

Hao-Hsuan Chang

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

105
papers

1,293
citations

18
h-index

32
g-index

111
ext. papers

1,413
ext. citations

3.9
avg, IF

4.77
L-index

#	Paper	IF	Citations
105	A Mathematical Programming Model for Water Usage and Treatment Network Design. <i>Industrial & Engineering Chemistry Research</i> , 1999 , 38, 2666-2679	3.9	177
104	Simultaneous optimization approach for integrated water-allocation and heat-exchange networks. <i>Chemical Engineering Science</i> , 2008 , 63, 3664-3678	4.4	102
103	Water Usage and Treatment Network Design Using Genetic Algorithms. <i>Industrial & Engineering Chemistry Research</i> , 2001 , 40, 4874-4888	3.9	59
102	Retrofitting Heat Exchanger Networks Based on Simple Pinch Analysis. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 3967-3971	3.9	46
101	Integrated Water Network Designs for Batch Processes. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 1241-1253	3.9	45
100	A Mathematical Programming Model for Discontinuous Water-Reuse System Design. <i>Industrial & Engineering Chemistry Research</i> , 2006 , 45, 5027-5036	3.9	44
99	A fuzzy diagnosis approach using dynamic fault trees. <i>Chemical Engineering Science</i> , 2002 , 57, 2971-2985	4.4	38
98	A New Approach to Generate Flexible Multiperiod Heat Exchanger Network Designs with Timesharing Mechanisms. <i>Industrial & Engineering Chemistry Research</i> , 2013 , 52, 3794-3804	3.9	34
97	Improved Optimization Strategies for Generating Practical Water-Usage and -Treatment Network Structures. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 3607-3618	3.9	29
96	A simple design strategy for fault monitoring systems. <i>AIChE Journal</i> , 1993 , 39, 1146-1163	3.6	28
95	Application of a Mathematic Programming Model for Integrated Planning and Scheduling of Petroleum Supply Networks. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 1935-1954	3.9	26
94	A game-theory based optimization strategy to configure inter-plant heat integration schemes. <i>Chemical Engineering Science</i> , 2014 , 118, 60-73	4.4	25
93	A fuzzy-logic based fault diagnosis strategy for process control loops. <i>Chemical Engineering Science</i> , 2003 , 58, 3395-3411	4.4	22
92	Development of a Generalized Mixed Integer Nonlinear Programming Model for Assessing and Improving the Operational Flexibility of Water Network Designs. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 3496-3504	3.9	20
91	Implementation issues concerning the EKF-based fault diagnosis techniques. <i>Chemical Engineering Science</i> , 1995 , 50, 2861-2882	4.4	20
90	On the use of risk-based Shapley values for cost sharing in interplant heat integration programs. <i>Applied Energy</i> , 2018 , 211, 904-920	10.7	20
89	Single-Objective and Multiobjective Designs for Hydrogen Networks with Fuel Cells. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 6006-6020	3.9	18

88	A heuristic revamp strategy to improve operational flexibility of water networks based on active constraints. <i>Chemical Engineering Science</i> , 2010 , 65, 2758-2770	4.4	18
87	Game-theory based optimization strategies for stepwise development of indirect interplant heat integration plans. <i>Energy</i> , 2018 , 148, 90-111	7.9	17
86	A mathematical programming formulation for temporal flexibility analysis. <i>Computers and Chemical Engineering</i> , 2013 , 57, 151-158	4	16
85	Improved Model Formulations for Multiperiod Hydrogen Network Designs. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 20204-20222	3.9	16
84	An algorithmic approach to generate timesharing schemes for multi-period HEN designs. <i>Chemical Engineering Research and Design</i> , 2015 , 93, 402-410	5.5	15
83	Automatic hazard analysis of batch operations with Petri nets. <i>Reliability Engineering and System Safety</i> , 2002 , 76, 91-104	6.3	15
82	An effective computation strategy for assessing operational flexibility of high-dimensional systems with complicated feasible regions. <i>Chemical Engineering Science</i> , 2016 , 147, 137-149	4.4	14
81	Petri-Net Based Approach To Configure Online Fault Diagnosis Systems for Batch Processes. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 4249-4268	3.9	14
80	Iterative Identification of Continuous-Time Hammerstein and Wiener Systems Using a Two-Stage Estimation Algorithm. <i>Industrial & Engineering Chemistry Research</i> , 2009 , 48, 1495-1510	3.9	14
79	Optimal design of wastewater equalization systems in batch processes. <i>Computers and Chemical Engineering</i> , 2006 , 30, 797-806	4	14
78	Automata generated test plans for fault diagnosis in sequential material- and energy-transfer operations. <i>Chemical Engineering Science</i> , 2014 , 113, 101-115	4.4	13
77	Petri-net based scheduling strategy for semiconductor manufacturing processes. <i>Chemical Engineering Research and Design</i> , 2011 , 89, 291-300	5.5	13
76	An automaton-based approach to evaluate and improve online diagnosis schemes for multi-failure scenarios in batch chemical processes. <i>Chemical Engineering Research and Design</i> , 2011 , 89, 2652-2666	5.5	12
75	An algorithmic revamp strategy for improving operational flexibility of multi-contaminant water networks. <i>Chemical Engineering Science</i> , 2013 , 102, 289-299	4.4	11
74	Efficient Flexibility Assessment Procedure for Water Network Designs. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 3763-3774	3.9	11
73	A Simultaneous Optimization Approach To Generate Design Specifications and Maintenance Policies for the Multilayer Protective Systems in Chemical Processes. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 5543-5555	3.9	11
72	Petri-Net Based Binary Integer Programs for Automatic Synthesis of Batch Operating Procedures. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 2797-2813	3.9	11
71	Optimal planning strategy for the supply chains of light aromatic compounds in petrochemical industries. <i>Computers and Chemical Engineering</i> , 2008 , 32, 1147-1166	4	11

70	Simultaneous optimization strategy for synthesizing heat exchanger networks with multi-stream mixers. <i>Chemical Engineering Research and Design</i> , 2008 , 86, 299-309	5.5	11
69	A hierarchical approach to construct Petri nets for modeling the fault propagation mechanisms in sequential operations. <i>Computers and Chemical Engineering</i> , 2003 , 27, 259-280	4	11
68	Generation of batch operating procedures for multiple material-transfer tasks with Petri nets. <i>Computers and Chemical Engineering</i> , 2005 , 29, 1822-1836	4	11
67	Studies on the Digraph-Based Approach for Fault-Tree Synthesis. 1. The Ratio-Control Systems. <i>Industrial & Engineering Chemistry Research</i> , 1994 , 33, 1520-1529	3.9	11
66	Automata-based operating procedure for abnormal situation management in batch processes. <i>Computers and Chemical Engineering</i> , 2017 , 97, 220-241	4	10
65	Heuristic Approach to Incorporate Timesharing Schemes in Multiperiod Heat Exchanger Network Designs. <i>Industrial & Engineering Chemistry Research</i> , 2012 , 51, 7967-7987	3.9	10
64	An automata-based approach to synthesize untimed operating procedures in batch chemical processes. <i>Korean Journal of Chemical Engineering</i> , 2012 , 29, 583-594	2.8	10
63	An automata based method for online synthesis of emergency response procedures in batch processes. <i>Computers and Chemical Engineering</i> , 2012 , 38, 151-170	4	9
62	Fuzzy diagnosis method for control systems with coupled feed forward and feedback loops. <i>Chemical Engineering Science</i> , 2006 , 61, 3105-3128	4.4	9
61	Petri-Net-Based Strategy To Synthesize the Operating Procedures for Cleaning Pipeline Networks. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 114-123	3.9	9
60	Petri-Net-Based Deductive Reasoning Strategy for Fault Identification in Batch Processes. <i>Industrial & Engineering Chemistry Research</i> , 2004 , 43, 2704-2720	3.9	9
59	Optimal Sensor Placement and Maintenance Strategies for Mass-Flow Networks. <i>Industrial & Engineering Chemistry Research</i> , 2003 , 42, 4366-4375	3.9	9
58	Systematic generation of cyclic operating procedures based on timed automata. <i>Chemical Engineering Research and Design</i> , 2014 , 92, 139-155	5.5	8
57	Two-Tier Search Strategy to Identify Nominal Operating Conditions for Maximum Flexibility. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 10707-10716	3.9	8
56	Development of an Optimal Sensor Placement Procedure Based on Fault Evolution Sequences. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 7335-7346	3.9	8
55	Systematic Enumeration of Fuzzy Diagnosis Rules for Identifying Multiple Faults in Chemical Processes. <i>Industrial & Engineering Chemistry Research</i> , 2007 , 46, 3635-3655	3.9	8
54	Studies on the Digraph-Based Approach for Fault-Tree Synthesis. 2. The Trip Systems. <i>Industrial & Engineering Chemistry Research</i> , 1994 , 33, 1700-1707	3.9	8
53	Development of fault diagnosis strategies based on qualitative predictions of symptom evolution behaviors. <i>Journal of Process Control</i> , 2009 , 19, 842-858	3.9	7

52	Optimal alarm logic design for mass-flow networks. <i>AICHE Journal</i> , 1997 , 43, 3021-3030	3.6	7
51	Constructing fault trees for advanced process control systems \$application to cascade control loops. <i>IEEE Transactions on Reliability</i> , 2004 , 53, 43-60	4.6	7
50	Petri-Net Models for Risk Analysis of Hazardous Liquid Loading Operations. <i>Industrial & Engineering Chemistry Research</i> , 2002 , 41, 4823-4836	3.9	7
49	FAULT DETECTION AND DIAGNOSIS IN BATCH AND SEMI-BATCH PROCESSES USING ARTIFICIAL NEURAL NETWORKS. <i>Chemical Engineering Communications</i> , 1996 , 143, 39-71	2.2	7
48	Design and Maintenance of Multichannel Protective Systems. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 11421-11433	3.9	6
47	Fault diagnosis with automata generated languages. <i>Computers and Chemical Engineering</i> , 2011 , 35, 329-341	3.4	6
46	Simplification techniques for EKF computations in fault diagnosis: Model decomposition. <i>AICHE Journal</i> , 1998 , 44, 1392-1403	3.6	6
45	Multiobjective Optimization of Water-Using Networks with Multiple Contaminants. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 5651-5660	3.9	5
44	Prototype for intergated hazard analysis. <i>AICHE Journal</i> , 1997 , 43, 1494-1510	3.6	5
43	Automatic generation of interlock designs using genetic algorithms. <i>Computers and Chemical Engineering</i> , 2017 , 101, 167-192	4	4
42	On Heuristic Computation and Application of Flexibility Indices for Unsteady Process Design. <i>Industrial & Engineering Chemistry Research</i> , 2016 , 55, 670-682	3.9	4
41	Model Based Approach To Identify Optimal System Structures and Maintenance Policies for Safety Interlocks with Time-Varying Failure Rates. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 4398-4412	3.9	4
40	Development of mathematical programs for evaluating dynamic and temporal flexibility indices based on KKT conditions. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2017 , 73, 86-92	5.3	4
39	A Model-Based Search Strategy for Exhaustive Identification of Alternative Water Network Designs. <i>Industrial & Engineering Chemistry Research</i> , 2011 , 50, 3653-3659	3.9	4
38	Fault-tree structures of override control systems. <i>Reliability Engineering and System Safety</i> , 2003 , 81, 163-181	6.3	4
37	THE MODIFIED DIFFERENTIAL QUADRATURES AND THEIR APPLICATIONS. <i>Chemical Engineering Communications</i> , 1993 , 123, 135-164	2.2	4
36	Optimal Retrofit of a Multiplant Heat Exchanger Network with a Fair Benefit Allocation Plan. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 18088-18105	3.9	4
35	Design Approach To Synthesize, Validate, and Evaluate Operating Procedures Based on Untimed Automata and Dynamic Simulation. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 8172-8183	3.9	3

34	Optimization of Multilayer Standby Mechanisms in Continuous Chemical Processes. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 2049-2059	3.9	3
33	Model based approach to synthesize spare-supported cleaning schedules for existing heat exchanger networks. <i>Computers and Chemical Engineering</i> , 2016 , 93, 413-427	4	3
32	Timed-automata based method for synthesizing diagnostic tests in batch processes. <i>Computers and Chemical Engineering</i> , 2016 , 84, 12-27	4	3
31	SMDDS design based on temporal flexibility analysis. <i>Desalination</i> , 2013 , 320, 96-104	10.3	3
30	Petri-net models for comprehensive hazard analysis of MOCVD processes. <i>Computers and Chemical Engineering</i> , 2011 , 35, 356-371	4	3
29	The use of mixers in heat recovery system design. <i>Chemical Engineering Science</i> , 1997 , 52, 183-194	4.4	3
28	An Exponentially Weighted Moving Average Method for Identification and Monitoring of Stochastic Systems. <i>Industrial & Engineering Chemistry Research</i> , 2008 , 47, 8239-8249	3.9	3
27	Practicable total-site heat integration plan for retrofitting multiple heat exchanger networks. <i>Chemical Engineering Research and Design</i> , 2021 , 174, 137-157	5.5	3
26	Optimal Design Refinements To Accommodate HEN Cleaning Schedules. <i>Industrial & Engineering Chemistry Research</i> , 2018 , 57, 997-1013	3.9	2
25	Retrofitting industrial Heat Exchanger Network based on pinch analysis 2017 ,		2
24	Sequential Approach to Design Batch Distillation Processes for Homogeneous Azeotropic Systems. <i>Industrial & Engineering Chemistry Research</i> , 2010 , 49, 4308-4328	3.9	2
23	Statistical operating strategies for charging batch reactors. <i>AIChE Journal</i> , 1996 , 42, 1304-1318	3.6	2
22	An automata based hybrid modeling approach to synthesize sequential diagnostic tests. <i>Chemical Engineering Research and Design</i> , 2019 , 145, 29-47	5.5	1
21	Synthesis, Validation, and Evaluation of Operating Procedures Based on Timed Automata and Dynamic Simulation. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 8769-8782	3.9	1
20	Hierarchical Petri Nets for Modeling Metabolic Phenotype in Prokaryotes. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 2218-2240	3.9	1
19	A statistics based approach to enhancing safety and reliability of the batch-reactor charging operation. <i>Computers and Chemical Engineering</i> , 1996 , 20, S647-S652	4	1
18	Optimization of Multilayer Standby Mechanisms in Continuous Processes under Varying Loads. <i>Chemical Engineering Research and Design</i> , 2021 , 166, 86-96	5.5	1
17	Optimal designs of multi-event interlocks. <i>Reliability Engineering and System Safety</i> , 2020 , 199, 106915	6.3	0

16	Automata Based Test Plans for Fault Diagnosis in Batch Processes. <i>Computer Aided Chemical Engineering</i> , 2015 , 37, 1781-1786	0.6	o
15	A simple graphic approach for observer decomposition. <i>Journal of Process Control</i> , 2002 , 12, 857-873	3.9	o
14	An Effective Numerical Procedure for Evaluating Flexibility Indices of Dynamic Systems with Piecewise Constant Manipulated Variables. <i>Computers and Chemical Engineering</i> , 2021 , 154, 107464	4	o
13	Systematic Development of Automata Generated Languages for Fault Diagnosis in Continuous Chemical Processes. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2009 , 42, 303-308		
12	Operating Strategies for Charging Batch Reactors under Multiple Constraints. <i>Industrial & Engineering Chemistry Research</i> , 1998 , 37, 1364-1371	3.9	
11	Identification of Design Modifications for Implementing Optimal HEN Cleaning Schedules. <i>Computer Aided Chemical Engineering</i> , 2018 , 44, 1009-1014	0.6	
10	Performance Evaluation of Unsteady Processes with Dynamic and Temporal Flexibility Indices. <i>Computer Aided Chemical Engineering</i> , 2016 , 38, 85-90	0.6	
9	Temporal Flexibility Index 2017 , 77-90		
8	Volumetric Flexibility Analysis 2017 , 33-60		
7	Model-Based Approach to Procedure Synthesis. <i>Advances in Industrial Control</i> , 2021 , 29-72	0.3	
6	Petri Net-Based Operating Procedures. <i>Advances in Industrial Control</i> , 2021 , 95-166	0.3	
5	Generation of Test Plans for Fault Diagnosis with Untimed Automata. <i>Advances in Industrial Control</i> , 2021 , 253-282	0.3	
4	Normal Operating Procedures Obtained with Timed Automata. <i>Advances in Industrial Control</i> , 2021 , 203-252	0.3	
3	Synthesis of Diagnostic Test Plans Based on Hybrid Automata. <i>Advances in Industrial Control</i> , 2021 , 311-347	0.3	
2	Normal Operating Procedures Obtained with Untimed Automata. <i>Advances in Industrial Control</i> , 2021 , 167-201	0.3	
1	Synthesis of Diagnostic Tests Based on Timed Automata. <i>Advances in Industrial Control</i> , 2021 , 283-310	0.3	