanding N₂O Emissions from Wastewater Treatment Plants: A Deep Learning Approach. Environmental Science & Technology, 2021, 55, 2143-2151.	10.0	39
10	Comparison of Group-Contribution and Machine Learning-based Property Prediction Models with Uncertainty Quantification. Computer Aided Chemical Engineering, 2021, 50, 755-760.	0.5	5
11	Activated sludge models at the crossroad of artificial intelligenceâ€”A perspective on advancing process modeling. Npj Clean Water, 2021, 4, .	8.0	19
12	Simulation of an Industrial-Scale Reactive Liquidâ€“Liquid Extraction Tower Using Polar PC-SAFT Toward Understanding and Improving the Hydrolysis of Triglycerides. ACS Sustainable Chemistry and Engineering, 2021, 9, 4735-4743.	6.7	3
13	Independent Validation of an In Silico Tool for a Pilot-Scale Pharmaceutical Crystallization Process Development. Processes, 2021, 9, 640.	2.8	0
14	Model-Based Evaluation of a Data-Driven Control Strategy: Application to Ibuprofen Crystallization. Processes, 2021, 9, 653.	2.8	5
15	Dynamic Simulation of Natural Gas Transmission Pipeline Systems through Autoregressive Neural Networks. Industrial & Engineering Chemistry Research, 2021, 60, 9851-9859.	3.7	7
16	Optimal design and operation of an Organic Rankine Cycle (ORC) system driven by solar energy with sensible thermal energy storage. Energy Conversion and Management, 2021, 244, 114494.	9.2	76
17	Towards Digitalization in Bio-Manufacturing Operations: A Survey on Application of Big Data and Digital Twin Concepts in Denmark. Frontiers in Chemical Engineering, 2021, 3, .	2.7	16
18	Benchmarking of Surrogate Models for the Conceptual Process Design of Biorefineries. Computer Aided Chemical Engineering, 2021, 50, 475-480.	0.5	3

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19	Comprehensive development, uncertainty and sensitivity analysis of a model for the hydrolysis of rapeseed oil. Computers and Chemical Engineering, 2020, 133, 106631.	3.8	5
20	Covariance-Based Uncertainty Analysis of Reference Equations of State. Journal of Chemical & Engineering Data, 2020, 65, 503-522.	1.9	4
21	Development of an integrated network for waste-to-energy and central utility systems considering air pollutant emissions pinch analysis. Journal of Cleaner Production, 2020, 252, 119746.	9.3	14
22	Effect of Selective Size Extraction of Microalgae from a Photobioreactor. Computer Aided Chemical Engineering, 2020, , 331-336.	0.5	1
23	Development and Application of Simulation-based Methods for Engineering Optimization Under Uncertainty. Computer Aided Chemical Engineering, 2020, 48, 451-456.	0.5	3
24	Robust Monitoring of Lactic Acid Bacteria with Sequential Monte Carlo. Computer Aided Chemical Engineering, 2020, 48, 1615-1620.	0.5	0
25	Surrogate Modelling Based Uncertainty and Sensitivity Analysis for the Downstream Process Design of a Xylitol Biorefinery. Computer Aided Chemical Engineering, 2020, , 1663-1668.	0.5	3
26	An integrated framework for plant data-driven process modeling using deep-learning with Monte-Carlo simulations. Computers and Chemical Engineering, 2020, 143, 107071.	3.8	20
27	Stochastic simulation-based superstructure optimization framework for process synthesis and design under uncertainty. Computers and Chemical Engineering, 2020, 143, 107118.	3.8	15
28	Identification of behavioural model input data sets for WWTP uncertainty analysis. Water Science and Technology, 2020, 81, 1558-1568.	2.5	5
29	Comprehensive evaluation of a data driven control strategy: Experimental application to a pharmaceutical crystallization process. Chemical Engineering Research and Design, 2020, 163, 248-261.	5.6	20
30	Unravelling the environmental and economic impacts of innovative technologies for the enhancement of biogas production and sludge management in wastewater systems. Journal of Environmental Management, 2020, 270, 110965.	7.8	14
31	Assessment of the fate of organic micropollutants in novel wastewater treatment plant configurations through an empirical mechanistic model. Science of the Total Environment, 2020, 716, 137079.	8.0	4
32	A process synthesis tool for WWTP â€“ An application to design sustainable energy recovery facilities. Chemical Engineering Research and Design, 2020, 156, 353-370.	5.6	11
33	Modeling of Polyhydroxyalkanoate Synthesis from Biogas by Methylocystis hirsuta. ACS Sustainable Chemistry and Engineering, 2020, 8, 3906-3912.	6.7	12
34	Comprehensive sensitivity analysis and process risk assessment of large scale pharmaceutical crystallization processes. Computers and Chemical Engineering, 2020, 135, 106746.	3.8	11
35	Dynamic model validation and advanced polymer control for rotating belt filtration as primary treatment of domestic wastewaters. Chemical Engineering Science, 2020, 217, 115510.	3.8	8
36	Editorial: Applications of Monte Carlo Method in Chemical, Biochemical and Environmental Engineering. Frontiers in Energy Research, 2020, 8, .	2.3	9

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37	Design of control framework based on deep reinforcement learning and Monte-Carlo sampling in downstream separation. Computers and Chemical Engineering, 2020, 140, 106910.	3.8	21
38	Computer-aided molecular product-process design under property uncertainties â€“ A Monte Carlo based optimization strategy. Computers and Chemical Engineering, 2019, 122, 247-257.	3.8	12
39	A compartment model for risk-based monitoring of lactic acid bacteria cultivations. Biochemical Engineering Journal, 2019, 151, 107293.	3.6	14
40	Impact of granule size distribution on nitrous oxide production in autotrophic nitrogen removal granular reactor. Science of the Total Environment, 2019, 689, 700-708.	8.0	16
41	Assessment of Full-Scale N₂O Emission Characteristics and Testing of Control Concepts in an Activated Sludge Wastewater Treatment Plant with Alternating Aerobic and Anoxic Phases. Environmental Science & Technology, 2019, 53, 12485-12494.	10.0	32
42	A Modular Modelling Environment for Computer-Aided Process Design. Computer Aided Chemical Engineering, 2019, 47, 23-28.	0.5	0
43	Scale-up Modeling of a Pharmaceutical Antisolvent Crystallization via a Hybrid Method of Computational Fluid Dynamics and Compartmental Modeling. Computer Aided Chemical Engineering, 2019, 46, 709-714.	0.5	3
44	Towards development of a decision support tool for conceptual design of wastewater treatment plants using stochastic simulation optimization. Computer Aided Chemical Engineering, 2019, 46, 325-330.	0.5	3
45	Uncertainty in the prediction of the thermophysical behavior of new halogenated working fluids. Fluid Phase Equilibria, 2019, 485, 220-233.	2.5	7
46	Nitrous oxide production in autotrophic nitrogen removal granular sludge: A modeling study. Biotechnology and Bioengineering, 2019, 116, 1280-1291.	3.3	32
47	Output uncertainty of dynamic growth models: Effect of uncertain parameter estimates on model reliability. Biochemical Engineering Journal, 2019, 150, 107247.	3.6	25
48	Meta-modeling based efficient global sensitivity analysis for wastewater treatment plants â€“ An application to the BSM2 model. Computers and Chemical Engineering, 2019, 127, 233-246.	3.8	50
49	The Monte Carlo driven and machine learning enhanced process simulator. Computers and Chemical Engineering, 2019, 125, 324-338.	3.8	13
50	Predicting the oxidant demand in full-scale drinking water treatment using an artificial neural network: Uncertainty and sensitivity analysis. Chemical Engineering Research and Design, 2019, 125, 317-327.	5.6	24
51	Solubility Prediction of Different Forms of Pharmaceuticals in Single and Mixed Solvents Using Symmetric Electrolyte Nonrandom Two-Liquid Segment Activity Coefficient Model. Industrial & Engineering Chemistry Research, 2019, 58, 4267-4276.	3.7	7
52	Design of smart liquid-liquid extraction columns for downstream separations of biopharmaceuticals using deep Q-learning algorithm. Computer Aided Chemical Engineering, 2019, 46, 271-276.	0.5	1
53	Splitting Triglycerides with a Counter-Current Liquidâ€“Liquid Spray Column: Modeling, Global Sensitivity Analysis, Parameter Estimation and Optimization. Processes, 2019, 7, 881.	2.8	3
54	Nitrite effect on the phosphorus uptake activity of phosphate accumulating organisms (PAOs) in pilot-scale SBR and MBR reactors. Water S A, 2019, 34, 249.	0.4	22

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55	Economic Risk Analysis and Critical Comparison of Biodiesel Production Systems. Biofuel and Biorefinery Technologies, 2019, , 127-148.	0.3	2
56	CFD predicted pH gradients in lactic acid bacteria cultivations. Biotechnology and Bioengineering, 2019, 116, 769-780.	3.3	31
57	Puncture of an import gasoline pipelineâ€"Spray effects may evaporate more fuel than a Buncefield-type tank overfill event. Chemical Engineering Research and Design, 2019, 122, 33-47.	5.6	7
58	Global Uncertainty and Sensitivity Analysis for Robust Design of a Rotary Kiln Process. Computer Aided Chemical Engineering, 2019, 46, 805-810.	0.5	1
59	Morris screening for FMECA of valve failure modes on offshore gas reinjection. Computer Aided Chemical Engineering, 2019, , 1315-1320.	0.5	0
60	Landâ€use planning risk estimates for a chemical industrial park in China â€" A longitudinal study. Process Safety Progress, 2018, 37, 124-133.	1.0	6
61	Multiscale modeling of poly(lactic acid) production: From reaction conditions to rheology of polymer melt. Chemical Engineering Journal, 2018, 336, 361-375.	12.7	19
62	Design and preliminary operation of a hybrid syngas/solar PV/battery power system for off-grid applications: A case study in Thailand. Chemical Engineering Research and Design, 2018, 131, 346-361.	5.6	25
63	A probabilistic model-based soft sensor to monitor lactic acid bacteria fermentations. Biochemical Engineering Journal, 2018, 135, 49-60.	3.6	26
64	Organic carbon recovery modeling for a rotating belt filter and its impact assessment on a plant-wide scale. Chemical Engineering Journal, 2018, 334, 1965-1976.	12.7	27
65	Property Prediction of Pharmaceuticals for Designing of Downstream Separation Processes. Computer Aided Chemical Engineering, 2018, 43, 287.	0.5	3
66	Systematic framework development for the construction of surrogate models for wastewater treatment plants. Computer Aided Chemical Engineering, 2018, 44, 1909-1914.	0.5	5
67	From property uncertainties to process simulation uncertainties â€" Monte Carlo methods in SimSci PRO/II process simulator. Computer Aided Chemical Engineering, 2018, , 1489-1494.	0.5	5
68	Prediction of Environmental Properties Using a Hybrid Group Contribution Approach. Computer Aided Chemical Engineering, 2018, , 1723-1728.	0.5	2
69	Superstructure Optimization of Oleochemical Processes with Surrogate Models. Computer Aided Chemical Engineering, 2018, , 277-282.	0.5	8
70	Implementation of a Radial Basis Function control strategy for the crystallization of Ibuprofen under uncertainty. Computer Aided Chemical Engineering, 2018, 44, 565-570.	0.5	3
71	Reverse Engineering of Working Fluid Selection for Industrial Heat Pump Based on Monte Carlo Sampling and Uncertainty Analysis. Industrial & Engineering Chemistry Research, 2018, 57, 13463-13477.	3.7	12
72	Dynamic Plantwide Modeling, Uncertainty, and Sensitivity Analysis of a Pharmaceutical Upstream Synthesis: Ibuprofen Case Study. Industrial & Engineering Chemistry Research, 2018, 57, 10026-10037.	3.7	19

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73	A water treatment case study for quantifying model performance with multilevel flow modeling. Nuclear Engineering and Technology, 2018, 50, 532-541.	2.3	5
74	Process Synthesis, Design, and Control of Wastewater Treatment Plants. , 2018, , .		1
75	Modeling for Process Risk Assessment in Industrial Bioprocesses. , 2018, , .		1
76	Model-based process development for a continuous lactic acid bacteria fermentation. Computer Aided Chemical Engineering, 2018, 43, 1601-1606.	0.5	4
77	Scale-up Modeling of a Pharmaceutical Crystallization Process via Compartmentalization Approach. Computer Aided Chemical Engineering, 2018, 44, 181-186.	0.5	11
78	Controlling sewer systems â€“ a critical review based on systems in three EU cities. Urban Water Journal, 2017, 14, 435-442.	2.1	29
79	Uncertainty assessment of equations of state with application to an organic Rankine cycle. Molecular Physics, 2017, 115, 1225-1244.	1.7	24
80	Understanding N 2 O formation mechanisms through sensitivity analyses using a plant-wide benchmark simulation model. Chemical Engineering Journal, 2017, 317, 935-951.	12.7	29
81	A novel modelâ€based control strategy for aerobic filamentous fungal fedâ€batch fermentation processes. Biotechnology and Bioengineering, 2017, 114, 1459-1468.	3.3	16
82	A review of control strategies for manipulating the feed rate in fed-batch fermentation processes. Journal of Biotechnology, 2017, 245, 34-46.	3.8	136
83	Model-based plantwide optimization of large scale lignocellulosic bioethanol plants. Biochemical Engineering Journal, 2017, 124, 13-25.	3.6	9
84	Supply Chain Optimization of Integrated Glycerol Biorefinery: GlyThink Model Development and Application. Industrial & Engineering Chemistry Research, 2017, 56, 6711-6727.	3.7	13
85	Biorefinery Sustainability Analysis. Lecture Notes in Energy, 2017, , 161-200.	0.3	2
86	Mechanistic Fermentation Models for Process Design, Monitoring, and Control. Trends in Biotechnology, 2017, 35, 914-924.	9.3	71
87	Calibration of the comprehensive NDHA-N2O dynamics model for nitrifier-enriched biomass using targeted respirometric assays. Water Research, 2017, 126, 29-39.	11.3	12
88	Optimal Design and Planning of Glycerol-Based Biorefinery Supply Chains under Uncertainty. Industrial & Engineering Chemistry Research, 2017, 56, 11870-11893.	3.7	18
89	A novel fuzzy-logic control strategy minimizing N2O emissions. Water Research, 2017, 123, 479-494.	11.3	28
90	Application of a mechanistic model as a tool for onâ€line monitoring of pilot scale filamentous fungal fermentation processesâ€”The importance of evaporation effects. Biotechnology and Bioengineering, 2017, 114, 589-599.	3.3	15

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91	Uncertainty and Sensitivity Analysis for an Ibuprofen Synthesis Model Based on Hoechst Path. Computer Aided Chemical Engineering, 2017, 40, 163-168.	0.5	1
92	A Consistent Methodology Based Parameter Estimation for a Lactic Acid Bacteria Fermentation Model. Computer Aided Chemical Engineering, 2017, 40, 2221-2226.	0.5	1
93	Uncertainty & sensitivity analysis of economic assessment of lactic acid production from crude glycerol â€“ impact of price correlations. Computer Aided Chemical Engineering, 2017, , 2911-2916.	0.5	0
94	Techno-economic analysis of resource recovery technologies for wastewater treatment plants. Computer Aided Chemical Engineering, 2017, 40, 1945-1950.	0.5	3
95	Powder stickiness in milk drying: uncertainty and sensitivity analysis for process understanding. Computer Aided Chemical Engineering, 2017, , 2743-2748.	0.5	1
96	Methodology for Plantwide Design and Optimization of Wastewater Treatment Plants. Computer Aided Chemical Engineering, 2017, 40, 859-864.	0.5	0
97	Multi-scale Modeling Approach for Design and Optimization of Oleochemical Processes. Computer Aided Chemical Engineering, 2017, 40, 1885-1890.	0.5	0
98	A simplified kinetic and mass transfer modelling of the thermal hydrolysis of vegetable oils. Computer Aided Chemical Engineering, 2017, 40, 1177-1182.	0.5	1
99	Monte Carlo Based Framework to Support HAZOP Study. Computer Aided Chemical Engineering, 2017, 40, 2233-2238.	0.5	6
100	Using MFM methodology to generate and define major accident scenarios for quantitative risk assessment studies. Computer Aided Chemical Engineering, 2017, 40, 589-594.	0.5	0
101	Data Validation and Modelling of Thermodynamic Properties of Systems with Active Pharmaceutical Ingredients (APIs) in Complex Media for Skin Absorption Processes. Computer Aided Chemical Engineering, 2017, 40, 247-252.	0.5	1
102	Computational chemical product design problems under property uncertainties. Computer Aided Chemical Engineering, 2017, , 973-978.	0.5	2
103	An Empirical Model for Carbon Recovery in a Rotating Belt Filter and Its Application in the Frame of Plantwide Evaluation. Lecture Notes in Civil Engineering, 2017, , 30-36.	0.4	1
104	Superstructure-based optimization tool for plant design and retrofitting. , 2017, , 581-598.		0
105	Synthesis of preliminary system designs for offshore oil and gas production. Computer Aided Chemical Engineering, 2016, , 1419-1424.	0.5	1
106	Global sensitivity analysis of computer-aided molecular design problem for the development of novel working fluids for power cycles. Computer Aided Chemical Engineering, 2016, 38, 283-288.	0.5	6
107	Mechanistic Models for Process Development and Optimization of Fed-batch Fermentation Systems. Computer Aided Chemical Engineering, 2016, , 1311-1316.	0.5	1
108	Economic risk-based analysis: Effect of technical and market price uncertainties on the production of glycerol-based isobutanol. Computer Aided Chemical Engineering, 2016, 38, 319-324.	0.5	1

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109	Group-contribution based property estimation and uncertainty analysis for flammability-related properties. Journal of Hazardous Materials, 2016, 318, 783-793.	12.4	36
110	Functional unfold principal component regression methodology for analysis of industrial batch process data. AICHE Journal, 2016, 62, 1986-1994.	3.6	13
111	A methodological approach to the design of optimising control strategies for sewer systems. Environmental Modelling and Software, 2016, 83, 103-115.	4.5	20
112	Economic Risk Assessment of Early Stage Designs for Glycerol Valorization in Biorefinery Concepts. Industrial & Engineering Chemistry Research, 2016, 55, 6801-6814.	3.7	37
113	Control of wastewater N2O emissions by balancing the microbial communities using a fuzzy-logic approach. IFAC-PapersOnLine, 2016, 49, 1157-1162.	0.9	24
114	Assessing the environmental sustainability of early stage design for bioprocesses under uncertainties: An analysis of glycerol bioconversion. Journal of Cleaner Production, 2016, 139, 1245-1260.	9.3	35
115	An integrated knowledge-based and optimization tool for the sustainable selection of wastewater treatment process concepts. Environmental Modelling and Software, 2016, 84, 177-192.	4.5	25
116	Systematic design of membership functions for fuzzy-logic control: A case study on one-stage partial nitritation/anammox treatment systems. Water Research, 2016, 102, 346-361.	11.3	12
117	Modeling a production scale milk drying process: parameter estimation, uncertainty and sensitivity analysis. Chemical Engineering Science, 2016, 152, 301-310.	3.8	12
118	Working fluid selection for organic Rankine cycles â€“ Impact of uncertainty of fluid properties. Energy, 2016, 109, 987-997.	8.8	52
119	A framework for techno-economic & environmental sustainability analysis by risk assessment for conceptual process evaluation. Biochemical Engineering Journal, 2016, 116, 146-156.	3.6	34
120	Economic risk analysis and critical comparison of optimal biorefinery concepts. Biofuels, Bioproducts and Biorefining, 2016, 10, 435-445.	3.7	33
121	Uncertainty analysis of the CPA and a quadrupolar CPA equation of state â€“ With emphasis on CO2. Fluid Phase Equilibria, 2016, 414, 29-47.	2.5	12
122	Systematic design of an optimal control system for the SHARON-Anammox process. Journal of Process Control, 2016, 39, 1-10.	3.3	21
123	A Comprehensive Methodology for Development, Parameter Estimation, and Uncertainty Analysis of Group Contribution Based Property Modelsâ€”An Application to the Heat of Combustion. Journal of Chemical & Engineering Data, 2016, 61, 602-613.	1.9	57
124	Optimal WWTP process selection for treatment of domestic wastewater â€“ A realistic full-scale retrofitting study. Chemical Engineering Journal, 2016, 286, 447-458.	12.7	40
125	Dynamic modeling and validation of a biomass hydrothermal pretreatment processâ€”a demonstration scale study. AICHE Journal, 2015, 61, 4235-4250.	3.6	17
126	Validation of a functional model for integration of safety into process system design. Computer Aided Chemical Engineering, 2015, 37, 293-298.	0.5	8

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127	Development of Computer Aided Modelling Templates for Model Re-use in Chemical and Biochemical Process and Product Design: Import and export of models. Computer Aided Chemical Engineering, 2015, , 953-958.	0.5	2
128	Optimization-based methodology for wastewater treatment plant synthesis â€“ a full scale retrofitting case study. Computer Aided Chemical Engineering, 2015, , 1241-1246.	0.5	1
129	Extending the benchmark simulation model nÂ°2 with processes for nitrous oxide production and side-stream nitrogen removal. Computer Aided Chemical Engineering, 2015, 37, 2477-2482.	0.5	6
130	Outlier treatment for improving parameter estimation of group contribution based models for upper flammability limit. Computer Aided Chemical Engineering, 2015, , 503-508.	0.5	3
131	Aeration control by monitoring the microbiological activity using fuzzy logic diagnosis and control. Application to a complete autotrophic nitrogen removal reactor. Journal of Process Control, 2015, 30, 22-33.	3.3	18
132	Methods and tools for sustainable chemical process design. , 2015, , 277-321.		3
133	Optimal Design of Algae Biorefinery Processing Networks for the production of Protein, Ethanol and Biodiesel. Computer Aided Chemical Engineering, 2015, , 1151-1156.	0.5	8
134	A comprehensive sensitivity and uncertainty analysis of a milk drying process. Computer Aided Chemical Engineering, 2015, , 2225-2230.	0.5	2
135	Multivariate Analysis of Industrial Scale Fermentation Data. Computer Aided Chemical Engineering, 2015, 37, 1667-1672.	0.5	2
136	Computer-aided modelling template: Concept and application. Computers and Chemical Engineering, 2015, 83, 232-247.	3.8	23
137	Sustainable Process Design under uncertainty analysis: targeting environmental indicators. Computer Aided Chemical Engineering, 2015, 37, 2579-2584.	0.5	7
138	A generic methodology for the optimisation of sewer systems using stochastic programming and self-optimizing control. Journal of Environmental Management, 2015, 155, 193-203.	7.8	11
139	Upgrading of lignocellulosic biorefinery to value-added chemicals: Sustainability and economics of bioethanol-derivatives. Biomass and Bioenergy, 2015, 75, 282-300.	5.7	38
140	Regulatory control analysis and design for sewer systems. Environmental Modelling and Software, 2015, 66, 153-166.	4.5	14
141	A Framework for Sustainable Design of Algal Biorefineries: Economic Aspects and Life Cycle Analysis. , 2015, , 511-535.		3
142	A mathematical programming framework for early stage design of wastewater treatment plants. Environmental Modelling and Software, 2015, 64, 164-176.	4.5	29
143	Systematic network synthesis and design: Problem formulation, superstructure generation, data management and solution. Computers and Chemical Engineering, 2015, 72, 68-86.	3.8	40
144	A novel control strategy for single-stage autotrophic nitrogen removal in SBR. Chemical Engineering Journal, 2015, 260, 64-73.	12.7	11

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145	A Framework for the Modelling of Biphasic Reacting Systems. Computer Aided Chemical Engineering, 2014, 34, 249-254.	0.5	6
146	A computer-aided framework for development, identification and management of physiologically-based pharmacokinetic models. Computers and Chemical Engineering, 2014, 71, 677-698.	3.8	19
147	Superstructure Development and Optimization under Uncertainty for Design and Retrofit of Municipal Wastewater Treatment Plants. Computer Aided Chemical Engineering, 2014, , 37-42.	0.5	5
148	Toward a Computer-Aided Synthesis and Design of Biorefinery Networks: Data Collection and Management Using a Generic Modeling Approach. ACS Sustainable Chemistry and Engineering, 2014, 2, 19-29.	6.7	20
149	A Dynamic Model for Cellulosic Biomass Hydrolysis: a Comprehensive Analysis and Validation of Hydrolysis and Product Inhibition Mechanisms. Applied Biochemistry and Biotechnology, 2014, 172, 2815-2837.	2.9	28
150	Development of novel control strategies for single-stage autotrophic nitrogen removal: A process oriented approach. Computers and Chemical Engineering, 2014, 66, 71-81.	3.8	13
151	Industrial Process Water Treatment and Reuse: A Framework for Synthesis and Design. Industrial & Engineering Chemistry Research, 2014, 53, 5160-5171.	3.7	29
152	Influence of selecting secondary settling tank sub-models on the calibration of WWTP models â€“ A global sensitivity analysis using BSM2. Chemical Engineering Journal, 2014, 241, 28-34.	12.7	23
153	An integrated qualitative and quantitative modeling framework for computerâ€assisted HAZOP studies. AICHE Journal, 2014, 60, 4150-4173.	3.6	20
154	Effect of Market Price Uncertainties on the Design of Optimal Biorefinery Systemsâ€”A Systematic Approach. Industrial & Engineering Chemistry Research, 2014, 53, 6021-6032.	3.7	44
155	Significance of settling model structures and parameter subsets in modelling WWTPs under wet-weather flow and filamentous bulking conditions. Water Research, 2014, 63, 209-221.	11.3	15
156	Uncertainty Analysis in Raw Material and Utility Cost of Biorefinery Synthesis and Design. Computer Aided Chemical Engineering, 2014, , 49-54.	0.5	2
157	Hazard identification by extended multilevel flow modelling with function roles. International Journal of Process Systems Engineering, 2014, 2, 203.	0.2	3
158	Financial Risk Analysis in the Synthesis and Design of Processing Networks. Computer Aided Chemical Engineering, 2014, 33, 1-6.	0.5	2
159	Computer-Aided Template for Model Reuse, Development and Maintenance. Computer Aided Chemical Engineering, 2014, , 817-822.	0.5	6
160	Application of the Generic Modelling Template Approach to Unsaturated Fatty Acid Oxidation and Crystallization Systems. Computer Aided Chemical Engineering, 2014, , 309-314.	0.5	0
161	Introducing uncertainty analysis of nucleation and crystal growth models in Process Analytical Technology (PAT) system design of crystallization processes. European Journal of Pharmaceutics and Biopharmaceutics, 2013, 85, 911-929.	4.3	8
162	Hazard Identification of the Offshore Three-Phase Separation Process Based on Multilevel Flow Modeling and HAZOP. Lecture Notes in Computer Science, 2013, , 421-430.	1.3	2

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163	Use of continuous lactose fermentation for ethanol production by Kluveromyces marxianus for verification and extension of a biochemically structured model. Bioresource Technology, 2013, 130, 703-709.	9.6	8
164	Dynamic modeling and validation of a lignocellulosic enzymatic hydrolysis process â€“ A demonstration scale study. Bioresource Technology, 2013, 150, 393-403.	9.6	18
165	A systematic framework for enterprise-wide optimization: Synthesis and design of processing networks under uncertainty. Computers and Chemical Engineering, 2013, 59, 47-62.	3.8	40
166	First principles pharmacokinetic modeling: A quantitative study on Cyclosporin. Computers and Chemical Engineering, 2013, 54, 97-110.	3.8	12
167	Control assessment for heat integrated systems. An industrial case study for ethanol recovery. Chemical Engineering and Processing: Process Intensification, 2013, 67, 60-70.	3.6	6
168	A systematic framework for design of process monitoring and control (PAT) systems for crystallization processes. Computers and Chemical Engineering, 2013, 54, 8-23.	3.8	15
169	A method to estimate the enthalpy of formation of organic compounds with chemical accuracy. Fluid Phase Equilibria, 2013, 348, 23-32.	2.5	46
170	An operational protocol for facilitating start-up of single-stage autotrophic nitrogen-removing reactors based on process stoichiometry. Water Science and Technology, 2013, 68, 514-521.	2.5	17
171	pH variation and influence in an autotrophic nitrogen removing biofilm system using an efficient numerical solution strategy. Water Science and Technology, 2013, 67, 2608-2615.	2.5	8
172	Modelling and L<inf>1</inf> adaptive control of pH in bioethanol enzymatic process. , 2013, , .		5
173	Calibration and validation of a model describing complete autotrophic nitrogen removal in a granular <scp>SBR</scp> system. Journal of Chemical Technology and Biotechnology, 2013, 88, 2007-2015.	3.2	12
174	Modelling and ℒ<inf>1</inf> adaptive control of temperature in biomass pretreatment. , 2013, , .		2
175	Self-optimising control of sewer systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 708-712.	0.4	0
176	A fuzzy-logic based diagnosis and control of a reactor performing complete autotrophic nitrogen removal. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 199-204.	0.4	0
177	Synthesis and design of optimal biorefinery using an expanded network with thermochemical and biochemical biomass conversion platforms. Computer Aided Chemical Engineering, 2013, 32, 985-990.	0.5	4
178	Computer-aided modeling framework â€“ a generic modeling template for catalytic membrane fixed bed reactors. Computer Aided Chemical Engineering, 2013, 32, 775-780.	0.5	4
179	Design of a Generic and Flexible Data Structure for Efficient Formulation of Large Scale Network Problems. Computer Aided Chemical Engineering, 2013, , 661-666.	0.5	5
180	Control of a Biological Nitrogen Removal Process in an Intensified Single Reactor Configuration. Computer Aided Chemical Engineering, 2013, 32, 769-774.	0.5	1

#	Article	IF	Citations
181	A simulation based engineering method to support HAZOP studies. Computer Aided Chemical Engineering, 2012, , 1271-1275.	0.5	11
182	A systematic methodology for controller tuning in wastewater treatment plants. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 828-833.	0.4	0
183	The Solvent Selection framework. Computer Aided Chemical Engineering, 2012, 30, 762-766.	0.5	14
184	Estimation of Environment-Related Properties of Chemicals for Design of Sustainable Processes: Development of Group-Contribution⁺ (GC⁺) Property Models and Uncertainty Analysis. Journal of Chemical Information and Modeling, 2012, 52, 2823-2839.	5.4	100
185	A framework for model-based optimization of bioprocesses under uncertainty: Lignocellulosic ethanol production case. Computers and Chemical Engineering, 2012, 42, 115-129.	3.8	53
186	Applying Mechanistic Models in Bioprocess Development. Advances in Biochemical Engineering/Biotechnology, 2012, 132, 137-166.	1.1	11
187	Sensitivity analysis of autotrophic N removal by a granule based bioreactor: Influence of mass transfer versus microbial kinetics. Bioresource Technology, 2012, 123, 230-241.	9.6	51
188	Experiences on dynamic simulation software in chemical engineering education. Education for Chemical Engineers, 2012, 7, e153-e162.	4.8	27
189	Stateâ€ofâ€theâ€art and progress in the optimizationâ€based simultaneous design and control for chemical processes. AICHE Journal, 2012, 58, 1640-1659.	3.6	116
190	Systematic Multi-Scale Model Development Strategy for the Fragrance Spraying Process and Transport. Chemical Engineering and Technology, 2012, 35, 1381-1391.	1.5	5
191	Group-contribution+ (GC+) based estimation of properties of pure components: Improved property estimation and uncertainty analysis. Fluid Phase Equilibria, 2012, 321, 25-43.	2.5	249
192	Integrated business and engineering framework for synthesis and design of enterprise-wide processing networks. Computers and Chemical Engineering, 2012, 38, 213-223.	3.8	71
193	Sensitivity of Process Design due to Uncertainties in Property Estimates. Computer Aided Chemical Engineering, 2012, , 200-204.	0.5	2
194	Synthesis and Design of Processing Networks. Computer Aided Chemical Engineering, 2012, , 467-471.	0.5	9
195	Computer-Aided Modeling Framework for Efficient Model Development, Analysis, and Identification: Combustion and Reactor Modeling. Industrial & Engineering Chemistry Research, 2011, 50, 5253-5265.	3.7	24
196	Multienzyme-Catalyzed Processes: Next-Generation Biocatalysis. Organic Process Research and Development, 2011, 15, 203-212.	2.7	149
197	Global sensitivity analysis in wastewater treatment plant model applications: Prioritizing sources of uncertainty. Water Research, 2011, 45, 639-651.	11.3	133
198	Lipid Processing Technology: Building a Multilevel Modeling Network. Computer Aided Chemical Engineering, 2011, 29, 256-260.	0.5	4

#	Article	IF	Citations
199	Integration of Generic Multi-dimensional Model and Operational Policies for Batch Cooling Crystallization. Computer Aided Chemical Engineering, 2011, , 86-90.	0.5	0
200	A framework for model-based optimization of bioprocesses under uncertainty. Computer Aided Chemical Engineering, 2011, , 1455-1459.	0.5	5
201	Methodological Approach for Modeling of Multienzyme in-pot Processes. Computer Aided Chemical Engineering, 2011, 29, 1346-1350.	0.5	0
202	A Mathematical Model for Simultaneous Saccharification and Co-fermentation (SSCF) of C6 and C5 Sugars. Chinese Journal of Chemical Engineering, 2011, 19, 185-191.	3.5	51
203	Modified calibration protocol evaluated in a model-based testing of SBR flexibility. Bioprocess and Biosystems Engineering, 2011, 34, 205-214.	3.4	10
204	Uncertainty and sensitivity analysis of filtration models for non-Fickian transport and hyperexponential deposition. Chemical Engineering Journal, 2011, 168, 635-648.	12.7	11
205	Dynamic model-based evaluation of process configurations for integrated operation of hydrolysis and co-fermentation for bioethanol production from lignocellulose. Bioresource Technology, 2011, 102, 1174-1184.	9.6	45
206	A biochemically structured model for ethanol fermentation by Kluyveromyces marxianus: A batch fermentation and kinetic study. Bioresource Technology, 2011, 102, 7513-7520.	9.6	31
207	A generic multi-dimensional model-based system for batch cooling crystallization processes. Computers and Chemical Engineering, 2011, 35, 828-843.	3.8	24
208	Application of the Morris method for screening the influential parameters of fuzzy controllers applied to wastewater treatment plants. Water Science and Technology, 2011, 63, 2199-2206.	2.5	48
209	Systematic procedure for generating operational policies to achieve target crystal size distribution (CSD) in batch cooling crystallization. , 2011, , .		0
210	Building a multilevel modeling network for lipid processing systems. , 2011, , .		0
211	Multivariate Principal Component Analysis and Case-Based Reasoning for monitoring, fault detection and diagnosis in a WWTP. Water Science and Technology, 2011, 64, 1661-1667.	2.5	17
212	Application of computer-aided multi-scale modelling framework - Aerosol case study. Computer Aided Chemical Engineering, 2011, 29, 16-20.	0.5	7
213	Wastewater Systems. Applied Ecology and Environmental Management, 2011, , 277-322.	0.1	0
214	A computer-aided framework for systematic model development, analysis and identification in innovative product-process engineering. Procedia, Social and Behavioral Sciences, 2010, 2, 7678-7679.	0.5	0
215	Application of mechanistic models to fermentation and biocatalysis for next-generation processes. Trends in Biotechnology, 2010, 28, 346-354.	9.3	111
216	A new extant respirometric assay to estimate intrinsic growth parameters applied to study plasmid metabolic burden. Biotechnology and Bioengineering, 2010, 105, 141-149.	3.3	9

#	Article	IF	Citations
217	A systematic approach for fine-tuning of fuzzy controllers applied to WWTPs. Environmental Modelling and Software, 2010, 25, 670-676.	4.5	20
218	Integration of process design and controller design for chemical processes using model-based methodology. Computers and Chemical Engineering, 2010, 34, 683-699.	3.8	65
219	Assessing reliability of cellulose hydrolysis models to support biofuel process designâ€"Identifiability and uncertainty analysis. Computers and Chemical Engineering, 2010, 34, 1385-1392.	3.8	65
220	A model-based methodology for simultaneous design and control of a bioethanol production process. Computers and Chemical Engineering, 2010, 34, 2043-2061.	3.8	32
221	A computer-aided framework for regression and multi-scale modelling needs in innovative product-process engineering. Computer Aided Chemical Engineering, 2010, , 379-384.	0.5	3
222	Control of Process Operations and Monitoring of Product Qualities through Generic Model-based in Batch Cooling Crystallization. Computer Aided Chemical Engineering, 2010, 28, 613-618.	0.5	6
223	Systematic model development for partial nitrification of landfill leachate in a SBR. Water Science and Technology, 2010, 61, 2199-2210.	2.5	13
224	Improving the Morris method for sensitivity analysis by scaling the elementary effects. Computer Aided Chemical Engineering, 2009, 26, 925-930.	0.5	28
225	Sensitivity Analysis of Non-Linear Dynamic Models: Prioritizing Experimental Research. Computer Aided Chemical Engineering, 2009, 27, 267-272.	0.5	3
226	Uncertainty and sensitivity analysis of control strategies using the benchmark simulation model No1 (BSM1). Water Science and Technology, 2009, 59, 491-499.	2.5	22
227	Good modeling practice for PAT applications: Propagation of input uncertainty and sensitivity analysis. Biotechnology Progress, 2009, 25, 1043-1053.	2.6	180
228	Application of modeling and simulation tools for the evaluation of biocatalytic processes: A future perspective. Biotechnology Progress, 2009, 25, 1529-1538.	2.6	28
229	Introducing mechanistic models in Process Analytical Technology education. Biotechnology Journal, 2009, 4, 593-599.	3.5	9
230	Uncertainty analysis in WWTP model applications: A critical discussion using an example from design. Water Research, 2009, 43, 2894-2906.	11.3	132
231	A Model-Based Methodology for Simultaneous Design and Control of a Bioethanol Production Process. Computer Aided Chemical Engineering, 2009, 27, 237-242.	0.5	0
232	Comparison of the Modeling Approach between Membrane Bioreactor and Conventional Activated Sludge Processes. Water Environment Research, 2009, 81, 432-440.	2.7	25
233	A New Model-Based Methodology for Simultaneous Design and Control of Reaction-Separation System with Recycle. Computer Aided Chemical Engineering, 2009, 26, 839-845.	0.5	2
234	Are Mechanistic Cellulose-hydrolysis Models Reliable for Use in Biofuel Process Design?â€"Identifiability and Sensitivity Analysis. , 2009, , 93-106.		3

#	Article	IF	Citations
235	Determination of Optimal Design and Control Decisions for Reactor-Separator Systems with Recycle. , 2009, , 593-602.		1
236	Dynamic model development and validation for a nitrifying moving bed biofilter: Effect of temperature and influent load on the performance. Process Biochemistry, 2008, 43, 384-397.	3.7	18
237	An efficient approach to automate the manual trial and error calibration of activated sludge models. Biotechnology and Bioengineering, 2008, 100, 516-528.	3.3	72
238	Matrix notation for efficient development of firstâ€principles models within PAT applications: Integrated modeling of antibiotic production with Streptomyces coelicolor. Biotechnology and Bioengineering, 2008, 101, 153-171.	3.3	43
239	Multi-criteria evaluation of wastewater treatment plant control strategies under uncertainty. Water Research, 2008, 42, 4485-4497.	11.3	97
240	Developing a framework for continuous use of models in daily management and operation of WWTPs: a life cycle approach. Water Science and Technology, 2008, 57, 1301-1307.	2.5	0
241	Combining multiway principal component analysis (MPCA) and clustering for efficient data mining of historical data sets of SBR processes. Water Science and Technology, 2008, 57, 1659-1666.	2.5	47
242	Modelling nitrite in wastewater treatment systems: a discussion of different modelling concepts. Water Science and Technology, 2008, 58, 1155-1171.	2.5	123
243	Model-based optimisation of the biological performance of a sidestream MBR. Water Science and Technology, 2007, 56, 135-143.	2.5	14
244	Parameter subset selection for the dynamic calibration of activated sludge models (ASMs): experience versus systems analysis. Water Science and Technology, 2007, 56, 107-115.	2.5	42
245	Extensions to modeling aerobic carbon degradation using combined respirometricâ€“titrimetric measurements in view of activated sludge model calibration. Water Research, 2007, 41, 3345-3358.	11.3	33
246	Influence of Scaling and Unfolding in PCA Based Monitoring of Nutrient Removing Batch Process. , 2007, , 114-119.		3
247	Simple modification to describe the soil water retention curve between saturation and oven dryness. Water Resources Research, 2006, 42, .	4.2	61
248	Reply to: Comment on â€œA critical comparison of systematic calibration protocols for activated sludge models: A SWOT analysisâ€• Water Research, 2006, 40, 2994-2996.	11.3	1
249	INFLUENCE OF SCALING AND UNFOLDING IN PCA BASED MONITORING OF NUTRIENT REMOVING BATCH PROCESS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 114-119.	0.4	1
250	Evaluation of the impacts of model-based operation of SBRs on activated sludge microbial community. Water Science and Technology, 2006, 54, 157-166.	2.5	8
251	Model-based evaluation of an on-line control strategy for SBRs based on OUR and ORP measurements. Water Science and Technology, 2006, 53, 161-169.	2.5	19
252	Application of a model-based optimisation methodology for nutrient removing SBRs leads to falsification of the model. Water Science and Technology, 2006, 53, 95-103.	2.5	31

#	Article	IF	Citations
253	Evolution of an ASM2d-like model structure due to operational changes of an SBR process. Water Science and Technology, 2006, 53, 237-245.	2.5	45
254	The Influence of Experimental Data Quality and Quantity on Parameter Estimation Accuracy. Education for Chemical Engineers, 2006, 1, 139-145.	4.8	34
255	A calibration methodology and model-based systems analysis for SBRs removing nutrients under limited aeration conditions. Journal of Chemical Technology and Biotechnology, 2006, 81, 679-687.	3.2	45
256	MODEL-AIDED METHODOLOGY FOR SYSTEMATIC EXPLORATION OF THE OPTIMAL OPERATIONAL DOMAIN OF NUTRIENT REMOVING SBR SYSTEMS. Proceedings of the Water Environment Federation, 2005, 2005, 2012-2034.	0.0	0
257	A new approach for modelling simultaneous storage and growth processes for activated sludge systems under aerobic conditions. Biotechnology and Bioengineering, 2005, 92, 600-613.	3.3	98
258	A critical comparison of systematic calibration protocols for activated sludge models: A SWOT analysis. Water Research, 2005, 39, 2459-2474.	11.3	108
259	Discussion of â€œAssessing Parameter Identifiability of Activated Sludge Model Number 1â€•by Pedro Afonso and Maria da ConceiÃ§Ã£o Cunha. Journal of Environmental Engineering, ASCE, 2004, 130, 110-112.	1.4	10
260	Transient response of aerobic and anoxic activated sludge activities to sudden substrate concentration changes. Biotechnology and Bioengineering, 2004, 86, 277-290.	3.3	74
261	A COMPREHENSIVE MODEL CALIBRATION PROCEDURE FOR ACTIVATED SLUDGE MODELS. Proceedings of the Water Environment Federation, 2003, 2003, 210-237.	0.0	85