

# Raghu Rengaswamy

## List of Publications by Year in descending order

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192  
papers

8,918  
citations

81900

39  
h-index

43889

91  
g-index

198  
all docs

198  
docs citations

198  
times ranked

4233  
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of process fault detection and diagnosis. Computers and Chemical Engineering, 2003, 27, 293-311.	3.8	1,972
2	A review of process fault detection and diagnosis. Computers and Chemical Engineering, 2003, 27, 327-346.	3.8	1,445
3	A review of process fault detection and diagnosis. Computers and Chemical Engineering, 2003, 27, 313-326.	3.8	1,243
4	Locating sensors in complex chemical plants based on fault diagnostic observability criteria. AIChE Journal, 1999, 45, 310-322.	3.6	130
5	A Review of Solid Oxide Fuel Cell (SOFC) Dynamic Models. Industrial & Engineering Chemistry Research, 2009, 48, 6068-6086.	3.7	127
6	A syntactic pattern-recognition approach for process monitoring and fault diagnosis. Engineering Applications of Artificial Intelligence, 1995, 8, 35-51.	8.1	125
7	Robust and reliable estimation via Unscented Recursive Nonlinear Dynamic Data Reconciliation. Journal of Process Control, 2006, 16, 1075-1086.	3.3	120
8	Fault diagnosis using dynamic trend analysis: A review and recent developments. Engineering Applications of Artificial Intelligence, 2007, 20, 133-146.	8.1	120
9	Application of signed digraphs-based analysis for fault diagnosis of chemical process flowsheets. Engineering Applications of Artificial Intelligence, 2004, 17, 501-518.	8.1	119
10	Control Loop Performance Assessment. 2. Hammerstein Model Approach for Stiction Diagnosis. Industrial & Engineering Chemistry Research, 2005, 44, 6719-6728.	3.7	116
11	A Systematic Framework for the Development and Analysis of Signed Digraphs for Chemical Processes. 1. Algorithms and Analysis. Industrial & Engineering Chemistry Research, 2003, 42, 4789-4810.	3.7	102
12	Fuzzy-logic based trend classification for fault diagnosis of chemical processes. Computers and Chemical Engineering, 2003, 27, 347-362.	3.8	100
13	A qualitative shape analysis formalism for monitoring control loop performance. Engineering Applications of Artificial Intelligence, 2001, 14, 23-33.	8.1	88
14	Recursive estimation in constrained nonlinear dynamical systems. AIChE Journal, 2005, 51, 946-959.	3.6	83
15	A Signed Directed Graph and Qualitative Trend Analysis-Based Framework for Incipient Fault Diagnosis. Chemical Engineering Research and Design, 2007, 85, 1407-1422.	5.6	80
16	Approaches for efficient stiction compensation in process control valves. Computers and Chemical Engineering, 2008, 32, 218-229.	3.8	80
17	A modified empirical mode decomposition (EMD) process for oscillation characterization in control loops. Control Engineering Practice, 2007, 15, 1135-1148.	5.5	79
18	A two-dimensional steady state model including the effect of liquid water for a PEM fuel cell cathode. Journal of Power Sources, 2007, 173, 375-393.	7.8	73

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19	A novel interval-halving framework for automated identification of process trends. <i>AIChE Journal</i> , 2004, 50, 149-162.	3.6	72
20	A signed directed graph-based systematic framework for steady-state malfunction diagnosis inside control loops. <i>Chemical Engineering Science</i> , 2006, 61, 1790-1810.	3.8	71
21	A Systematic Framework for the Development and Analysis of Signed Digraphs for Chemical Processes. 2. Control Loops and Flowsheet Analysis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2003, 42, 4811-4827.	3.7	69
22	New nonlinear residual feedback observer for fault diagnosis in nonlinear systems. <i>Automatica</i> , 2008, 44, 2222-2229.	5.0	68
23	Comprehensive Design of a Sensor Network for Chemical Plants Based on Various Diagnosability and Reliability Criteria. 1. Framework. <i>Industrial &amp; Engineering Chemistry Research</i> , 2002, 41, 1826-1839.	3.7	66
24	Design of Sensor Network Based on the Signed Directed Graph of the Process for Efficient Fault Diagnosis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2000, 39, 999-1019.	3.7	65
25	Control Loop Performance Assessment. 1. A Qualitative Approach for Stiction Diagnosis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2005, 44, 6708-6718.	3.7	64
26	Fault Diagnosis by Qualitative Trend Analysis of the Principal Components. <i>Chemical Engineering Research and Design</i> , 2005, 83, 1122-1132.	5.6	63
27	Recursive state estimation techniques for nonlinear differential algebraic systems. <i>Chemical Engineering Science</i> , 2010, 65, 4548-4556.	3.8	60
28	Control loop performance assessment using detrended fluctuation analysis (DFA). <i>Automatica</i> , 2012, 48, 1359-1363.	5.0	59
29	A framework for on-line trend extraction and fault diagnosis. <i>Engineering Applications of Artificial Intelligence</i> , 2010, 23, 950-960.	8.1	57
30	Design of sensor location based on various fault diagnostic observability and reliability criteria. <i>Computers and Chemical Engineering</i> , 2000, 24, 735-741.	3.8	55
31	Robust sensor network design for fault diagnosis. <i>Computers and Chemical Engineering</i> , 2008, 32, 1067-1084.	3.8	55
32	Dynamic modeling and validation studies of a tubular solid oxide fuel cell. <i>Chemical Engineering Science</i> , 2009, 64, 2158-2172.	3.8	54
33	Stiction Compensation in Process Control Loops: A Framework for Integrating Stiction Measure and Compensation. <i>Industrial &amp; Engineering Chemistry Research</i> , 2005, 44, 9164-9174.	3.7	50
34	A two-dimensional steady-state model for phosphoric acid fuel cells (PAFC). <i>Journal of Power Sources</i> , 2002, 112, 137-152.	7.8	47
35	A fast training neural network and its updation for incipient fault detection and diagnosis. <i>Computers and Chemical Engineering</i> , 2000, 24, 431-437.	3.8	44
36	Automatic oscillation detection and characterization in closed-loop systems. <i>Control Engineering Practice</i> , 2012, 20, 733-746.	5.5	44

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37	Performance analysis of a PEM fuel cell cathode with multiple catalyst layers. International Journal of Hydrogen Energy, 2010, 35, 6356-6365.	7.1	43
38	Kalman-based strategies for Fault Detection and Identification (FDI): Extensions and critical evaluation for a buffer tank system. Computers and Chemical Engineering, 2011, 35, 806-816.	3.8	43
39	Comprehensive Design of a Sensor Network for Chemical Plants Based on Various Diagnosability and Reliability Criteria. 2. Applications. Industrial & Engineering Chemistry Research, 2002, 41, 1840-1860.	3.7	41
40	Dynamic characteristics of spherical agglomerate for study of cathode catalyst layers in proton exchange membrane fuel cells (PEMFC). Journal of Power Sources, 2006, 158, 110-123.	7.8	37
41	PEMFC Fault Diagnosis, Modeling, and Mitigation. IEEE Transactions on Industry Applications, 2010, 46, 295-303.	4.9	36
42	Rapid impedance measurement using chirp signals for electrochemical system analysis. Computers and Chemical Engineering, 2017, 106, 421-436.	3.8	35
43	An optimal strategy to model microbial growth in a multiple substrate environment. , 1997, 56, 635-644.		34
44	Interfacial contact resistance in polymer electrolyte membrane fuel cells: Recent developments and challenges. Renewable and Sustainable Energy Reviews, 2019, 115, 109351.	16.4	33
45	Machine Learning Derived Quantitative Structure Property Relationship (QSPR) to Predict Drug Solubility in Binary Solvent Systems. Industrial & Engineering Chemistry Research, 2019, 58, 3082-3092.	3.7	33
46	Generalized shape constrained spline fitting for qualitative analysis of trends. Computers and Chemical Engineering, 2013, 58, 116-134.	3.8	31
47	A framework for integrating diagnostic knowledge with nonlinear optimization for data reconciliation and parameter estimation in dynamic systems. Chemical Engineering Science, 2001, 56, 2133-2148.	3.8	30
48	Isothermal models for anode-supported tubular solid oxide fuel cells. Chemical Engineering Science, 2007, 62, 4250-4267.	3.8	29
49	Optimization studies of a polymer electrolyte membrane fuel cell with multiple catalyst layers. Journal of Power Sources, 2012, 206, 197-203.	7.8	28
50	Receding-Horizon Nonlinear Kalman (RNK) Filter for State Estimation. IEEE Transactions on Automatic Control, 2013, 58, 2054-2059.	5.7	28
51	Modelling of microbial growth for sequential utilization in a multisubstrate environment. Process Biochemistry, 1997, 32, 643-650.	3.7	27
52	Low grade heat recovery for power generation through electrochemical route: Vanadium Redox Flow Battery, a case study. Applied Surface Science, 2019, 474, 262-268.	6.1	27
53	Development of a cylindrical PEM fuel cell. International Journal of Hydrogen Energy, 2011, 36, 713-719.	7.1	26
54	Constrained unscented recursive estimator for nonlinear dynamic systems. Journal of Process Control, 2012, 22, 718-728.	3.3	25

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55	Development of cylindrical PEM fuel cells with semi-cylindrical cathode current collectors. International Journal of Hydrogen Energy, 2020, 45, 10549-10558.	7.1	25
56	Optimization Study of an Agglomerate Model for Platinum Reduction and Performance in PEM Fuel Cell Cathode. Chemical Engineering Research and Design, 2006, 84, 952-964.	5.6	24
57	Data-based automated diagnosis and iterative retuning of proportional-integral (PI) controllers. Control Engineering Practice, 2014, 29, 23-41.	5.5	23
58	Integration of machine learning and first principles models. AIChE Journal, 2022, 68, .	3.6	23
59	System Identification and Nonlinear Model Predictive Control of a Solid Oxide Fuel Cell. Industrial & Engineering Chemistry Research, 2010, 49, 4800-4808.	3.7	22
60	Use of Inverse Repeat Sequence (IRS) for Identification in Chemical Process Systems. Industrial & Engineering Chemistry Research, 1999, 38, 3420-3429.	3.7	21
61	Step response analysis of phosphoric acid fuel cell (PAFC) cathode through a transient model. Journal of Power Sources, 2005, 140, 274-279.	7.8	21
62	Multivariable optimization studies of cathode catalyst layer of a polymer electrolyte membrane fuel cell. Chemical Engineering Research and Design, 2011, 89, 10-22.	5.6	20
63	Design of a model-based feedback controller for active sorting and synchronization of droplets in a microfluidic loop. AIChE Journal, 2012, 58, 2120-2130.	3.6	20
64	Classification of High-Temperature PEM Fuel Cell Degradation Mechanisms Using Equivalent Circuits. IEEE Transactions on Industrial Electronics, 2015, 62, 5265-5274.	7.9	20
65	Sensor network design for contaminant detection and identification in water distribution networks. Computers and Chemical Engineering, 2016, 87, 246-256.	3.8	20
66	A comparison of model-based and neural network-based diagnostic methods. Engineering Applications of Artificial Intelligence, 2001, 14, 805-818.	8.1	19
67	A New Cluster Validity Index for Fuzzy Clustering. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 325-330.	0.4	18
68	Multivariate Control Loop Performance Assessment With Hurst Exponent and Mahalanobis Distance. IEEE Transactions on Control Systems Technology, 2016, 24, 1067-1074.	5.2	18
69	Rapid humidity regulation by mixing of dry and humid gases with feedback control for PEM fuel cells. International Journal of Hydrogen Energy, 2019, 44, 389-407.	7.1	18
70	Metabolic modeling of host-microbe interactions for therapeutics in colorectal cancer. Npj Systems Biology and Applications, 2022, 8, 1.	3.0	18
71	A distributed dynamic model for chronoamperometry, chronopotentiometry and gas starvation studies in PEM fuel cell cathode. Chemical Engineering Science, 2006, 61, 7393-7409.	3.8	17
72	Stiction identification in nonlinear process control loops. Computers and Chemical Engineering, 2010, 34, 1890-1898.	3.8	17

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73	Electrical Circuit Analysis of CO Poisoning in High-Temperature PEM Fuel Cells for Fault Diagnostics and Mitigation. IEEE Transactions on Industry Applications, 2015, 51, 619-630.	4.9	17
74	Effects of water induced pore blockage and mitigation strategies in low temperature PEM fuel cells – A simulation study. International Journal of Hydrogen Energy, 2017, 42, 23799-23813.	7.1	17
75	State and Parameter Estimation in Distributed Constrained Systems. 1. Extended Kalman Filtering of a Special Class of Differential-Algebraic Equation Systems. Industrial & Engineering Chemistry Research, 2017, 56, 206-215.	3.7	17
76	Plant Friendly Input Design: Convex Relaxation and Quality. IEEE Transactions on Automatic Control, 2011, 56, 1467-1472.	5.7	16
77	Optimal Sensor Placement for Fault Diagnosis Using Magnitude Ratio. Industrial & Engineering Chemistry Research, 2015, 54, 9369-9381.	3.7	16
78	Dynamic Model of a Slagging Entrained-Flow Gasifier Including Models of Slag Transport, Deposition, and Slag Layer. Industrial & Engineering Chemistry Research, 2016, 55, 279-292.	3.7	16
79	Reply to Comments on “Robust and reliable estimation via unscented recursive nonlinear dynamic data reconciliation” (URNDDR). Journal of Process Control, 2009, 19, 719-721.	3.3	15
80	Actuator network design to mitigate contamination effects in Water Distribution Networks. Computers and Chemical Engineering, 2018, 108, 194-205.	3.8	15
81	Design of multi-functional microfluidic ladder networks to passively control droplet spacing using genetic algorithms. Computers and Chemical Engineering, 2014, 60, 413-425.	3.8	14
82	A novel framework for integrating data mining with control loop performance assessment. AIChE Journal, 2016, 62, 146-165.	3.6	14
83	Modeling and control of battery systems. Part II: A model predictive controller for optimal charging. Computers and Chemical Engineering, 2018, 119, 326-335.	3.8	14
84	Origin of periodic and chaotic dynamics due to drops moving in a microfluidic loop device. Physical Review E, 2014, 89, 023015.	2.1	13
85	Very large scale droplet microfluidic integration (VLDMI) using genetic algorithm. Computers and Chemical Engineering, 2016, 85, 94-104.	3.8	13
86	Perspective “Micro Photosynthetic Power Cells. Journal of the Electrochemical Society, 2019, 166, B3012-B3016.	2.9	13
87	Quantification of performance of sensor networks for fault diagnosis. AIChE Journal, 2007, 53, 902-917.	3.6	12
88	Dimensional optimization of a tubular solid oxide fuel cell. Computers and Chemical Engineering, 2010, 34, 1789-1802.	3.8	12
89	Root Cause Analysis of Linear Closed-Loop Oscillatory Chemical Process Systems. Industrial & Engineering Chemistry Research, 2012, 51, 13712-13731.	3.7	12
90	Droplet digital signal generation in microfluidic networks using model predictive control. Journal of Process Control, 2013, 23, 132-139.	3.3	12

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91	Traffic of pairs of drops in microfluidic ladder networks with fore-aft structural asymmetry. <i>Microfluidics and Nanofluidics</i> , 2013, 14, 337-344.	2.2	12
92	Data mining and control loop performance assessment: The multivariate case. <i>AIChE Journal</i> , 2017, 63, 3311-3328.	3.6	12
93	Optimal power distribution control for a network of fuel cell stacks. <i>Journal of Process Control</i> , 2019, 74, 88-98.	3.3	12
94	Parametric study of the cathode and the role of liquid saturation on the performance of a polymer electrolyte membrane fuel cell—A numerical approach. <i>Journal of Power Sources</i> , 2010, 195, 6782-6794.	7.8	11
95	Data Reconciliation and Dynamic Modeling of a Sour Water Gas Shift Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 19855-19869.	3.7	11
96	Development of a hybrid shrinking-core shrinking-particle model for entrained-flow gasifiers. <i>AIChE Journal</i> , 2016, 62, 659-669.	3.6	11
97	Integrating stiction diagnosis and stiction compensation in process control valves. <i>Computer Aided Chemical Engineering</i> , 2006, 21, 1233-1238.	0.5	10
98	Characterization and fault diagnosis of PAFC cathode by EIS technique and a novel mathematical model approach. <i>Journal of Power Sources</i> , 2006, 161, 971-986.	7.8	10
99	Online Diagnostics of HTPEM Fuel Cells Using Small Amplitude Transient Analysis for CO Poisoning. <i>IEEE Transactions on Industrial Electronics</i> , 2015, 62, 5175-5186.	7.9	10
100	Novel ratio-metric features enable the identification of new driver genes across cancer types. <i>Scientific Reports</i> , 2022, 12, 5.	3.3	10
101	An integrated approach for oscillation diagnosis in linear closed loop systems. <i>Chemical Engineering Research and Design</i> , 2015, 93, 483-495.	5.6	9
102	Feasibility Studies of Micro Photosynthetic Power Cells as a Competitor of Photovoltaic Cells for Low and Ultra-Low Power IoT Applications. <i>Energies</i> , 2019, 12, 1595.	3.1	9
103	Designing Biological Circuits: From Principles to Applications. <i>ACS Synthetic Biology</i> , 2022, 11, 1377-1388.	3.8	9
104	Control of proton exchange membrane fuel cells using data driven state space models. <i>Chemical Engineering Research and Design</i> , 2010, 88, 861-874.	5.6	8
105	Achieving resilience in critical infrastructures: A case study for a nuclear power plant cooling loop. , 2010, , .		8
106	Sensor network design based on system-wide reliability criteria. Part II: Formulations and applications. <i>Journal of Process Control</i> , 2020, 93, 14-27.	3.3	8
107	Spacing Optimization for Active Droplet Sorting in Microfluidic Networks Using Genetic Algorithm. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 1699-1708.	3.7	8
108	Industrial Experience with Object-Oriented Modelling. <i>Chemical Engineering Research and Design</i> , 2004, 82, 527-552.	5.6	7

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109	An Integrated Qualitativeâ€“Quantitative Hypothesis Driven Approach for Comprehensive Fault Diagnosis. Chemical Engineering Research and Design, 2007, 85, 1281-1294.	5.6	7
110	Modeling of rechargeable batteries. Current Opinion in Chemical Engineering, 2016, 13, 63-74.	7.8	7
111	Rapid impedance spectroscopy using dual phase shifted chirp signals for electrochemical applications. International Journal of Hydrogen Energy, 2020, 45, 10536-10548.	7.1	7
112	Sensor network design based on system-wide reliability criteria. Part I: Objectives. Journal of Process Control, 2020, 93, 66-82.	3.3	7
113	A systems engineering perspective on electrochemical energy technologies and a framework for application driven choice of technology. Renewable and Sustainable Energy Reviews, 2021, 147, 111165.	16.4	7
114	A Computational Framework for Studying Gut-Brain Axis in Autism Spectrum Disorder. Frontiers in Physiology, 2022, 13, 760753.	2.8	7
115	Reinforcement-Learning designs droplet microfluidic networks. Computers and Chemical Engineering, 2022, 161, 107787.	3.8	7
116	Transport, sensitivity, and dimensional optimization studies of a tubular Solid Oxide Fuel Cell. Journal of Power Sources, 2009, 190, 499-510.	7.8	6
117	Structural Properties of Gene Regulatory Networks: Definitions and Connections. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2009, 6, 158-170.	3.0	6
118	Dynamic modeling and system identification of a tubular solid oxide fuel cell (TSOFC). , 2009, , .		6
119	Optimal Plant Friendly Input Design for System Identification. Industrial & Engineering Chemistry Research, 2011, 50, 13045-13055.	3.7	6
120	A reliability measure for model based stiction detection approaches. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 750-755.	0.4	6
121	Understanding drop-pattern formation in 2-D microchannels: a multi-agent approach. Microfluidics and Nanofluidics, 2014, 17, 527-537.	2.2	6
122	Micro photosynthetic cell for power generation from algae: Bio-electrochemical modeling and verification. Technology, 2016, 04, 249-258.	1.4	6
123	Entrainment of superoxide rhythm by menadione in HCT116 colon cancer cells. Scientific Reports, 2019, 9, 3347.	3.3	6
124	Prediction error-based clustering approach for multiple-model learning using statistical testing. Engineering Applications of Artificial Intelligence, 2019, 77, 125-135.	8.1	6
125	Recursive state estimation in nonlinear processes. , 2004, , .		6
126	Multivariable gain-scheduled fuzzy logic control of a fluidized catalytic cracker unit. Computers and Chemical Engineering, 2000, 24, 1083-1089.	3.8	5



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127	Isothermal Isobaric Reactive Flash Problem. Industrial & Engineering Chemistry Research, 2006, 45, 6548-6554.	3.7	5
128	Computationally Efficient Identification of Global ARX Parameters With Guaranteed Stability. IEEE Transactions on Automatic Control, 2011, 56, 1406-1411.	5.7	5
129	A Genetic Algorithm (GA) based rational approach for design of discrete microfluidic networks. Computer Aided Chemical Engineering, 2012, , 507-511.	0.5	5
130	Online fault diagnostics and impedance signature mapping of High Temperature PEM fuel cells using rapid small signal injection. , 2013, , .		5
131	Data driven approach for performance assessment of linear and nonlinear Kalman filters. , 2014, , .		5
132	Coalescence of drops in a 2D microchannel: critical transitions to autocatalytic behaviour. Soft Matter, 2016, 12, 115-122.	2.7	5
133	On the role of hydrodynamic interactions in the engineered-assembly of droplet ensembles. Soft Matter, 2019, 15, 7863-7875.	2.7	5
134	Comparison of first trimester dating methods for gestational age estimation and their implication on preterm birth classification in a North Indian cohort. BMC Pregnancy and Childbirth, 2021, 21, 343.	2.4	5
135	A Novel Interval-Halving Algorithm for Process Trend Identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 155-160.	0.4	4
136	Development of a Closed Form Nonlinear Predictive Control Law Based on a Class of Wiener Models. Industrial & Engineering Chemistry Research, 2010, 49, 148-165.	3.7	4
137	Receding Nonlinear Kalman (RNK) Filter for Nonlinear Constrained State Estimation. Computer Aided Chemical Engineering, 2011, 29, 844-848.	0.5	4
138	Degradation of high temperature PEM fuel cells and the impact on electrical performance. , 2013, , .		4
139	Electrical circuit analysis of CO poisoning in high temperature PEM fuel cells for rapid fault diagnostics. , 2013, , .		4
140	Phosphoric acid fuel cells. , 2016, , 57-70.		4
141	On developing a framework for detection of oscillations in data. ISA Transactions, 2019, 89, 96-112.	5.7	4
142	Multi-objective input signal design for plant friendly identification of process systems. , 2004, , .		4
143	Fault Diagnosis by Qualitative Trend Analysis of the Principal Components: Prospects and Some New Results. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 783-788.	0.4	3
144	Issues in modeling stiction in process control valves. , 2008, , .		3

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145	Application of empirical mode decomposition in the field of polymer physics. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 277-290.	2.1	3
146	Optimal Sensor Placement for Contamination Detection and Identification in Water Distribution Networks. Computer Aided Chemical Engineering, 2014, 33, 1447-1452.	0.5	3
147	On-line performance monitoring of PEM fuel cell using a fast EIS approach. , 2015, , .		3
148	A New Measure To Improve the Reliability of Stiction Detection Techniques. Industrial & Engineering Chemistry Research, 2015, 54, 7476-7488.	3.7	3
149	Investigating Arrangement of Composite Drops in Two-Dimensional Microchannels Using Multiagent Simulations: A Design Perspective. Industrial & Engineering Chemistry Research, 2015, 54, 10835-10842.	3.7	3
150	On modeling and optimization of micro-photosynthetic power cells. Computers and Chemical Engineering, 2017, 107, 284-293.	3.8	3
151	Strategies for Effective Utilization of Hydrogen in Cylindrical PEM Fuel Cells. ECS Transactions, 2017, 80, 485-496.	0.5	3
152	Modeling and control of battery systems. Part I: Revisiting Butler-Volmer equations to model non-linear coupling of various capacity fade mechanisms. Computers and Chemical Engineering, 2018, 119, 336-351.	3.8	3
153	Interacting coalescence avalanches in a 2D droplet assembly. AIChE Journal, 2019, 65, 1111-1118.	3.6	3
154	Droplet microfluidic networks as hybrid dynamical systems: Inlet spacing optimization for sorting of drops. AIChE Journal, 2022, 68, .	3.6	3
155	Real-Time testing of novel robust digital pitch controller for digital hydraulic pitch system in wind turbine. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2022, 44, 3477-3496.	2.3	3
156	Consistent malfunction diagnosis inside control loops using signed directed graphs. Computer Aided Chemical Engineering, 2003, , 473-478.	0.5	2
157	Lexicographic Optimization Based Sensor Network Design for Robust Fault Diagnosis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 215-220.	0.4	2
158	Scope for process systems engineering studies in proton exchange membrane fuel cells (PEMFC): A review of opportunities. Computer Aided Chemical Engineering, 2006, 21, 835-840.	0.5	2
159	Multi-objective optimal input design for plant friendly identification. , 2008, , .		2
160	Diagnosis of root cause for oscillations in closed-loop chemical process systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 13145-13150.	0.4	2
161	Sort-synchronization control in microfluidic loop devices with experimental uncertainties using a model predictive control (MPC) framework. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 4886-4891.	0.4	2
162	Modeling Studies of a Cylindrical Polymer Electrolyte Membrane Fuel Cell Cathode. Industrial & Engineering Chemistry Research, 2012, 51, 5003-5010.	3.7	2

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163	Evaluation of prediction error based fuzzy model clustering approaches for multiple model learning. International Journal of Advances in Engineering Sciences and Applied Mathematics, 2012, 4, 10-21.	1.1	2
164	A generative approach to qualitative trend analysis for batch process fault diagnosis. , 2013, , .		2
165	Averaged model for probabilistic coalescence avalanches in two-dimensional emulsions: Insights into uncertainty propagation. Physical Review E, 2017, 95, 032608.	2.1	2
166	State and Parameter Estimation in Distributed Constrained Systems. 2. GA-EKF Based Sensor Placement for a Water Gas Shift Reactor. Industrial & Engineering Chemistry Research, 2017, 56, 216-224.	3.7	2
167	A novel approach for benchmarking and assessing the performance of state estimators. ISA Transactions, 2018, 80, 137-145.	5.7	2
168	Effect of gas pressure and clamping pressure on interfacial contact resistance of a cylindrical polymer electrolyte membrane fuel cell. International Journal of Sustainable Engineering, 2021, 14, 1791-1799.	3.5	2
169	Phosphoric Acid Fuel Cells. , 2022, , 437-458.		2
170	Application and evaluation of linear/restricted nonlinear observers to a nonlinear CSTR. Computer Aided Chemical Engineering, 2001, , 853-858.	0.5	1
171	Systematic Development and Application of Digraphs for Process Diagnosis and Hazards Analysis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 327-332.	0.4	1
172	Qualitative trend analysis of the principal components: application to fault diagnosis. Computer Aided Chemical Engineering, 2003, 15, 968-973.	0.5	1
173	A dynamic spherical agglomerate model for proton exchange membrane fuel cells (PEMFC). Computer Aided Chemical Engineering, 2005, , 541-546.	0.5	1
174	ROOT CAUSE ANALYSIS OF OSCILLATING CONTROL LOOPS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1151-1156.	0.4	1
175	Techniques for stiction diagnosis and compensation in process control loops. , 2006, , .		1
176	Blind identification of stiction in nonlinear process control loops. , 2008, , .		1
177	Experimental evaluation of linear model based control strategies for PEMFCs. , 2009, , .		1
178	Resilient control in view of valve stiction: extension of a Kalman-based FTC scheme. Computer Aided Chemical Engineering, 2010, , 547-552.	0.5	1
179	Derivation of an equivalent electrical circuit model for degradation mechanisms in high temperature pem fuel cells in performance estimation. , 2014, , .		1
180	Optimal Power Sharing Control in Networked Fuel Cell Stacks. Computer Aided Chemical Engineering, 2016, 38, 1761-1766.	0.5	1

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181	An improved scaling procedure for analysis and simplification of process models. Chemical Engineering Research and Design, 2017, 120, 410-422.	5.6	1
182	On the Detection of Valve Nonlinearities in Otherwise Linear Closed-Loop Systems. IEEE Transactions on Automatic Control, 2017, 62, 955-960.	5.7	1
183	Data-driven prognostics for Lithium-ion battery health monitoring. Computer Aided Chemical Engineering, 2021, , 487-492.	0.5	1
184	A Framework for Sensor Network Design for Efficient and Reliable Fault Diagnosis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 29-40.	0.4	0
185	Stiction Identification in Nonlinear Process Control Loops. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 691-696.	0.4	0
186	Preface for special issue on "Data Analysis: Techniques and Applications" International Journal of Advances in Engineering Sciences and Applied Mathematics, 2012, 4, 1-2.	1.1	0
187	Understanding control in microchannels to manipulate drop-drop interactions. , 2014, , .		0
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