Tao Chen

List of Publications by Year
in descending order

125 papers	2,991 citations	147726 31 h-index	197736 49 g-index
127 all docs	127 docs citations	127 times ranked	2787 citing authors

#	Article	IF	Citations
1	Particle filters for state and parameter estimation in batch processes. Journal of Process Control, 2005, 15, 665-673.	1.7	141
2	Gaussian process regression for multivariate spectroscopic calibration. Chemometrics and Intelligent Laboratory Systems, 2007, 87, 59-71.	1.8	136
3	Bagging for Gaussian process regression. Neurocomputing, 2009, 72, 1605-1610.	3.5	124
4	Surface-functionalized TUD-1 mesoporous molecular sieve supported palladium for solvent-free aerobic oxidation of benzyl alcohol. Journal of Catalysis, 2010, 275, 11-24.	3.1	106
5	Robust probabilistic PCA with missing data and contribution analysis for outlier detection. Computational Statistics and Data Analysis, 2009, 53, 3706-3716.	0.7	100
6	On-line multivariate statistical monitoring of batch processes using Gaussian mixture model. Computers and Chemical Engineering, 2010, 34, 500-507.	2.0	92
7	Optimal dosing of cancer chemotherapy using model predictive control and moving horizon state/parameter estimation. Computer Methods and Programs in Biomedicine, 2012, 108, 973-983.	2.6	81
8	Probabilistic contribution analysis for statistical process monitoring: A missing variable approach. Control Engineering Practice, 2009, 17, 469-477.	3.2	73
9	Quality prediction for polypropylene production process based on CLGPR model. Control Engineering Practice, 2011, 19, 423-432.	3.2	71
10	Probability density estimation via an infinite Gaussian mixture model: application to statistical process monitoring. Journal of the Royal Statistical Society Series C: Applied Statistics, 2006, 55, 699-715.	0.5	70
11	Bayesian linear regression and variable selection for spectroscopic calibration. Analytica Chimica Acta, 2009, 631, 13-21.	2.6	69
12	A branch and bound method for isolation of faulty variables through missing variable analysis. Journal of Process Control, 2010, 20, 1198-1206.	1.7	69
13	Gaussian process regression with multiple response variables. Chemometrics and Intelligent Laboratory Systems, 2015, 142, 159-165.	1.8	69
14	Auto-Switch Gaussian Process Regression-Based Probabilistic Soft Sensors for Industrial Multigrade Processes with Transitions. Industrial & Engineering Chemistry Research, 2015, 54, 5037-5047.	1.8	66
15	Transfer learning for process fault diagnosis: Knowledge transfer from simulation to physical processes. Computers and Chemical Engineering, 2020, 139, 106904.	2.0	57
16	Accent Issues in Large Vocabulary Continuous Speech Recognition. International Journal of Speech Technology, 2004, 7, 141-153.	1.4	56
17	Process fault diagnosis with model- and knowledge-based approaches: Advances and opportunities. Control Engineering Practice, 2020, 105, 104637.	3.2	54
18	Response surface methodology using Gaussian processes: Towards optimizing the trans-stilbene epoxidation over $Co2+â€"NaX$ catalysts. Chemical Engineering Journal, 2010, 156, 423-431.	6.6	53

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19	Gas sensor technologies and mathematical modelling for quality sensing in fruit and vegetable cold chains: A review. Trends in Food Science and Technology, 2021, 110, 483-492.	7.8	53
20	Response surface methodology with prediction uncertainty: A multi-objective optimisation approach. Chemical Engineering Research and Design, 2012, 90, 1235-1244.	2.7	52
21	Automatic counting methods in aquaculture: A review. Journal of the World Aquaculture Society, 2021, 52, 269-283.	1.2	44
22	Multivariate statistical monitoring of two-dimensional dynamic batch processes utilizing non-Gaussian information. Journal of Process Control, 2010, 20, 1188-1197.	1.7	43
23	Reconstruction-based multivariate contribution analysis for fault isolation: A branch and bound approach. Journal of Process Control, 2012, 22, 1228-1236.	1.7	42
24	Bayesian migration of Gaussian process regression for rapid process modeling and optimization. Chemical Engineering Journal, 2011, 166, 1095-1103.	6.6	40
25	Mass transfer studies in shallow bubble column reactors. Chemical Engineering and Processing: Process Intensification, 2012, 62, 18-25.	1.8	38
26	Efficient meta-modelling of complex process simulations with time–space-dependent outputs. Computers and Chemical Engineering, 2011, 35, 502-509.	2.0	36
27	Dynamic data rectification using particle filters. Computers and Chemical Engineering, 2008, 32, 451-462.	2.0	35
28	On reducing false alarms in multivariate statistical process control. Chemical Engineering Research and Design, 2010, 88, 430-436.	2.7	35
29	Bagging for robust non-linear multivariate calibration of spectroscopy. Chemometrics and Intelligent Laboratory Systems, 2011, 105, 1-6.	1.8	35
30	A comparison of the in vitro permeation of niacinamide in mammalian skin and in the Parallel Artificial Membrane Permeation Assay (PAMPA) model. International Journal of Pharmaceutics, 2019, 556, 142-149.	2.6	35
31	Bayesian variable selection for Gaussian process regression: Application to chemometric calibration of spectrometers. Neurocomputing, 2010, 73, 2718-2726.	3.5	34
32	Nonlinear process monitoring and fault isolation using extended maximum variance unfolding. Journal of Process Control, 2014, 24, 880-891.	1.7	34
33	The impact of temperature variations on spectroscopic calibration modelling: a comparative study. Journal of Chemometrics, 2007, 21, 198-207.	0.7	30
34	Development of a Two-Dimensional Model for Predicting Transdermal Permeation with the Follicular Pathway: Demonstration with a Caffeine Study. Pharmaceutical Research, 2017, 34, 2036-2048.	1.7	30
35	QSPR predictions of heat of fusion of organic compounds using Bayesian regularized artificial neural networks. Chemometrics and Intelligent Laboratory Systems, 2010, 104, 260-264.	1.8	27
36	Root cause analysis in multivariate statistical process monitoring: Integrating reconstruction-based multivariate contribution analysis with fuzzy-signed directed graphs. Computers and Chemical Engineering, 2014, 64, 167-177.	2.0	27

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37	Meta-modelling in chemical process system engineering. Journal of the Taiwan Institute of Chemical Engineers, 2017, 73, 135-145.	2.7	27
38	In Silico Modelling of Transdermal and Systemic Kinetics of Topically Applied Solutes: Model Development and Initial Validation for Transdermal Nicotine. Pharmaceutical Research, 2016, 33, 1602-1614.	1.7	26
39	Refinery scheduling with varying crude: A deep belief network classification and multimodel approach. AICHE Journal, 2014, 60, 2525-2532.	1.8	25
40	Multivariate Calibration of Near Infrared Spectroscopy in the Presence of Light Scattering Effect: A Comparative Study. Analytical Letters, 2011, 44, 824-836.	1.0	24
41	Patient-reported Outcome Measures in Radiotherapy: Clinical Advances and Research Opportunities in Measurement for Survivorship. Clinical Oncology, 2015, 27, 679-685.	0.6	24
42	GPR model with signal preprocessing and bias update for dynamic processes modeling. Control Engineering Practice, 2012, 20, 1281-1292.	3.2	23
43	Meta-modelling for fast analysis of CFD-simulated vapour cloud dispersion processes. Computers and Chemical Engineering, 2014, 69, 89-97.	2.0	23
44	Emerging approaches to determine maturity of citrus fruit. Critical Reviews in Food Science and Nutrition, 2022, 62, 5245-5266.	5.4	23
45	Optimizing scheduling of refinery operations based on piecewise linear models. Computers and Chemical Engineering, 2015, 75, 105-119.	2.0	22
46	Optimal replacement policy for safety-related multi-component multi-state systems. Reliability Engineering and System Safety, 2012, 99, 87-95.	5.1	21
47	Solvent-free and electron transfer-induced phosphorus and nitrogen-containing heterostructures for multifunctional epoxy resin. Composites Part B: Engineering, 2022, 240, 109999.	5.9	21
48	QSAR prediction of HIV inhibition activity of styrylquinoline derivatives by genetic algorithm coupled with multiple linear regressions. Medicinal Chemistry Research, 2012, 21, 437-443.	1.1	19
49	Transfer learning for batch process optimal control using LV-PTM and adaptive control strategy. Journal of Process Control, 2019, 81, 197-208.	1.7	19
50	Statistical Modelling and Analysis of the Aerobic Oxidation of Benzyl Alcohol over K–Mn/C Catalysts. Catalysis Letters, 2009, 128, 210-220.	1.4	18
51	Penalized Reconstruction-Based Multivariate Contribution Analysis for Fault Isolation. Industrial & Engineering Chemistry Research, 2013, 52, 7784-7794.	1.8	18
52	Kriging meta–model assisted calibration of computational fluid dynamics models. AICHE Journal, 2016, 62, 4308-4320.	1.8	18
53	A spreadsheet calculator for estimating biogas production and economic measures for UK-based farm-fed anaerobic digesters. Bioresource Technology, 2016, 220, 479-489.	4.8	18
54	Model-aided optimization and analysis of multi-component catalysts: Application to selective hydrogenation of cinnamaldehyde. Chemical Engineering Science, 2012, 76, 26-36.	1.9	17

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55	Piecewise Linear Approximation Based MILP Method for PVC Plant Planning Optimization. Industrial & Engineering Chemistry Research, 2018, 57, 1233-1244.	1.8	17
56	Mixture Discriminant Monitoring: A Hybrid Method for Statistical Process Monitoring and Fault Diagnosis/Isolation. Industrial & Engineering Chemistry Research, 2013, 52, 10720-10731.	1.8	16
57	Radiotherapy reference dose audit in the United Kingdom by the National Physical Laboratory: 20 years of consistency and improvements. Physics and Imaging in Radiation Oncology, 2017, 3, 21-27.	1.2	16
58	The effect of parameter uncertainty on achieved safety integrity of safety system. Reliability Engineering and System Safety, 2012, 99, 15-23.	5.1	15
59	Modelling and Bayesian adaptive prediction of individual patients' tumour volume change during radiotherapy. Physics in Medicine and Biology, 2016, 61, 2145-2161.	1.6	15
60	Revisit of the Wall Effect on the Settling of Cylindrical Particles in the Inertial Regime. Industrial & Engineering Chemistry Research, 2010, 49, 8870-8876.	1.8	14
61	A novel versatile animal-free 3D tool for rapid low-cost assessment of immunodiagnostic microneedles. Sensors and Actuators B: Chemical, 2019, 296, 126652.	4.0	14
62	Polymerization of hydroxylated graphitic carbon nitride as an efficient flame retardant for epoxy resins. Composites Communications, 2022, 29, 101018.	3.3	13
63	Mathematical modelling of tumour volume dynamics in response to stereotactic ablative radiotherapy for non-small cell lung cancer. Physics in Medicine and Biology, 2015, 60, 3695-3713.	1.6	12
64	PID based nonlinear processes control model uncertainty improvement by using Gaussian process model. Journal of Process Control, 2016, 42, 77-89.	1.7	12
65	Experimental Investigation of the Impact of CO, C_2H_6, and H_2 on the Explosion Characteristics of CH_4. ACS Omega, 2020, 5, 24684-24692.	1.6	12
66	Development of high performance catalysts for CO oxidation using data-based modeling. Catalysis Today, 2011, 174, 127-134.	2.2	11
67	Multiperiod Planning of a PVC Plant for the Optimization of Process Operation and Energy Consumption: An MINLP Approach. Industrial & Engineering Chemistry Research, 2016, 55, 12430-12443.	1.8	11
68	A multi-centre analysis of radiotherapy beam output measurement. Physics and Imaging in Radiation Oncology, 2017, 4, 39-43.	1.2	11
69	On the use of phase change materials applied on cork-coconut-cork panels. Journal of Thermal Analysis and Calorimetry, 2019, 138, 4061-4090.	2.0	11
70	Preparation and Optimization of Macroalgae-Derived Solid Acid Catalysts. Waste and Biomass Valorization, 2019, 10, 805-816.	1.8	11
71	Transfer learning for nonlinear batch process operation optimization. Journal of Process Control, 2021, 101, 11-23.	1.7	11
72	Soft-sensing method for optimizing combustion efficiency of reheating furnaces. Journal of the Taiwan Institute of Chemical Engineers, 2017, 73, 112-122.	2.7	10

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73	Transfer learning for efficient meta-modeling of process simulations. Chemical Engineering Research and Design, 2018, 138, 546-553.	2.7	10
74	An adaptive method for fish growth prediction with empirical knowledge extraction. Biosystems Engineering, 2021, 212, 336-346.	1.9	10
75	Needleless administration of advanced therapies into the skin via the appendages using a hypobaric patch. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2120340119.	3.3	10
76	Particle filters for the estimation of a state space model. Computer Aided Chemical Engineering, 2004, , 613-618.	0.3	9
77	Interpretation of non-linear empirical data-based process models using global sensitivity analysis. Chemometrics and Intelligent Laboratory Systems, 2011, 107, 116-123.	1.8	9
78	Recent Development and Challenges in Spectroscopy and Machine Vision Technologies for Crop Nitrogen Diagnosis: A Review. Remote Sensing, 2020, 12, 2578.	1.8	9
79	Antibiotics-Free Compounds for Chronic Wound Healing. Pharmaceutics, 2022, 14, 1021.	2.0	9
80	Determination of Actual Object Size Distribution from Direct Imaging. Industrial & Engineering Chemistry Research, 2009, 48, 10136-10146.	1.8	8
81	Gaussian process regression with functional covariates and multivariate response. Chemometrics and Intelligent Laboratory Systems, 2017, 163, 1-6.	1.8	8
82	Multivariate log file analysis for multi-leaf collimator failure prediction in radiotherapy delivery. Physics and Imaging in Radiation Oncology, 2020, 15, 72-76.	1.2	8
83	Symptom clusters for revising scale membership in the analysis of prostate cancer patient reported outcome measures: a secondary data analysis of the Medical Research Council RT01 trial (ISCRTN47772397). Quality of Life Research, 2017, 26, 2103-2116.	1.5	7
84	Adaptive filtering-based soft sensor method for estimating total nitrogen in aquaponic systems. Computers and Electronics in Agriculture, 2021, 186, 106175.	3.7	7
85	Metaâ€Modelâ€Based Calibration and Sensitivity Studies of Computational Fluid Dynamics Simulation of Jet Pumps. Chemical Engineering and Technology, 2017, 40, 1674-1684.	0.9	6
86	Determining the Effect of pH on the Partitioning of Neutral, Cationic and Anionic Chemicals to Artificial Sebum: New Physicochemical Insight and QSPR Model. Pharmaceutical Research, 2018, 35, 141.	1.7	6
87	Experimental and Numerical Study of the Impact of Initial Turbulence on the Explosion Behavior of Methaneâ€Air Mixtures. Chemical Engineering and Technology, 2021, 44, 1195-1205.	0.9	6
88	Chemometric determination of the length distribution of single walled carbon nanotubes through optical spectroscopy. Analytica Chimica Acta, 2011, 708, 28-36.	2.6	5
89	RIMER and SA based thermal efficiency optimization for fired heaters. Fuel, 2017, 205, 272-285.	3.4	5
90	Determination of Solute Diffusion Properties in Artificial Sebum. Journal of Pharmaceutical Sciences, 2019, 108, 3003-3010.	1.6	5

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91	Spectral variable selection based on least absolute shrinkage and selection operator with ridge-adding homotopy. Chemometrics and Intelligent Laboratory Systems, 2022, 221, 104487.	1.8	5
92	Fast Burst-Sparsity Learning-Based Baseline Correction (FBSL-BC) Algorithm for Signals of Analytical Instruments. Analytical Chemistry, 2022, 94, 5113-5121.	3.2	5
93	Smoothed ℓ_1 – 1 -regularization-based line search for sparse signal recovery. Soft Computing, 2017, 21, 4813-4828.	2.1	4
94	A Measurement and Modeling Study of Hair Partition of Neutral, Cationic, and Anionic Chemicals. Journal of Pharmaceutical Sciences, 2018, 107, 1122-1130.	1.6	4
95	Prediction and Uncertainty Propagation for Completion Time of Batch Processes Based on Data-Driven Modeling. Industrial & Engineering Chemistry Research, 2020, 59, 14374-14384.	1.8	4
96	Pattern Matching and Active Simulation Method for Process Fault Diagnosis. Industrial & Engineering Chemistry Research, 2020, 59, 12525-12535.	1.8	4
97	Response to the discussion of â€œGaussian process regression for multivariate spectroscopic calibrationâ€. Chemometrics and Intelligent Laboratory Systems, 2007, 87, 69-71.	1.8	3
98	Investigation of pH effect on cationic solute binding to keratin and partition to hair. International Journal of Cosmetic Science, 2018, 40, 93-102.	1.2	3
99	A decision tree based decomposition method for oil refinery scheduling. Chinese Journal of Chemical Engineering, 2018, 26, 1605-1612.	1.7	3
100	Fault Detection in Managed Pressure Drilling Using Slow Feature Analysis. IEEE Access, 2018, 6, 34262-34271.	2.6	3
101	Plant Planning Optimization under Time-Varying Uncertainty: Case Study on a Poly(vinyl chloride) Plant. Industrial & Engineering Chemistry Research, 2018, 57, 12182-12191.	1.8	3
102	Offshore oil production planning optimization: An MINLP model considering well operation and flow assurance. Computers and Chemical Engineering, 2020, 133, 106674.	2.0	3
103	Numerical analysis of the strain distribution in skin domes formed upon the application of hypobaric pressure. Skin Research and Technology, 2021, 27, 948-958.	0.8	3
104	An integrated approach to active model adaptation and on-line dynamic optimisation of batch processes. Journal of Process Control, 2013, 23, 1350-1359.	1.7	2
105	Nonlinear process monitoring by integrating manifold learning with Gaussian process. Computer Aided Chemical Engineering, 2013, , 1009-1014.	0.3	2
106	Data-based modelling for predicting the completion time of batch processes. Computer Aided Chemical Engineering, 2018, , 937-942.	0.3	2
107	Mathematical modelling of moisture migration in confectionery multicomponent food systems. Computer Aided Chemical Engineering, 2018, 43, 1625-1630.	0.3	2
108	In Silico Simulation of Simultaneous Percutaneous Absorption and Xenobiotic Metabolism: Model Development and a Case Study on Aromatic Amines. Pharmaceutical Research, 2020, 37, 241.	1.7	2

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109	A Lagrange Relaxation Based Decomposition Algorithm for Large-Scale Offshore Oil Production Planning Optimization. Processes, 2021, 9, 1257.	1.3	2
110	Quantification of the uncertainties within the radiotherapy dosimetry chain and their impact on tumour control. Physics and Imaging in Radiation Oncology, 2021, 19, 33-38.	1.2	2
111	Global Sensitivity Analysis for a perfusion bioreactor system in tissue engineering. IFAC-PapersOnLine, 2021, 54, 550-555.	0.5	2
112	Bayesian Control Limits for Statistical Process Monitoring. , 0, , .		1
113	Simultaneous identification of parameter and time-delay based on subspace method and cross-correlation function. , 2017, , .		1
114	A Mixed Integer Linear Programming Model for Production Scheduling of Non-Pipelined Wells. , 2019, , .		1
115	Particle Filters for Dynamic Data Rectification and Process Change Detection. , 2007, , 204-209.		1
116	Global Sensitivity Analysis for the input parameters of a Perfusion Bioreactor System in Tissue Engineering. , 2021, , .		1
117	PARTICLE FILTERS FOR DYNAMIC DATA RECTIFICATION AND PROCESS CHANGE DETECTION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 204-209.	0.4	0
118	On-line statistical monitoring of batch processes using Gaussian mixture model. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 667-672.	0.4	0
119	Iterative Data-based Modelling and Optimization for Rapid Design of Dynamic Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 475-480.	0.4	0
120	A Branch and Bound Method for Fault Isolation through Missing Variable Analysis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 121-126.	0.4	0
121	Optimization and statistical analysis of Au-ZnO/Al2O3 catalyst for CO oxidation. Journal of Energy Chemistry, 2013, 22, 498-505.	7.1	0
122	Response to the discussion of â€œThe effect of parameter uncertainty on achieved safety integrity of safety systemâ€. Reliability Engineering and System Safety, 2013, 109, 1-2.	5.1	0
123	Non-destructive testing of CFRP using pulsed thermographic data enhanced by wavelet transform-based image denoising. , 2017, , .		0
124	Refinery Operation Scheduling Considering Both Varying Feedstocks and Operating Conditions: An Industrial Data-based Modeling Method. Computer Aided Chemical Engineering, 2018, 44, 1297-1302.	0.3	0
125	GA-BP Neural Network Based Meta-Model Method for Computational Fluid Dynamic Approximation. , 2020, , .		0