

Zainal Ahmad

List of Publications by Year in descending order

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91
papers

1,564
citations

279487

23
h-index

329751

37
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93
all docs

93
docs citations

93
times ranked

1683
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanistic model-based control of biodiesel production processes: a review of needs and scopes. <i>Chemical Engineering Communications</i> , 2023, 210, 274-290.	1.5	1
2	Feedstocks, catalysts, process variables and techniques for biodiesel production by one-pot extraction-transesterification: a review. <i>Environmental Chemistry Letters</i> , 2022, 20, 335-378.	8.3	18
3	Advanced catalysts and effect of operating parameters in ethanol dry reforming for hydrogen generation. A review. <i>Environmental Chemistry Letters</i> , 2022, 20, 1695-1718.	8.3	15
4	Production of hydrogen and value-added carbon materials by catalytic methane decomposition: a review. <i>Environmental Chemistry Letters</i> , 2022, 20, 2339-2359.	8.3	23
5	Process simulation and stochastic multiobjective optimisation of homogeneously acid-catalysed microalgal in-situ biodiesel production considering economic and environmental criteria. <i>Fuel</i> , 2022, 327, 125165.	3.4	7
6	Prediction of water quality index (WQI) using support vector machine (SVM) and least square-support vector machine (LS-SVM). <i>International Journal of River Basin Management</i> , 2021, 19, 149-156.	1.5	109
7	Modeling of low density polyethylene tubular reactor using nonlinear block-oriented model. <i>Materials Today: Proceedings</i> , 2021, 42, 39-44.	0.9	4
8	Low density polyethylene tubular reactor control using state space model predictive control. <i>Chemical Engineering Communications</i> , 2021, 208, 500-516.	1.5	6
9	Comparing Different Pre-processing Techniques and Machine Learning Models to Predict PM10 and PM2.5 Concentration in Malaysia. <i>Lecture Notes in Mechanical Engineering</i> , 2021, , 353-374.	0.3	3
10	Design and retrofitting of ultrasound intensified and ionic liquid catalyzed in situ algal biodiesel production. <i>Chemical Engineering Research and Design</i> , 2021, 171, 168-185.	2.7	13
11	Low density polyethylene tubular reactor control using neural Wiener model predictive control. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2021, 16, e2699.	0.8	4
12	River Water Quality Prediction in Malaysia Based on Extra Tree Regression Model Coupled with Linear Discriminant Analysis (LDA). <i>Computer Aided Chemical Engineering</i> , 2021, 50, 1491-1496.	0.3	6
13	Prediction of air pollution index (API) using support vector machine (SVM). <i>Journal of Environmental Chemical Engineering</i> , 2020, 8, 103208.	3.3	100
14	Temperature control of low density polyethylene (LDPE) tubular reactor using Model Predictive Control (MPC). <i>IOP Conference Series: Materials Science and Engineering</i> , 2020, 736, 042014.	0.3	0
15	Unified View of Magnetic Nanoparticle Separation under Magnetophoresis. <i>Langmuir</i> , 2020, 36, 8033-8055.	1.6	63
16	Designing real time model mobile monitoring system for model predictive control in a nonlinear continuous stirred tank reactor. <i>Asia-Pacific Journal of Chemical Engineering</i> , 2020, 15, e2430.	0.8	2
17	Quasi steady state approximation in enzymatic biopolymerization reactor. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	0
18	Optimization study on the CO ₂ and H ₂ S removal in natural gas using primary, secondary, tertiary and mixed amine. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	4

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19	Minimizing loop interaction in Multi Input Multi Output (MIMO) system using partial decoupler approach. IOP Conference Series: Materials Science and Engineering, 2019, 702, 012018.	0.3	0
20	Modeling and nonlinearity studies of low density polyethylene (LDPE) tubular reactor. Materials Today: Proceedings, 2018, 5, 21612-21619.	0.9	10
21	Prediction of equilibrium water dew point of natural gas in TEG dehydration systems using Bayesian Feedforward Artificial Neural Network (FANN). Petroleum Science and Technology, 2018, 36, 1620-1626.	0.7	7
22	Effect of nano- and micro-alumina fillers on some properties of poly(methyl methacrylate) denture base composites. Journal of the Serbian Chemical Society, 2018, 83, 75-91.	0.4	23
23	Improving water quality index prediction in Perak River basin Malaysia through a combination of multiple neural networks. International Journal of River Basin Management, 2017, 15, 79-87.	1.5	37
24	Kinetics of Low Field Gradient Magnetophoresis in the Presence of Magnetically Induced Convection. Journal of Physical Chemistry C, 2017, 121, 5389-5407.	1.5	25
25	Biodiesel Production using Heterogeneous Catalyst in CSTR: Sensitivity Analysis and Optimization. IOP Conference Series: Materials Science and Engineering, 2016, 121, 012007.	0.3	2
26	Computational intelligent strategies to predict energy conservation benefits in excess air controlled gas-fired systems. Applied Thermal Engineering, 2016, 102, 432-446.	3.0	40
27	Estimation of water content of natural gases using particle swarm optimization method. Petroleum Science and Technology, 2016, 34, 595-600.	0.7	5
28	A new empirical correlation for prediction of carbon dioxide separation from different gas mixtures. Petroleum Science and Technology, 2016, 34, 562-569.	0.7	1
29	Estimation of oil and gas properties in petroleum production and processing operations using rigorous model. Petroleum Science and Technology, 2016, 34, 1129-1136.	0.7	15
30	Experimental investigation the effect of nanoparticles on micellization behavior of a surfactant: Application to EOR. Petroleum Science and Technology, 2016, 34, 1055-1061.	0.7	23
31	Evaluation of the ability of the hydrophobic nanoparticles of SiO ₂ in the EOR process through carbonate rock samples. Petroleum Science and Technology, 2016, 34, 1048-1054.	0.7	28
32	Modeling of true vapor pressure of petroleum products using ANFIS algorithm. Petroleum Science and Technology, 2016, 34, 933-939.	0.7	40
33	Estimation of natural gases water content using adaptive neuro-fuzzy inference system. Petroleum Science and Technology, 2016, 34, 891-897.	0.7	37
34	Prediction of absorption and stripping factors in natural gas processing industries using feedforward artificial neural network. Petroleum Science and Technology, 2016, 34, 105-113.	0.7	3
35	Operator training simulator for biodiesel synthesis from waste cooking oil. Chemical Engineering Research and Design, 2016, 99, 55-68.	2.7	22
36	Multi-loop Control System Design for Biodiesel Process using Waste Cooking Oil. Journal of Physics: Conference Series, 2015, 622, 012011.	0.3	0

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37	Modeling and Optimisation of Xylose Production by Enzymatic Hydrolysis using Neural Network and Particle Swarm Optimization. <i>Chemical Product and Process Modeling</i> , 2015, 10, 173-178.	0.5	4
38	Fabrication and Characterization of Crystalline Cupric Oxide (CuO) Films by Simple Immersion Method. <i>Procedia Manufacturing</i> , 2015, 2, 379-384.	1.9	6
39	Magnetophoresis of superparamagnetic nanoparticles at low field gradient: hydrodynamic effect. <i>Soft Matter</i> , 2015, 11, 6968-6980.	1.2	49
40	Multi input single output model predictive control of non-linear bio-polymerization process. <i>AIP Conference Proceedings</i> , 2015, , .	0.3	1
41	Operator training simulators in the chemical industry: review, issues, and future directions. <i>Reviews in Chemical Engineering</i> , 2014, 30, .	2.3	44
42	Transesterification of waste cooking palm oil by MnZr with supported alumina as a potential heterogeneous catalyst. <i>Journal of Industrial and Engineering Chemistry</i> , 2014, 20, 4437-4442.	2.9	53
43	Plantwide Control of Biodiesel Production from Waste Cooking Oil Using Integrated Framework of Simulation and Heuristics. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 14408-14418.	1.8	19
44	Highly active alumina-supported CsZr mixed oxide catalysts for low-temperature transesterification of waste cooking oil. <i>Applied Catalysis A: General</i> , 2014, 487, 16-25.	2.2	54
45	Multi-objective optimization of two alkali catalyzed processes for biodiesel from waste cooking oil. <i>Energy Conversion and Management</i> , 2014, 85, 361-372.	4.4	71
46	Synthesis of fatty acid methyl esters via the methanolysis of palm oil over Ca _{3.5} Zr _{0.5} Al ₂ O ₇ mixed oxide catalyst. <i>Renewable Energy</i> , 2014, 66, 680-685.	4.3	29
47	Kinetics and modeling of pepsin soluble collagen (PSC) extraction from the skin of malaysian catfish (<i>Hybrid Clarias</i> sp.). <i>Journal of the Korean Society for Applied Biological Chemistry</i> , 2014, 57, 53-66.	0.9	3
48	A hybrid of back propagation neural network and genetic algorithm for optimization of collagen extraction from Malaysian cultured catfish (<i>Hybrid Clarias</i> sp.). <i>Biotechnology and Bioprocess Engineering</i> , 2013, 18, 257-265.	1.4	1
49	Influence of impurities on biodiesel production from <i>Jatropha curcas</i> L. by supercritical methyl acetate process. <i>Journal of Supercritical Fluids</i> , 2013, 79, 73-75.	1.6	22
50	Biodiesel production by non-catalytic supercritical methyl acetate: Thermal stability study. <i>Applied Energy</i> , 2013, 101, 198-202.	5.1	43
51	Feed-forward neural network modeling and optimization using genetic algorithm: Enzymatic hydrolysis of xylose production. , 2013, , .		1
52	Comparative Study between <i>Candida antarctica</i> Lipase B and <i>Pseudomonas fluorescens</i> as Catalyst for Polycaprolactone Production. <i>Advanced Materials Research</i> , 2012, 626, 547-550.	0.3	0
53	Nonlinear process modeling using multiple neural network (MNN) combination based on modified Dempster-Shafer (DS) approach. , 2012, , .		0
54	Biopolycaprolactone molecular weight prediction based on neural network technique in a batch reactor. , 2012, , .		0

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55	MODEL PREDICTIVE CONTROL (MPC) AND ITS CURRENT ISSUES IN CHEMICAL ENGINEERING. Chemical Engineering Communications, 2012, 199, 472-511.	1.5	39
56	Modeling of Polycaprolactone Production from $\hat{\mu}$ -Caprolactone Using Neural Network. Lecture Notes in Computer Science, 2012, , 444-451.	1.0	2
57	Compressive Strength Prediction of Concrete Recycled Aggregates made from Ceramic Tiles using Feedforward Artificial Neural Network (FANN). Computer Aided Chemical Engineering, 2012, 31, 320-324.	0.3	1
58	Optimum parameters for fault detection and diagnosis system of batch reaction using multiple neural networks. Journal of Loss Prevention in the Process Industries, 2012, 25, 138-141.	1.7	27
59	Neural network based soft sensor for prediction of biopolycaprolactone molecular weight using bootstrap neural network technique. , 2011, , .		1
60	Multiple Input-Single Output (MISO) Feedforward Artificial Neural Network (FANN) Models for Pilot Plant Binary Distillation Column. , 2011, , .		1
61	Candida antarctica as catalyst for polycaprolactone synthesis: effect of temperature and solvents. Asia-Pacific Journal of Chemical Engineering, 2011, 6, 398-405.	0.8	10
62	Comparison and optimisation of biodiesel production from Jatropha curcas oil using supercritical methyl acetate and methanol. Chemical Papers, 2011, 65, .	1.0	24
63	Feedforward artificial neural network to improve model predictive control in biological processes. International Journal of Automation and Control, 2011, 5, 371.	0.3	2
64	Nonlinear Process Modeling of "Shell" Heavy Oil Fractionator using Neural Network. Journal of Applied Sciences, 2011, 11, 2114-2124.	0.1	7
65	Modeling and Nonlinearity Studies of Industrial i-Butane/n-Butane Distillation Column. Journal of Applied Sciences, 2011, 11, 494-502.	0.1	5
66	Nonlinear process modeling of fructosyltransferase (FTase) using bootstrap re-sampling neural network model. Bioprocess and Biosystems Engineering, 2010, 33, 599-606.	1.7	3
67	Modelling and control of different types of polymerization processes using neural networks technique: A review. Canadian Journal of Chemical Engineering, 2010, 88, 1065-1084.	0.9	81
68	Parameters optimization of rice husk ash (RHA)/CaO/CeO ₂ sorbent for predicting SO ₂ /NO sorption capacity using response surface and neural network models. Journal of Hazardous Materials, 2010, 178, 249-257.	6.5	17
69	Inferential estimation of biopolymer (polyester) quality using bootstrap re-sampling neural network technique. , 2010, , .		0
70	Mutual Solubility Study in Supercritical Fluid Extraction of Tocopherols from Crude Palm Oil Using CO ₂ Solvent. International Journal of Molecular Sciences, 2010, 11, 3649-3659.	1.8	7
71	IMPROVING NONLINEAR PROCESS MODELING USING MULTIPLE NEURAL NETWORK COMBINATION THROUGH BAYESIAN MODEL AVERAGING (BMA). IIUM Engineering Journal, 2010, 9, 19-36.	0.5	1
72	Elevating Model Predictive Control Using Feedforward Artificial Neural Networks: A Review. Chemical Product and Process Modeling, 2009, 4, .	0.5	4

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73	MIMO Neural Network Model for Pilot Plant Distillation Column. Computer Aided Chemical Engineering, 2009, 27, 531-536.	0.3	1
74	Selective combination of multiple neural networks for improving model prediction in nonlinear systems modelling through forward selection and backward elimination. Neurocomputing, 2009, 72, 1198-1204.	3.5	22
75	Multiple neural networks modeling techniques in process control: a review. Asia-Pacific Journal of Chemical Engineering, 2009, 4, 403-419.	0.8	21
76	Solubility of β -Carotene from Crude Palm Oil in High-Temperature and High-Pressure Carbon Dioxide. Journal of Chemical & Engineering Data, 2009, 54, 2200-2207.	1.0	7
77	Improving Multi Step-Ahead Model Prediction through Backward Elimination Method in Multiple Neural Networks Combination. Lecture Notes in Computer Science, 2009, , 469-476.	1.0	0
78	Mutual solubility study for 94.2:5.8 of ethanol to octane with supercritical carbon dioxide solvent. Journal of the Taiwan Institute of Chemical Engineers, 2008, 39, 343-352.	1.4	2
79	Supercritical fluid extraction of β -carotene from crude palm oil using CO ₂ . Journal of Food Engineering, 2008, 89, 472-478.	2.7	45
80	Phase equilibrium studying for the supercritical fluid extraction process using carbon dioxide solvent with 1.35 mole ratio of octane to ethanol mixture. Chemical Engineering Journal, 2008, 140, 173-182.	6.6	5
81	Extraction of Fish Oil by Fractionation through Supercritical Carbon Dioxide. Journal of Chemical & Engineering Data, 2008, 53, 2128-2132.	1.0	19
82	Nonlinear Modelling Application in Distillation Column. Chemical Product and Process Modeling, 2007, 2, .	0.5	13
83	Improving multi step-ahead model prediction using multiple neural networks combination through forward selection (FS) technique. , 2006, , .		0
84	A Nonlinear Model Predictive Control Strategy Using Multiple Neural Network Models. Lecture Notes in Computer Science, 2006, , 943-948.	1.0	6
85	Combination of multiple neural networks using data fusion techniques for enhanced nonlinear process modelling. Computers and Chemical Engineering, 2005, 30, 295-308.	2.0	43
86	Bayesian selective combination of multiple neural networks for improving long-range predictions in nonlinear process modelling. Neural Computing and Applications, 2005, 14, 78-87.	3.2	31
87	Improving long range prediction for nonlinear process modelling through combining multiple neural networks. , 0, , .		2
88	A comparison of different methods for combining multiple neural networks models. , 0, , .		13
89	Improving data based nonlinear process modelling through bayesian combination of multiple neural networks. , 0, , .		1
90	Techno-Economic Analysis of an Alkali Catalyzed Biodiesel Production Using Waste Palm Oil. Applied Mechanics and Materials, 0, 465-466, 120-124.	0.2	1

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91	Hybrid Model for Biopolymerization Process ($\hat{\mu}$ -Caprolactone to Polycaprolactone). Applied Mechanics and Materials, 0, 625, 77-80.	0.2	1