Muhammad Karim

List of Publications by Year
in descending order

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		236925	214800
82	2,365	25	47
papers	citations	h-index	g-index

82	82	82	2777
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Root Cause Analysis of Key Process Variable Deviation for Rare Events in the Chemical Process Industry. Industrial & Engineering Chemistry Research, 2020, 59, 10987-10999.	3.7	25
2	Effect of dataset size on modeling and monitoring of chemical processes. Chemical Engineering Science, 2020, 227, 115928.	3.8	5
3	Kinetic modeling of countercurrent saccharification. Biotechnology for Biofuels, 2019, 12, 179.	6.2	2
4	Effect of headspace gas composition on carboxylates production in open-culture fermentation of corn stover. Biomass and Bioenergy, 2019, 126, 57-61.	5.7	9
5	Development of modified HCH-1 kinetic model for long-term enzymatic cellulose hydrolysis and comparison with literature models. Biotechnology for Biofuels, 2019, 12, 34.	6.2	14
6	Estimation of Unmeasured States in a Bioreactor under Unknown Disturbances. Industrial & Engineering Chemistry Research, 2019, 58, 2235-2245.	3.7	4
7	Design of an Unknown Input Observer for Leak Detection under Process Disturbances. Industrial & Engineering Chemistry Research, 2017, 56, 989-998.	3.7	7
8	Economic improvement of continuous pharmaceutical production via the optimal control of a multifeed bioreactor. Biotechnology Progress, 2017, 33, 902-912.	2.6	9
9	Economic viability of consolidated bioprocessing utilizing multiple biomass substrates for commercial-scale cellulosic bioethanol production. Biomass and Bioenergy, 2017, 103, 35-46.	5.7	22
10	Detection of Multiple Leaks in a Natural Gas Pipeline Using Observer and Mixed-Integer Partial Differential Equation-Constrained Optimization. Industrial & Engineering Chemistry Research, 2017, 56, 11839-11846.	3.7	3
11	Fault detection of nonlinear systems using an improved KPCA method. , 2017, , .		1
12	Monitoring of chemical processes using improved multiscale KPCA. , 2017, , .		6
13	Separation and recovery of intracellular beta-carotene using a process synthesis framework. Computer Aided Chemical Engineering, 2017, 40, 2851-2856.	0.5	1
14	Modelling of batch kinetics of aerobic carotenoid production using Saccharomyces cerevisiae. Biochemical Engineering Journal, 2016, 114, 226-236.	3.6	12
15	Separating isopropanol from its diluted solutions via a process of integrating gas stripping and vapor permeation. RSC Advances, 2015, 5, 24031-24037.	3.6	9
16	A novel method for furfural recovery via gas stripping assisted vapor permeation by a polydimethylsiloxane membrane. Scientific Reports, 2015, 5, 9428.	3.3	26
17	Alternative power sources for remote sensors: A review. Journal of Power Sources, 2014, 245, 129-143.	7.8	175
18	A PDMS membrane with high pervaporation performance for the separation of furfural and its potential in industrial application. Green Chemistry, 2014, 16, 1262-1273.	9.0	79

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19	Preparation of PDMS membrane using water as solvent for pervaporation separation of butanolâ€“water mixture. Green Chemistry, 2013, 15, 2180.	9.0	132
20	Saccharification and Fermentation of Waste Sweet Potato for Bioethanol Production. Journal of Food Process Engineering, 2013, 36, 739-747.	2.9	10
21	Optimization of Bioethanol Ethanol Production in Fed-batch Fermentation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 816-821.	0.4	2
22	Dynamics of cello-oligosaccharides on a cellulose crystal surface. Cellulose, 2012, 19, 1791-1806.	4.9	12
23	Heterogeneous reaction kinetics of epoxide-functionalized regenerated cellulose membrane and aliphatic amine. Thermochimica Acta, 2012, 543, 18-23.	2.7	0
24	Growth kinetics of microalgae in microfluidic static droplet arrays. Biotechnology and Bioengineering, 2012, 109, 2987-2996.	3.3	84
25	Computationally Efficient Identification of Global ARX Parameters With Guaranteed Stability. IEEE Transactions on Automatic Control, 2011, 56, 1406-1411.	5.7	5
26	Multi-Model MPC for Nonlinear Systems. Computer Aided Chemical Engineering, 2011, 29, 622-627.	0.5	5
27	A whole cell biocatalyst for cellulosic ethanol production from dilute acid-pretreated corn stover hydrolyzates. Applied Microbiology and Biotechnology, 2011, 91, 529-542.	3.6	68
28	Potential of mean force for separation of the repeating units in cellulose and hemicellulose. Carbohydrate Research, 2011, 346, 867-871.	2.3	11
29	Multi-Scale Modeling of Heterogeneities in Mammalian Cell Culture Processes. Industrial & Engineering Chemistry Research, 2010, 49, 7990-8006.	3.7	29
30	Model-Based Fed-Batch for High-Solids Enzymatic Cellulose Hydrolysis. Applied Biochemistry and Biotechnology, 2009, 152, 88-107.	2.9	196
31	Alternative model structure with simplistic noise model to identify linear time invariant systems subjected to non-stationary disturbances. Journal of Process Control, 2009, 19, 964-977.	3.3	18
32	Comprehensive methodology for detection and diagnosis of oscillatory control loops. Control Engineering Practice, 2009, 17, 939-956.	5.5	55
33	A Modified Extended Recursive Least-Squares Method for Closed-Loop Identification of FIR Models. Industrial & Engineering Chemistry Research, 2009, 48, 6327-6338.	3.7	3
34	Tubular bioreactor models that include Onsagerâ€“Curie scalar cross-phenomena to describe stress-dependent rates of cell proliferation. Biophysical Chemistry, 2008, 135, 41-50.	2.8	32
35	Soluble and insoluble solids contributions to high-solids enzymatic hydrolysis of lignocellulose. Bioresource Technology, 2008, 99, 8940-8948.	9.6	280
36	Flocculation enhanced microfiltration of Escherichia coli lysate. Biochemical Engineering Journal, 2008, 40, 512-519.	3.6	13

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37	Effect of Shear Stress on Intrinsic CHO Culture State and Glycosylation of Recombinant Tissue-Type Plasminogen Activator Protein. Biotechnology Progress, 2008, 19, 1199-1209.	2.6	68
38	Modeling Intrinsic Kinetics of Enzymatic Cellulose Hydrolysis. Biotechnology Progress, 2008, 23, 626-637.	2.6	51
39	Prediction of N-linked glycan branching patterns using artificial neural networks. Mathematical Biosciences, 2008, 211, 89-104.	1.9	12
40	Quantifying the metabolic capabilities of engineered Zymomonas mobilis using linear programming analysis. Microbial Cell Factories, 2007, 6, 8.	4.0	27
41	Optimization of fed-batch parameters and harvest time of CHO cell cultures for a glycosylated product with multiple mechanisms of inactivation. Biotechnology and Bioengineering, 2007, 98, 378-390.	3.3	16
42	PREDICTION OF GLYCOSYLATION SITE-OCCUPANCY USING ARTIFICIAL NEURAL NETWORKS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 725-730.	0.4	0
43	Development of a Culture Sub-population Induction Model: Signaling Pathways Synergy and Taxanes Production by Taxus canadensis. Biotechnology Progress, 2006, 22, 1671-1682.	2.6	5
44	Development of a Culture Sub-population Induction Model: Signaling Pathways Synergy and Taxanes Production byTaxuscanadensis. Biotechnology Progress, 2006, 22, 1671-1682.	2.6	3
45	Variable Site-Occupancy Classification of N-Linked Glycosylation Using Artificial Neural Networks. Biotechnology Progress, 2005, 21, 1653-1662.	2.6	19
46	Neural Network Based Identification of r-TPA Production and Glycosylation in CHO Cells. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 79-84.	0.4	0
47	Neural Network-Based Prediction of Variable Site-Occupancy of N-Linked Glycosylation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 309-314.	0.4	0
48	Effect of Sulfuric and Phosphoric Acid Pretreatments on Enzymatic Hydrolysis of Corn Stover. Applied Biochemistry and Biotechnology, 2003, 105, 115-126.	2.9	79
49	Data-Based Modeling and Analysis of Bioprocesses: Some Real Experiences. Biotechnology Progress, 2003, 19, 1591-1605.	2.6	29
50	Evaluation of Ion Exchange Resins for Removal of Inhibitory Compounds from Corn Stover Hydrolyzate for Xylitol Fermentation. Biotechnology Progress, 2003, 19, 1837-1841.	2.6	73
51	Neural-Network-Based Identification of Tissue-Type Plasminogen Activator Protein Production and Glycosylation in CHO Cell Culture under Shear Environment. Biotechnology Progress, 2003, 19, 1828-1836.	2.6	15
52	Control of starvation-induced apoptosis in Chinese hamster ovary cell cultures. Biotechnology and Bioengineering, 2002, 78, 645-657.	3.3	28
53	Modeling and Advanced Control of Recombinant Zymomonas mobilis Fed-Batch Fermentation. Biotechnology Progress, 2002, 18, 572-579.	2.6	24
54	Probabilistic neural networks using Bayesian decision strategies and a modified Gompertz model for growth phase classification in the batch culture of Bacillus subtilis. Biochemical Engineering Journal, 2001, 7, 41-48.	3.6	31

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55	Identification and Control of Dissolved Oxygen in Hybridoma Cell Culture in a Shear Sensitive Environment. Biotechnology Progress, 2001, 17, 634-642.	2.6	16
56	Growth-Phase Classification Using Backpropagation and Probabilistic Neural Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1999, 32, 7568-7572.	0.4	0
57	Prediction and classification of different phases in a fermentation using neural networks. Biotechnology Letters, 1998, 12, 301-304.	0.5	13
58	Adaptive pole placement control algorithm for DO-control in Î²-lactamase production. , 1998, 60, 1-9.		16
59	Hammerstein model identification by multilayer feedforward neural networks. International Journal of Systems Science, 1997, 28, 49-54.	5.5	21
60	Global and local neural network models in biotechnology: Application to different cultivation processes. Journal of Bioscience and Bioengineering, 1997, 83, 1-11.	0.9	59
61	Experimental optimization of a real time fed-batch fermentation process using Markov decision process. , 1997, 55, 317-327.		12
62	A New Method for the Identification of Hammerstein Model**This paper was not presented at any IFAC meeting. This paper was recommended for publication in revised form by Associate Editor B.W. Bequette under the direction of Editor Yaman Arkun.. Automatica, 1997, 33, 1871-1875.	5.0	79
63	A decreasing feeding profile for the optimization of ethanol production in a recombinant Escherichia coli fed-batch fermentation. Biotechnology Letters, 1996, 18, 1055-1060.	2.2	3
64	Effect of Oxygen Limitation on Î²-Lactamase Production. Biotechnology Progress, 1996, 12, 786-792.	2.6	8
65	Mass balance and thermodynamic description of solid state fermentation of lignocellulosics byPleurotus ostreatus for animal feed production. Journal of Industrial Microbiology, 1995, 15, 25-31.	0.9	5
66	Real-time design of an adaptive nonlinear predictive controller. International Journal of Control, 1994, 59, 863-889.	1.9	27
67	Use of an Extended Kalman Filter and development of an automated system for xylose fermentation by a recombinantEscherichia coli. Journal of Industrial Microbiology, 1994, 13, 83-89.	0.9	6
68	Model-predictive pH control using real-time NARX approach. AICHE Journal, 1994, 40, 269-282.	3.6	61
69	Comparison of ethanol production from xylose by a recombinant Escherichia coli in batch, fedbatch and continuous fermentations.. Journal of General and Applied Microbiology, 1994, 40, 463-467.	0.7	5
70	Effect of operating conditions on solid substrate fermentation. Biotechnology and Bioengineering, 1993, 42, 149-158.	3.3	70
71	On-Line Identification, Model Structure Reduction, and Control Using NARX Models. , 1992, , .		0
72	Evaporative temperature and moisture control in a rocking reactor for solid substrate fermentation. Biotechnology Letters, 1991, 5, 19-24.	0.5	36

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73	Kinetic studies in the biosolubilization of lignite. Resources, Conservation and Recycling, 1990, 3, 97-109.	10.8	2
74	Improved acetone-butanol fermentation analysis using subambient HPLC column temperature. Enzyme and Microbial Technology, 1990, 12, 24-27.	3.2	35
75	Application of Dynamic Programming for Fermentative Ethanol Production by Zymomonas mobilis. , 1990, , .		7
76	Biosolubilization of lignite. Applied Biochemistry and Biotechnology, 1989, 20-21, 731-742.	2.9	13
77	Response surface optimization ofLactobacillus plantarum batch growth. Biotechnology Letters, 1989, 11, 817-820.	2.2	17
78	ON THE DESIGN OF ROBUST CONTROL SYSTEMS FOR DISTILLATION COLUMNS. Chemical Engineering Communications, 1988, 68, 81-98.	2.6	2
79	Data acquisition and control of a continuous fermentation unit. Journal of Industrial Microbiology, 1987, 2, 305-317.	0.9	4
80	Preparation of fungal starter culture in liquid fluidized bed reactor. Biotechnology Letters, 1987, 1, 175.	0.5	4
81	Modeling and sensitivity study of critical parameters in oil shale retorting process. , 1983, , .		0
82	An application of multivariable adaptive control to chemical processes. , 1981, , .		0