

# Given Names Deactivated Family Name

## List of Publications by Year in descending order

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Version: 2024-02-01

98  
papers

3,238  
citations

159358

30  
h-index

161609

54  
g-index

104  
all docs

104  
docs citations

104  
times ranked

2976  
citing authors

#	ARTICLE	IF	CITATIONS
1	Zeolitic imidazolate framework membranes made by ligand-induced permselectivation. <i>Science</i> , 2018, 361, 1008-1011.	6.0	324
2	Economic Optimization of a Lignocellulosic Biomass-to-Ethanol Supply Chain. <i>Chemical Engineering Science</i> , 2012, 67, 68-79.	1.9	195
3	Feedback control of hyperbolic PDE systems. <i>AIChE Journal</i> , 1996, 42, 3063-3086.	1.8	170
4	Modeling and Control of a Renewable Hybrid Energy System With Hydrogen Storage. <i>IEEE Transactions on Control Systems Technology</i> , 2014, 22, 169-179.	3.2	159
5	Continuous production of 5-hydroxymethylfurfural from fructose: a design case study. <i>Energy and Environmental Science</i> , 2010, 3, 1560.	15.6	136
6	Feedback control of nonlinear differential-algebraic-equation systems. <i>AIChE Journal</i> , 1995, 41, 619-636.	1.8	131
7	Modeling, analysis and control of ethylene glycol reactive distillation column. <i>AIChE Journal</i> , 1999, 45, 51-68.	1.8	108
8	Using hydrogen and ammonia for renewable energy storage: A geographically comprehensive techno-economic study. <i>Computers and Chemical Engineering</i> , 2020, 136, 106785.	2.0	96
9	Biorefinery Location and Technology Selection Through Supply Chain Optimization. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 3192-3208.	1.8	94
10	Nonlinear model reduction of chemical reaction systems. <i>AIChE Journal</i> , 2001, 47, 2320-2332.	1.8	86
11	Dynamics and Control of Process Networks with Large Energy Recycle. <i>Industrial &amp; Engineering Chemistry Research</i> , 2009, 48, 6087-6097.	1.8	63
12	Renewable ammonia for sustainable energy and agriculture: vision and systems engineering opportunities. <i>Current Opinion in Chemical Engineering</i> , 2021, 31, 100667.	3.8	63
13	Engineering Biomass Conversion Processes: A Systems Perspective. <i>AIChE Journal</i> , 2013, 59, 3-18.	1.8	62
14	Multiplicity of Steady States in Glycolysis and Shift of Metabolic State in Cultured Mammalian Cells. <i>PLoS ONE</i> , 2015, 10, e0121561.	1.1	61
15	Bistability in Glycolysis Pathway as a Physiological Switch in Energy Metabolism. <i>PLoS ONE</i> , 2014, 9, e98756.	1.1	60
16	Feedback control of two-time-scale nonlinear systems. <i>International Journal of Control</i> , 1996, 63, 965-994.	1.2	57
17	Modeling and Optimal Design of Absorbent Enhanced Ammonia Synthesis. <i>Processes</i> , 2018, 6, 91.	1.3	57
18	Microgrid/Macrogrid Energy Exchange: A Novel Market Structure and Stochastic Scheduling. <i>IEEE Transactions on Smart Grid</i> , 2017, 8, 178-189.	6.2	55

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19	Impact of Decomposition on Distributed Model Predictive Control: A Process Network Case Study. Industrial & Engineering Chemistry Research, 2017, 56, 9606-9616.	1.8	53
20	Dynamics and control of integrated networks with purge streams. AIChE Journal, 2006, 52, 1460-1472.	1.8	49
21	Optimizing the catalyst distribution for countercurrent methane steam reforming in plate reactors. AIChE Journal, 2011, 57, 2518-2528.	1.8	49
22	Exploring the Benefits of Modular Renewable-Powered Ammonia Production: A Supply Chain Optimization Study. Industrial & Engineering Chemistry Research, 2019, 58, 5898-5908.	1.8	49
23	Scheduling-informed optimal design of systems with time-varying operation: A wind-powered ammonia case study. AIChE Journal, 2019, 65, e16434.	1.8	49
24	Optimal scheduling for wind-powered ammonia generation: Effects of key design parameters. Chemical Engineering Research and Design, 2018, 131, 5-15.	2.7	47
25	Policy effects on microgrid economics, technology selection, and environmental impact. Computers and Chemical Engineering, 2015, 81, 364-375.	2.0	40
26	Robust semi-global output tracking for nonlinear singularly perturbed systems. International Journal of Control, 1996, 65, 639-666.	1.2	39
27	A framework for ammonia supply chain optimization incorporating conventional and renewable generation. AIChE Journal, 2017, 63, 4390-4402.	1.8	38
28	A novel system for ammonia-based sustainable energy and agriculture: Concept and design optimization. Chemical Engineering and Processing: Process Intensification, 2019, 140, 11-21.	1.8	38
29	Control-relevant decomposition of process networks via optimization-based hierarchical clustering. AIChE Journal, 2016, 62, 3177-3188.	1.8	35
30	Dynamic real-time optimization and control of a hybrid energy system. AIChE Journal, 2014, 60, 2546-2556.	1.8	34
31	Biomass waste-to-energy supply chain optimization with mobile production modules. Computers and Chemical Engineering, 2021, 150, 107326.	2.0	33
32	A hybrid mechanistic-empirical model for in silico mammalian cell bioprocess simulation. Metabolic Engineering, 2021, 66, 31-40.	3.6	32
33	A mathematical model for zeolite membrane module performance and its use for techno-economic evaluation of improved energy efficiency hybrid membrane-distillation processes for butane isomer separations. Journal of Membrane Science, 2016, 520, 434-449.	4.1	30
34	Distributed Estimation and Nonlinear Model Predictive Control Using Community Detection. Industrial & Engineering Chemistry Research, 2019, 58, 13495-13507.	1.8	28
35	Automated identification of energetically feasible mechanisms of complex reaction networks in heterogeneous catalysis: application to glycerol conversion on transition metals. Green Chemistry, 2014, 16, 813-823.	4.6	27
36	Dynamic considerations in the synthesis of self-optimizing control structures. AIChE Journal, 2008, 54, 1830-1841.	1.8	26

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37	Decomposition of control and optimization problems by network structure: Concepts, methods, and inspirations from biology. <i>AICHE Journal</i> , 2019, 65, e16708.	1.8	26
38	Process design and supply chain optimization of supercritical biodiesel synthesis from waste cooking oils. <i>Chemical Engineering Research and Design</i> , 2013, 91, 1456-1466.	2.7	24
39	Relative time-averaged gain array (RTAGA) for distributed control-oriented network decomposition. <i>AICHE Journal</i> , 2018, 64, 1682-1690.	1.8	21
40	Distributed Model Predictive Control of an Amine Gas Sweetening Plant. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 13103-13115.	1.8	21
41	Feedback regularization and control of nonlinear differential-algebraic-equation systems. <i>AICHE Journal</i> , 1996, 42, 2175-2198.	1.8	20
42	Modeling, optimization, and cost analysis of an IGCC plant with a membrane reactor for carbon capture. <i>AICHE Journal</i> , 2016, 62, 1568-1580.	1.8	20
43	System Decomposition for Distributed Multivariate Statistical Process Monitoring by Performance Driven Agglomerative Clustering. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 8283-8298.	1.8	20
44	Harnessing the Wind Power of the Ocean with Green Offshore Ammonia. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 14605-14617.	3.2	20
45	Modeling and Optimization of Membrane Reactors for Carbon Capture in Integrated Gasification Combined Cycle Units. <i>Industrial &amp; Engineering Chemistry Research</i> , 2012, 51, 5480-5489.	1.8	19
46	Topology Effects on Sparse Control of Complex Networks with Laplacian Dynamics. <i>Scientific Reports</i> , 2019, 9, 9034.	1.6	19
47	Bioethanol enrichment using zeolite membranes: Molecular modeling, conceptual process design and techno-economic analysis. <i>Journal of Membrane Science</i> , 2017, 540, 464-476.	4.1	18
48	DeCODE: a community-based algorithm for generating high-quality decompositions of optimization problems. <i>Optimization and Engineering</i> , 2019, 20, 1067-1084.	1.3	17
49	Structural analysis and output feedback control of nonlinear multivariable processes. <i>AICHE Journal</i> , 1994, 40, 647-669.	1.8	16
50	Mechanism for multiplicity of steady states with distinct cell concentration in continuous culture of mammalian cells. <i>Biotechnology and Bioengineering</i> , 2015, 112, 1437-1445.	1.7	16
51	Graph reduction of complex energy-integrated networks: Process systems applications. <i>AICHE Journal</i> , 2014, 60, 995-1012.	1.8	14
52	Automated network generation and analysis of biochemical reaction pathways using RING. <i>Metabolic Engineering</i> , 2018, 49, 84-93.	3.6	14
53	Distributed cooperative industrial demand response. <i>Journal of Process Control</i> , 2020, 86, 81-93.	1.7	14
54	Hierarchical control of a renewable hybrid energy system. , 2012, , .		12

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55	Dynamics of a reaction-diffusion system with Brusselator kinetics under feedback control. <i>Physical Review E</i> , 1999, 59, 372-380.	0.8	11
56	Networks with large solvent recycle: Dynamics, hierarchical control, and a biorefinery application. <i>AIChE Journal</i> , 2012, 58, 1764-1777.	1.8	11
57	Nonlinear Decoupling Control With Deadtime Compensation for Multirange Operation of Steam Power Plants. <i>IEEE Transactions on Control Systems Technology</i> , 2016, 24, 341-348.	3.2	11
58	Optimal Design of Sustainable Ammonia-Based Food-Energy-Water Systems with Nitrogen Management. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 2816-2834.	3.2	11
59	Renewable hydrogen and ammonia for combined heat and power systems in remote locations: Optimal design and scheduling. <i>Optimal Control Applications and Methods</i> , 2023, 44, 719-738.	1.3	11
60	Fast and stable nonconvex constrained distributed optimization: the ELLADA algorithm. <i>Optimization and Engineering</i> , 2022, 23, 259-301.	1.3	10
61	Dynamics and control of high duty counter-current heat exchangers. , 2011, , .		8
62	Kinetic model optimization and its application to mitigating the Warburg effect through multiple enzyme alterations. <i>Metabolic Engineering</i> , 2019, 56, 154-164.	3.6	8
63	Distributed nonlinear model predictive control through accelerated parallel ADMM. , 2019, , .		8
64	Stochastic blockmodeling for learning the structure of optimization problems. <i>AIChE Journal</i> , 2022, 68, e17415.	1.8	8
65	The role of community structures in sparse feedback control. , 2018, , .		7
66	Efficient Water Pollution Abatement. <i>Industrial &amp; Engineering Chemistry Research</i> , 2019, 58, 22483-22487.	1.8	7
67	Control of an energy integrated solid oxide fuel cell system. , 2011, , .		6
68	A Bilevel Programming Approach to the Convergence Analysis of Control-Lyapunov Functions. <i>IEEE Transactions on Automatic Control</i> , 2019, 64, 4174-4179.	3.6	6
69	An integrated platform for mucin-type O-glycosylation network generation and visualization. <i>Biotechnology and Bioengineering</i> , 2019, 116, 1341-1354.	1.7	6
70	Mathematical modeling and parameter estimation of MFI membranes for para/ortho-xylene separation. <i>AIChE Journal</i> , 2021, 67, e17232.	1.8	6
71	High-Capacity Regenerable H <sub>2</sub> S Sorbent for Reducing Sulfur Emissions. <i>Industrial &amp; Engineering Chemistry Research</i> , 0, , .	1.8	6
72	Efficient Solution of Enterprise-Wide Optimization Problems Using Nested Stochastic Blockmodeling. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 14476-14494.	1.8	5

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73	Output feedback controller realizations for open-loop stable nonlinear processes. , 1992, , .		5
74	Control of interface shape of cadmium zinc telluride grown via an electrodynamic gradient freeze furnace. , 2007, , .		4
75	Graph reduction for hierarchical control of energy integrated process networks. , 2012, , .		4
76	Ammonia supply chains: A new framework for renewable generation with a case study for Minnesota. Computer Aided Chemical Engineering, 2016, 38, 1395-1400.	0.3	4
77	Input-output data-driven control through dissipativity learning. , 2019, , .		4
78	Modeling and simulation of gas separations with spiral-wound membranes. AIChE Journal, 2020, 66, e16274.	1.8	4
79	Branch-and-price for a class of nonconvex mixed-integer nonlinear programs. Journal of Global Optimization, 2021, 81, 861-880.	1.1	4
80	Feedforward/Output Feedback Control of Nonlinear Processes. , 1993, , .		4
81	Dynamics and control of reactor - feed effluent heat exchanger networks. , 2008, , .		3
82	Multi-scale dynamics in counter-current heat exchangers. , 2009, , .		3
83	Modeling and control of a water gas shift membrane reactor for hydrogen production. , 2012, , .		3
84	Nonlinear model predictive control of IGCC plants with membrane reactors for carbon capture. , 2013, , .		3
85	Optimal Operation of an Energy Integrated Batch Reactor - Feed Effluent Heat Exchanger System—Partial financial support for this work by the National Science Foundation, grant CBET-1133167 and the Government of India Department of Science and Technology (DST) INSPIRE & SERB-SB/S3/CE/090/2013 grant is gratefully acknowledged. IFAC-PapersOnLine, 2015, 48, 1192-1197.	0.5	3
86	Impact of steam reformer on the design and control of an energy integrated solid oxide fuel cell system. , 2011, , .		2
87	Input/output hierarchical clustering in process networks based on relative degrees. , 2015, , .		2
88	Dynamic Real-Time Optimization of Microgrids with Day-Ahead Commitments for External Power Exchange. Computer Aided Chemical Engineering, 2016, 38, 103-108.	0.3	2
89	Vapor recompression distillation: Multi-scale dynamics and control. , 2009, , .		1
90	Optimal design and observation of counter-current autothermal reactors for the production of hydrogen. , 2009, , .		1

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91	Control structure design for complex energy integrated networks using graph-theoretic methods. , 2013, , .		1
92	Modularity-based control structure selection for process networks: An extension to distributed parameter systems. , 2017, , .		1
93	Decomposition and Distributed Control of Integrated Lumped and Distributed Parameter Process Networks. , 2018, , .		1
94	AICHE Journal Special PSE issue on sustainable energy. AICHE Journal, 2019, 65, e16630.	1.8	1
95	Nonlinear non-stiff models of reactive distillation columns with two-time-scale dynamics. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 119-124.	0.4	0
96	Dynamics and control of energy integrated distillation column networks. , 2010, , .		0
97	Dynamics and control of autothermal reactors for the production of hydrogen. , 2007, , .		0
98	Smart manufacturing: A sustainable energy perspective. , 2020, , 423-454.		0