

Qiang Xu

List of Publications by Year in descending order

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103
papers

1,536
citations

361045

20
h-index

454577

30
g-index

105
all docs

105
docs citations

105
times ranked

799
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimal design and operation of a C3MR refrigeration system for natural gas liquefaction. Computers and Chemical Engineering, 2012, 39, 84-95.	2.0	106
2	Thermodynamic-Analysis-Based Energy Consumption Minimization for Natural Gas Liquefaction. Industrial & Engineering Chemistry Research, 2011, 50, 12630-12640.	1.8	81
3	Chemical Plant Flare Minimization via Plantwide Dynamic Simulation. Industrial & Engineering Chemistry Research, 2009, 48, 3505-3512.	1.8	64
4	Simulation study on boil-off gas minimization and recovery strategies at LNG exporting terminals. Applied Energy, 2015, 156, 628-641.	5.1	46
5	Thermodynamic-Analysis-Based Design and Operation for Boil-Off Gas Flare Minimization at LNG Receiving Terminals. Industrial & Engineering Chemistry Research, 2010, 49, 7412-7420.	1.8	42
6	Dynamic simulation of LNG loading, BOG generation, and BOG recovery at LNG exporting terminals. Computers and Chemical Engineering, 2017, 97, 47-58.	2.0	40
7	Cyclic scheduling for best profitability of industrial cracking furnace system. Computers and Chemical Engineering, 2010, 34, 544-554.	2.0	38
8	Cyclic Scheduling for Ethylene Cracking Furnace System with Consideration of Secondary Ethane Cracking. Industrial & Engineering Chemistry Research, 2010, 49, 5765-5774.	1.8	37
9	Dynamic Scheduling for Ethylene Cracking Furnace System. Industrial & Engineering Chemistry Research, 2011, 50, 12026-12040.	1.8	32
10	Cascade refrigeration system synthesis based on exergy analysis. Computers and Chemical Engineering, 2011, 35, 1901-1914.	2.0	29
11	Real-time dynamic hoist scheduling for multistage material handling process under uncertainties. AIChE Journal, 2013, 59, 465-482.	1.8	28
12	Optimal design and operation for simultaneous shale gas NGL recovery and LNG re-gasification under uncertainties. Chemical Engineering Science, 2014, 112, 130-142.	1.9	28
13	Energy network dispatch optimization under emergency of local energy shortage. Energy, 2012, 42, 132-145.	4.5	24
14	Simultaneous study on energy consumption and emission generation for an ethylene plant under different start-up strategies. Computers and Chemical Engineering, 2013, 56, 68-79.	2.0	24
15	ENVIRONMENTALLY CONSCIOUS HOIST SCHEDULING FOR ELECTROPLATING FACILITIES. Chemical Engineering Communications, 2006, 193, 273-292.	1.5	23
16	Pressure-Driven Dynamic Simulation for Improving the Performance of a Multistage Compression System during Plant Startup. Industrial & Engineering Chemistry Research, 2009, 48, 9195-9203.	1.8	23
17	Emission Source Characterization for Proactive Flare Minimization during Ethylene Plant Start-ups. Industrial & Engineering Chemistry Research, 2010, 49, 5734-5741.	1.8	23
18	A novel conceptual design by integrating NGL recovery and LNG regasification processes for maximum energy savings. AIChE Journal, 2013, 59, 4673-4685.	1.8	23

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19	Integration of electroplating process design and operation for simultaneous productivity maximization, energy saving, and freshwater minimization. <i>Chemical Engineering Science</i> , 2012, 68, 202-214.	1.9	22
20	Process and Carbon Footprint Analyses of the Allam Cycle Power Plant Integrated with an Air Separation Unit. <i>Clean Technologies</i> , 2019, 1, 325-340.	1.9	22
21	ACS-based dynamic optimization for curing of polymeric coating. <i>AIChE Journal</i> , 2006, 52, 1410-1422.	1.8	21
22	Simulation and economic evaluation of a coupled thermal vapor compression desalination process for produced water management. <i>Journal of Natural Gas Science and Engineering</i> , 2016, 36, 442-453.	2.1	21
23	Simultaneous scheduling of front-end crude transfer and refinery processing. <i>Computers and Chemical Engineering</i> , 2017, 96, 212-236.	2.0	21
24	Comprehensive study on boil-off gas generation from LNG road tankers under simultaneous impacts of heat leakage and transportation vibration. <i>Fuel</i> , 2020, 275, 117876.	3.4	20
25	Graph-Assisted Cyclic Hoist Scheduling for Environmentally Benign Electroplating. <i>Industrial & Engineering Chemistry Research</i> , 2004, 43, 8307-8316.	1.8	18
26	Dynamic Simulation and Optimization for the Start-up Operation of An Ethylene Oxide Plant. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 4360-4371.	1.8	18
27	Emission Constrained Dynamic Scheduling for Ethylene Cracking Furnace System. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 1327-1340.	1.8	18
28	Impacts of flare emissions from an ethylene plant shutdown to regional air quality. <i>Atmospheric Environment</i> , 2016, 138, 22-41.	1.9	17
29	Study on regional air quality impact from a chemical plant emergency shutdown. <i>Chemosphere</i> , 2018, 201, 655-666.	4.2	17
30	Flare Minimization Strategy for Ethylene Plants. <i>Chemical Engineering and Technology</i> , 2010, 33, 1059-1065.	0.9	16
31	Flare Minimization during Start-Ups of an Integrated Cryogenic Separation System via Dynamic Simulation. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 1553-1562.	1.8	16
32	Refinery continuous-time crude scheduling with consideration of long-distance pipeline transportation. <i>Computers and Chemical Engineering</i> , 2015, 75, 74-94.	2.0	16
33	Simultaneous scheduling of multi-product pipeline distribution and depot inventory management for petroleum refineries. <i>Chemical Engineering Science</i> , 2020, 220, 115618.	1.9	16
34	Simultaneous Optimization of Crude Oil Blending and Purchase Planning with Delivery Uncertainty Consideration. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 8453-8464.	1.8	15
35	Scheduling of multiple chemical plant start-ups to minimize regional air quality impacts. <i>Computers and Chemical Engineering</i> , 2013, 54, 68-78.	2.0	15
36	Production-ratio oriented optimization for multi-recipe material handling via simultaneous hoist scheduling and production line arrangement. <i>Computers and Chemical Engineering</i> , 2013, 50, 28-38.	2.0	15

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37	Emission Source Characterization during an Ethylene Plant Shutdown. <i>Chemical Engineering and Technology</i> , 2014, 37, 1170-1180.	0.9	15
38	Process synthesis for cascade refrigeration system based on exergy analysis. <i>AIChE Journal</i> , 2015, 61, 2471-2488.	1.8	15
39	Multiobjective Optimization for Design and Operation of the Chilling Train System in Ethylene Plants. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 5786-5799.	1.8	14
40	Reactive Scheduling of Short-Term Crude Oil Operations under Uncertainties. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 12502-12518.	1.8	14
41	Air-Quality Considered Study for Multiple Olefin Plant Startups. <i>Industrial & Engineering Chemistry Research</i> , 2016, 55, 9698-9710.	1.8	14
42	A New Proactive Scheduling Methodology for Front-End Crude Oil and Refinery Operations under Uncertainty of Shipping Delay. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 8041-8053.	1.8	14
43	A novel MINLP model of front-end crude scheduling for refinery with consideration of inherent upset minimization. <i>Computers and Chemical Engineering</i> , 2018, 117, 42-62.	2.0	14
44	Characterization and sensitivity analysis on ozone pollution over the Beaumont-Port Arthur Area in Texas of USA through source apportionment technologies. <i>Atmospheric Research</i> , 2021, 247, 105249.	1.8	14
45	Simultaneous mixed-integer dynamic optimization for environmentally benign electroplating. <i>Computers and Chemical Engineering</i> , 2011, 35, 2411-2425.	2.0	13
46	Generic Approach of Using Dynamic Simulation for Industrial Emission Reduction under Abnormal Operations: Scenario Study of an Ethylene Plant Start-up. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 15089-15100.	1.8	13
47	Multiobjective Optimization for Air-Quality Monitoring Network Design. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 7743-7750.	1.8	13
48	Impact of chemical plant start-up emissions on ambient ozone concentration. <i>Atmospheric Environment</i> , 2017, 164, 20-30.	1.9	13
49	Dynamic Simulations of the Allam Cycle Power Plant Integrated with an Air Separation Unit. <i>International Journal of Chemical Engineering</i> , 2019, 2019, 1-10.	1.4	13
50	New insight of ozone pollution impact from flare emissions of chemical plant start-up operations. <i>Environmental Pollution</i> , 2019, 245, 873-882.	3.7	13
51	Shutdown Strategy for Flare Minimization at an Olefin Plant. <i>Chemical Engineering and Technology</i> , 2014, 37, 605-610.	0.9	12
52	Dynamic simulation and optimization targeting emission source reduction during an ethylene plant start-up operations. <i>Journal of Cleaner Production</i> , 2016, 135, 771-783.	4.6	12
53	Ozone impact minimization through coordinated scheduling of turnaround operations from multiple olefin plants in an ozone nonattainment area. <i>Atmospheric Environment</i> , 2018, 176, 47-53.	1.9	12
54	Upset-conscious scheduling for continuous parallel-process and performance decaying unit system. <i>Chemical Engineering Science</i> , 2019, 195, 828-840.	1.9	12

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55	Novel Design for Simultaneous Production of Biodiesel and Glycerol Carbonate from Soybean Oil. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 16809-16816.	1.8	11
56	A new method of cyclic hoist scheduling for multi-recipe and multi-stage material handling processes. <i>Computers and Chemical Engineering</i> , 2016, 90, 171-187.	2.0	10
57	Dynamic simulation for flare minimization in chemical process industry under abnormal operations. <i>Current Opinion in Chemical Engineering</i> , 2016, 14, 26-34.	3.8	10
58	Dynamic Routing Optimization for Chemical Hazardous Material Transportation under Uncertainties. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 10500-10517.	1.8	10
59	Optimal scheduling for olefin plant furnace system with consideration of inherent process upset reduction. <i>Computers and Chemical Engineering</i> , 2019, 126, 157-167.	2.0	10
60	Flare minimization for an olefin plant shutdown via plant-wide dynamic simulation. <i>Journal of Cleaner Production</i> , 2020, 254, 120129.	4.6	10
61	Source apportionment simulations of ground-level ozone in Southeast Texas employing OSAT/APCA in CAMx. <i>Atmospheric Environment</i> , 2021, 253, 118370.	1.9	10
62	Integrated Electroplating System Modeling and Simulation for Near Zero Discharge of Chemicals and Metals. <i>Industrial & Engineering Chemistry Research</i> , 2005, 44, 2156-2164.	1.8	9
63	A New Reactive Scheduling Approach for Short-Term Crude Oil Operations under Tank Malfunction. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 12438-12454.	1.8	9
64	Process Synthesis of Mixed Refrigerant System for Ethylene Plants. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 7984-7999.	1.8	9
65	Dynamic Simulation Study for Boil-off Gas Minimization at Liquefied Natural Gas Exporting Terminals. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 5903-5913.	1.8	9
66	Coupling multiple water-reuse network designs for agile manufacturing. <i>Computers and Chemical Engineering</i> , 2012, 45, 62-71.	2.0	8
67	Proactive Abnormal Emission Identification by Air-Quality-Monitoring Network. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 9189-9202.	1.8	8
68	Monte Carlo optimization for site selection of new chemical plants. <i>Journal of Environmental Management</i> , 2015, 163, 28-38.	3.8	8
69	Glycol Loss Minimization for a Natural Gas Dehydration Plant under Upset Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 1994-2008.	1.8	8
70	Effect of industrial flare DREs derived by CFD and WERF on ozone pollution through CAMx simulation. <i>Atmospheric Environment</i> , 2020, 238, 117723.	1.9	8
71	Ozone pollution control strategies examined by Empirical Kinetics Modeling Approach over the Beaumont-Port Arthur region in Texas of USA. <i>Atmospheric Pollution Research</i> , 2021, 12, 403-413.	1.8	8
72	Optimal scheduling for simultaneous refinery manufacturing and multi oil-product pipeline distribution. <i>Computers and Chemical Engineering</i> , 2022, 157, 107613.	2.0	8

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73	Simultaneous 2D hoist scheduling and production line design for multi-recipe and multi-stage material handling processes. <i>Chemical Engineering Science</i> , 2017, 167, 251-264.	1.9	7
74	Integrated Proactive and Reactive Scheduling for Refinery Front-End Crude Movement with Consideration of Unit Maintenance. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 12192-12206.	1.8	7
75	Sloshing Impact on Gas Pretreatment for LNG Plants Located in a Stranded Offshore Location. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 5764-5775.	1.8	6
76	Production of 1,3-Butadiene and Associated Coproducts Ethylene and Propylene from Lignin. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 16182-16189.	1.8	6
77	Integrated Ejector-Based Flare Gas Recovery and On-Site Desalination of Produced Water in Shale Gas Production. <i>Chemical Engineering and Technology</i> , 2020, 43, 200-210.	0.9	6
78	A win-win strategy for simultaneous air-quality benign and profitable emission reduction during chemical plant shutdown operations. <i>Chemical Engineering Research and Design</i> , 2021, 147, 1185-1192.	2.7	6
79	Modeling and Simulation of the 1,3-Butadiene Extraction Process at Turndown Capacity. <i>Chemical Engineering and Technology</i> , 2019, 42, 2649-2657.	0.9	5
80	Optimal Retrofit Design of Crude Distillation Units for Processing Shale Gas/Natural Gas Condensate Oil. <i>Chemical Engineering and Technology</i> , 2016, 39, 1099-1110.	0.9	4
81	Optimal Design of Gas-Expanded Liquid Ethylene Oxide Production with Zero Carbon Dioxide Byproduct. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 5351-5358.	1.8	4
82	Modeling and Optimization for a Comprehensive Gas Processing Plant with Sensitivity Analysis and Economic Evaluation. <i>Chemical Engineering and Technology</i> , 2020, 43, 2198-2207.	0.9	4
83	Parallel Optimization Scheme for Industrial Steam Cracking Process. <i>Journal of Chemical Engineering of Japan</i> , 2003, 36, 14-19.	0.3	4
84	Plant-Wide Scheduling for Profitable Emission Reduction in Petroleum Refineries. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 9471-9488.	1.8	3
85	Modelling and Simulation for Regional Ozone Impact by Flaring Destruction and Removal Efficiency of Oil & Gas Industries. <i>Computer Aided Chemical Engineering</i> , 2018, 44, 2185-2190.	0.3	3
86	A thermo-stable poly(propylene carbonate)-based composite separator for lithium-sulfur batteries under elevated temperatures. <i>International Journal of Energy Research</i> , 2020, 44, 10295-10306.	2.2	3
87	Advanced Process Control for Cost-Effective Glycol Loss Minimization in a Natural Gas Dehydration Plant under Upset Conditions. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 7680-7692.	1.8	3
88	Effect of dynamic low DREs from flare combustion on regional ozone pollution during a chemical plant shutdown. <i>Atmospheric Environment</i> , 2021, 254, 118399.	1.9	3
89	CAMx simulations of the control of anthropogenic emissions on the reduction of ozone formation in Southeast Texas of USA. <i>Atmospheric Pollution Research</i> , 2021, 12, 101114.	1.8	3
90	New Conceptual Design of an Integrated Allam-Cycle Power Complex Coupling Air Separation Unit and Ammonia Plant. <i>Industrial & Engineering Chemistry Research</i> , 0, , .	1.8	3

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91	Debottleneck of Multistage Material-Handling Processes via Simultaneous Hoist Scheduling and Production Line Retrofit. <i>Industrial & Engineering Chemistry Research</i> , 0, , 120425123023004.	1.8	2
92	Emission-Considered Diesel Blending Optimization. <i>Chemical Engineering and Technology</i> , 2014, 37, 293-300.	0.9	2
93	Coupling Refrigeration System Synthesis and Heat Exchanger Network Design. <i>Computer Aided Chemical Engineering</i> , 2014, 34, 297-302.	0.3	2
94	An integrated flare minimization methodology for simultaneous turnaround operations of two chemical plants. <i>Journal of Cleaner Production</i> , 2020, 277, 123181.	4.6	2
95	Air Quality Considered Site Selection for New Chemical Plants. <i>Computer Aided Chemical Engineering</i> , 2014, 34, 273-278.	0.3	2
96	Study on Near-Zero Flaring for Chemical Plant Turnaround Operation. , 2009, , 603-611.		2
97	Comprehensive Study on Sloshing Impacts for an Offshore 3D Vessel via the Integration of Computational Fluid Dynamics Simulation, Experimental Unit, and Artificial Neural Network Prediction. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 22187-22204.	1.8	2
98	Simultaneous Production and Maintenance Scheduling for Refinery Front-End Process with Considerations of Risk Management and Resource Availability. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 2152-2166.	1.8	2
99	Emission Conscious Scheduling of Crude Unloading, Transferring, and Processing for Petroleum Refineries. <i>Computer Aided Chemical Engineering</i> , 2018, 44, 1219-1224.	0.3	1
100	Optimal Front-end Crude Schedule for Refineries under Consideration of Inherent Upset Reduction. <i>Computer Aided Chemical Engineering</i> , 2018, 44, 1315-1320.	0.3	1
101	Iterative algorithms for the input and state recovery from the approximate inverse of strictly proper multivariable systems. <i>Mechanical Systems and Signal Processing</i> , 2018, 101, 320-337.	4.4	0
102	Time-Window Based Berth and Yard Allocation Planning of Container Vessels. , 2019, , .		0
103	New flare minimization strategies with consideration of multi-plant material exchange. <i>Journal of Cleaner Production</i> , 2021, 282, 124508.	4.6	0