Mahmoud M El-Halwagi

List of Publications by Year in Descending Order

494 papers	12,190 citations	57 h-index	87 g-index
517 ext. papers	13,451 ext. citations	4.5 avg, IF	7.02 L-index

#	Paper	IF	Citations
494	Strategic Planning for Optimal Management of Different Types of Shale Gas Wastewater. *ACS Sustainable Chemistry and Engineering*, **2022**, 10, 1451-1470	8.3	1
493	Integrating safety and economics in designing a steam methane reforming process. *International Journal of Hydrogen Energy*, **2022**, 47, 6404-6404	6.7	0
492	Incorporating the occupational health in the optimization for the methanol process. *Journal of Loss Prevention in the Process Industries*, **2022**, 74, 104660	3.5	0
491	Integrating flare gas with cogeneration system: Hazard identification using process simulation. *Journal of Loss Prevention in the Process Industries*, **2022**, 74, 104635	3.5	0
490	Optimal Management of Multistakeholder Macroscopic Water Networks with Social, Economic, and Environmental Considerations. *Industrial & Engineering Chemistry Research*, **2022**, 61, 3342-3349	3.9	0
489	Assessment of modular biorefineries with economic, environmental, and safety considerations **2022**, 293-303		
488	Process Intensification of Membrane-Based Systems for Water, Energy, and Environment Applications **2021**, 97-116		
487	Design and Techno-Economic Analysis of Separation Units to Handle Feedstock Variability in Shale Gas Treatment **2021**, 15-41		
486	Shale Gas as an Option for the Production of Chemicals and Challenges for Process Intensification **2021**, 1-14		
485	What can the trove of CSB incident investigations teach us? A detailed analysis of information characteristics among chemical process incidents investigated by the CSB. *Journal of Loss Prevention in the Process Industries*, **2021**, 69, 104389	3.5	1
484	Strategic Planning of an Integrated Fuel Production System with a Fair-Sustainable Approach. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 5116-5127	8.3	1
483	Development of a CHO Symbiosis Network during Conceptual Design via Economic, Sustainability, and Safety Metrics. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 3735-3749	8.3	6
482	Integrating uncertainty quantification in reliability, availability, and maintainability (RAM) analysis in the conceptual and preliminary stages of chemical process design. *Chemical Engineering Research and Design*, **2021**, 167, 281-291	5.5	4
481	Green hydrogen as an alternative fuel for the shipping industry. *Current Opinion in Chemical Engineering*, **2021**, 31, 100668	5.4	59
480	Renewable ammonia as an alternative fuel for the shipping industry. *Current Opinion in Chemical Engineering*, **2021**, 31, 100670	5.4	31
479	Integration of Excess Renewable Energy with Natural Gas Infrastructure for the Production of Hydrogen and Chemicals. *Process Integration and Optimization for Sustainability*, **2021**, 5, 487-504	2	
478	Multilayer Approach for Product Portfolio Optimization: Waste to Added-Value Products. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 6410-6426	8.3	3

477	Macroscopic water networks optimization considering unsatisfied demand and deep wells dynamic level. *Computers and Chemical Engineering*, **2021**, 145, 107160	4	1
476	Comparison of safety indexes for chemical processes under uncertainty. *Chemical Engineering Research and Design*, **2021**, 148, 225-236	5.5	9
475	Decomposition and Implementation of Large-Scale Interplant Heat Integration **2021**, 201-220		
474	Multi-objective Optimisation of Integrated Heat, Mass and Regeneration Networks with Renewables Considering Economics and Environmental Impact **2021**, 221-259		0
473	Optimization of Integrated Water and Multi-regenerator Membrane Systems Involving Multi-contaminants: A Water-Energy Nexus Aspect **2021**, 261-283		
472	Optimization Strategies for Integrating and Intensifying Housing Complexes **2021**, 285-300		
471	Sustainable Biomass Conversion Process Assessment **2021**, 301-318		1
470	Techno-economic and Environmental Assessment of Ultrathin Polysulfone Membranes for Oxygen-Enriched Combustion **2021**, 69-95		
469	Design of Internally Heat-Integrated Distillation Column (HIDiC) **2021**, 117-129		
468	Graphical Analysis and Integration of Heat Exchanger Networks with Heat Pumps **2021**, 131-149		
467	Insightful Analysis and Integration of Reactor and Heat Exchanger Network **2021**, 151-166		
466	Optimal Selection of Shale Gas Processing and NGL Recovery Plant from Multiperiod Simulation. *Process Integration and Optimization for Sustainability*, **2021**, 5, 123-138	2	2
465	Sustainable Design and Model-Based Optimization of Hybrid ROPRO Desalination Process **2021**, 43-68		
464	Green hydrogen for industrial sector decarbonization: Costs and impacts on hydrogen economy in qatar. *Computers and Chemical Engineering*, **2021**, 145, 107144	4	22
463	A novel CO utilization technology for the synergistic co-production of multi-walled carbon nanotubes and syngas. *Scientific Reports*, **2021**, 11, 1417	4.9	5
462	Integrating flare gas with cogeneration systems: Operational risk assessment. *Journal of Loss Prevention in the Process Industries*, **2021**, 72, 104571	3.5	1
461	Fast, easy-to-use, machine learning-developed models of prediction of flash point, heat of combustion, and lower and upper flammability limits for inherently safer design. *Computers and Chemical Engineering*, **2021**, 155, 107524	4	4
460	An Integrated Approach to the Design of Centralized and Decentralized Biorefineries with Environmental, Safety, and Economic Objectives. *Processes*, **2020**, 8, 1682	2.9	6

459	An analytical investigation on the energy efficiency of integration of natural gas hydrate exploitation with H2 production (by in situ CH4 reforming) and CO2 sequestration. *Energy Conversion and Management*, **2020**, 216, 112959	10.6	10
458	Conceptual Design of a Kraft Lignin Biorefinery for the Production of Valuable Chemicals via Oxidative Depolymerization. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 8823-8829	8.3	13
457	Hybrid Regeneration Network for Flowback Water Management. *Industrial & Engineering Chemistry Research*, **2020**, 59, 13143-13159	3.9	6
456	Flare minimization for an olefin plant shutdown via plant-wide dynamic simulation. *Journal of Cleaner Production*, **2020**, 254, 120129	10.3	6
455	Structural and Operating Optimization of the Methanol Process Using a Metaheuristic Technique. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 3135-3150	8.3	11
454	Synthesis and Sustainability Evaluation of a Lignocellulosic Multifeedstock Biorefinery Considering Technical Performance Indicators. *ACS Omega*, **2020**, 5, 9259-9275	3.9	20
453	System Integration Approaches in Natural Gas Conversion **2020**, 415-426		
452	On the optimization of water-energy nexus in shale gas network under price uncertainties. *Energy*, **2020**, 203, 117770	7.9	7
451	Designing an Eco-Industrial Park with Planning over a Time Horizon. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 18324-18334	8.3	3
450	Optimal design and scheduling of a solar-assisted domestic desalination systems. *Computers and Chemical Engineering*, **2020**, 132, 106605	4	3
449	Incorporating inherent safety during the conceptual process design stage: A literature review. *Journal of Loss Prevention in the Process Industries*, **2020**, 63, 104040	3.5	31
448	Involving economic incentives in optimizing the methanol supply chain considering conventional and unconventional resources. *Applied Thermal Engineering*, **2020**, 166, 114622	5.8	6
447	Sustainable Process Intensification Using Building Blocks. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 17664-17679	8.3	14
446	Mitigation of operational failures via an economic framework of reliability, availability, and maintainability (RAM) during conceptual design. *Journal of Loss Prevention in the Process Industries*, **2020**, 67, 104261	3.5	9
445	Performance evaluation of shale gas processing and NGL recovery plant under uncertainty of the feed composition. *Journal of Natural Gas Science and Engineering*, **2020**, 83, 103517	4.6	11
444	Evaluating the spatiotemporal variability of water recovery ratios of shale gas wells and their effects on shale gas development. *Journal of Cleaner Production*, **2020**, 276, 123171	10.3	7
443	Gradual Synthesis of Heat Exchanger Networks Taking into Account Economic, Environmental, and Safety Factors. *Industrial & Engineering Chemistry Research*, **2020**, 59, 20123-20130	3.9	2
442	A data-driven study of IMO compliant fuel emissions with consideration of black carbon aerosols. *Ocean Engineering*, **2020**, 218, 108241	3.9	14

441	Disaster-Resilient Design of Manufacturing Facilities Through Process Integration: Principal Strategies, Perspectives, and Research Challenges. *Frontiers in Sustainability*, **2020**, 1,	2.1	14
440	The impact of the development of catalyst and reaction system of the methanol synthesis stage on the overall profitability of the entire plant: A techno-economic study. *Catalysis Today*, **2020**, 343, 191-198	5.3	19
439	A Stochastic Optimization Approach to the Design of Shale Gas/Oil Wastewater Treatment Systems with Multiple Energy Sources under Uncertainty. *Sustainability*, **2019**, 11, 4865	3.6	10
438	Optimization of water-energy nexus in shale gas exploration: From production to transmission. *Energy*, **2019**, 183, 651-669	7.9	12
437	Modular Design of Carbon-Hydrogen-Oxygen Symbiosis Networks over a Time Horizon with Limited Natural Resources. *Chemical Engineering and Processing: Process Intensification*, **2019**, 141, 107535	3.7	12
436	CO2 footprint reduction via the optimal design of Carbon-Hydrogen-Oxygen SYmbiosis Networks (CHOSYNs). *Chemical Engineering Science*, **2019**, 203, 1-11	4.4	20
435	Optimization of Microalgae-to-Biodiesel Production Process Using a Metaheuristic Technique. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 8490-8498	8.3	15
434	Integrating Mass and Energy through the Anchor-Tenant Approach for the Synthesis of Carbon-Hydrogen-Oxygen Symbiosis Networks. *Industrial & Engineering Chemistry Research*, **2019**, 58, 16761-16776	3.9	12
433	Multi-scenario model for optimal design of seawater air-conditioning systems under demand uncertainty. *Journal of Cleaner Production*, **2019**, 238, 117863	10.3	7
432	Framework for Design Under Uncertainty Including Inherent Safety, Environmental Assessment, and Economic Performance of Chemical Processes. *Industrial & Engineering Chemistry Research*, **2019**, 58, 13239-13248	3.9	12
431	A Decomposition-Based Approach for the Optimum Integration of Heating Utility and Phase Separation Systems in Oil and Gas Platform. *Industrial & Engineering Chemistry Research*, **2019**, 58, 21584-21601	3.9	4
430	Integrated Approach of Safety, Sustainability, Reliability, and Resilience Analysis via a Return on Investment Metric. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 19522-19536	8.3	14
429	Optimization of biofuel supply chain design via a water-energy-food nexus framework. *Computer Aided Chemical Engineering*, **2019**, 46, 1567-1572	0.6	
428	Using Ultrafiltration for flowback Water Management in Shale Gas Exploration: Multicontaminant Consideration. *Computer Aided Chemical Engineering*, **2019**, 47, 347-352	0.6	2
427	Process Systems Engineering and Catalysis: A Collaborative Approach for the Development of Chemical Processes. *Computer Aided Chemical Engineering*, **2019**, 409-414	0.6	2
426	Editorial overview: Engineering and design approaches to process intensification. *Current Opinion in Chemical Engineering*, **2019**, 25, A4-A5	5.4	
425	A pinch analysis approach to environmental risk management in industrial solvent selection. *Clean Technologies and Environmental Policy*, **2019**, 21, 351-366	4.3	6
424	Synthesis of Interplant Water Networks Using Principal Pipes—Part 2: Network Optimization and Application. *Process Integration and Optimization for Sustainability*, **2019**, 3, 321-339	2	1

423	Capacity Planning for Modular and Transportable Infrastructure for Shale Gas Production and Processing. *Industrial & Engineering Chemistry Research*, **2019**, 58, 5887-5897	3.9	18
422	Technology review and data analysis for cost assessment of water treatment systems. *Science of the Total Environment*, **2019**, 651, 2749-2761	10.2	81
421	A Disjunctive Programming Approach for Optimizing Carbon, Hydrogen, and Oxygen Symbiosis Networks. *Process Integration and Optimization for Sustainability*, **2019**, 3, 199-212	2	11
420	Optimization Approach to the Reduction of CO2 Emissions for Syngas Production Involving Dry Reforming. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 7532-7544	8.3	38
419	Optimal design of air-conditioning systems using deep seawater. *Clean Technologies and Environmental Policy*, **2018**, 20, 639-654	4.3	9
418	Sustainable Process Design Approach for On-Purpose Propylene Production and Intensification. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 2407-2421	8.3	34
417	Incorporation of Safety and Sustainability in Conceptual Design via a Return on Investment Metric. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 1411-1416	8.3	63
416	Improved Targeting Procedure To Determine the Indirect Interplant Heat Integration with Parallel Connection Pattern among Three Plants. *Industrial & Engineering Chemistry Research*, **2018**, 57, 1569-1580	3.9	11
415	Investigating the effect of inherent safety principles on system reliability in process design. *Chemical Engineering Research and Design*, **2018**, 117, 100-110	5.5	24
414	An anchor-tenant approach to the synthesis of carbon-hydrogen-oxygen symbiosis networks. *Computers and Chemical Engineering*, **2018**, 116, 80-90	4	17
413	Optimization of biofuels production via a water□energy□ood nexus framework. *Clean Technologies and Environmental Policy*, **2018**, 20, 1443-1466	4.3	30
412	Accounting for central and distributed zero liquid discharge options in interplant water network design. *Journal of Cleaner Production*, **2018**, 171, 644-661	10.3	24
411	Optimal Supply Chain for Biofuel Production under the Water-Energy-Food Nexus Framework. *Computer Aided Chemical Engineering*, **2018**, 1903-1908	0.6	0
410	Sustainable Manufacturing Education Modules for Senior Undergraduate or Graduate Engineering Curriculum. *Computer Aided Chemical Engineering*, **2018**, 44, 1657-1662	0.6	6
409	Safety, sustainability and economic assessment in conceptual design stages for chemical processes. *Computer Aided Chemical Engineering*, **2018**, 44, 2353-2358	0.6	2
408	Technoeconomic Analysis of Alternative Pathways of Isopropanol Production. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 10260-10272	8.3	12
407	An Integrated Approach to Water-Energy Nexus in Shale-Gas Production. *Processes*, **2018**, 6, 52	2.9	24
406	A computational fluid dynamics evaluation of unconfined hydrogen explosions in high pressure applications. *International Journal of Hydrogen Energy*, **2018**, 43, 16411-16420	6.7	8

405	Synthesis of Water Distribution Networks through a Multi-Stakeholder Approach. *Computer Aided Chemical Engineering*, **2018**, 44, 1717-1722	0.6	
404	Reliability of C-H-O Symbiosis Networks under Source Streams Uncertainty. *Smart and Sustainable Manufacturing Systems*, **2018**, 2, 20180022	0.8	11
403	**2018**,		2
402	Stochastic Optimization Tools for Water-Heat Nexus Problems. *Computer Aided Chemical Engineering*, **2018**, 44, 1987-1992	0.6	
401	Modeling and Optimization of Natural Gas Processing and Production Networks **2018**, 259-303		1
400	Process Safety in Natural Gas Industries **2018**, 305-340		
399	Techno-Economic Analysis of Monetizing Shale Gas to Butadiene **2018**, 403-411		
398	Fractionation of the Gas-to-Liquid Diesel Fuels for Production of On-Specification Diesel and Value-Added Chemicals **2018**, 413-438		
397	A Multicriteria Optimization Approach to the Synthesis of Shale Gas Monetization Supply Chains **2018**, 219-234		
396	Design of Synthetic Jet Fuel Using Multivariate Statistical Methods **2018**, 527-544		
395	Synthesis of Interplant Water Networks Using Principal Pipes. Part 1: Network Representation. *Process Integration and Optimization for Sustainability*, **2018**, 2, 413-434	2	2
394	Simultaneous Energy and Water Optimisation in Shale Exploration. *Processes*, **2018**, 6, 86	2.9	12
393	Simultaneous Energy and Water Optimization in Shale Exploration. *Computer Aided Chemical Engineering*, **2018**, 1957-1962	0.6	
392	Process integration of Calcium Looping with industrial plants for monetizing CO2 into value-added products. *Carbon Resources Conversion*, **2018**, 1, 191-199	4.7	18
391	Integration of Safety in the Optimization of Transporting Hazardous Materials. *Process Integration and Optimization for Sustainability*, **2018**, 2, 435-446	2	3
390	Optimal Multiscale Capacity Planning in Seawater Desalination Systems. *Processes*, **2018**, 6, 68	2.9	11
389	Design of Multiperiod C□H□O Symbiosis Networks. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 9130-9136	8.3	16
388	Synthesis and dual-objective optimization of industrial combined heat and power plants compromising the water□energy nexus. *Applied Energy*, **2018**, 224, 448-468	10.7	15

387	Optimal design of total integrated residential complexes involving water-energy-waste nexus. *Clean Technologies and Environmental Policy*, **2018**, 20, 1061-1085	4.3	13
386	Optimal location of biorefineries considering sustainable integration with the environment. *Renewable Energy*, **2017**, 100, 65-77	8.1	30
385	Optimization of multi-effect distillation with brine treatment via membrane distillation and process heat integration. *Desalination*, **2017**, 408, 110-118	10.3	42
384	Using module-based learning methods to introduce sustainable manufacturing in engineering curriculum. *International Journal of Sustainability in Higher Education*, **2017**, 18, 307-328	3.9	13
383	Optimal Design of Water Desalination Systems Involving Waste Heat Recovery. *Industrial & Engineering Chemistry Research*, **2017**, 56, 1834-1847	3.9	19
382	A return on investment metric for incorporating sustainability in process integration and improvement projects. *Clean Technologies and Environmental Policy*, **2017**, 19, 611-617	4.3	87
381	Thermo-economic analysis and optimization of a zoetropic fluid organic Rankine cycle with liquid-vapor separation during condensation. *Energy Conversion and Management*, **2017**, 148, 517-532	10.6	21
380	Involving Environmental Assessment in the Optimal Design of Domestic Cogeneration Systems. *Process Integration and Optimization for Sustainability*, **2017**, 1, 15-32	2	5
379	Economic and system reliability optimization of heat exchanger networks using NSGA-II algorithm. *Applied Thermal Engineering*, **2017**, 124, 716-724	5.8	15
378	Design, simulation and techno-economic analysis of two processes for the conversion of shale gas to ethylene. *Computers and Chemical Engineering*, **2017**, 107, 237-246	4	33
377	Optimal Design of Cogeneration Systems To Use Uncertain Flare Streams. *Industrial & Engineering Chemistry Research*, **2017**, 56, 7049-7061	3.9	1
376	Shale gas monetization □A review of downstream processing to chemicals and fuels. *Journal of Natural Gas Science and Engineering*, **2017**, 45, 436-455	4.6	89
375	A combined thermo-kinetic analysis of various methane reforming technologies: Comparison with dry reforming. *Journal of CO2 Utilization*, **2017**, 17, 99-111	7.6	60
374	Strategic Planning for the Supply Chain of Aviation Biofuel with Consideration of Hydrogen Production. *Industrial & Engineering Chemistry Research*, **2017**, 56, 13812-13830	3.9	12
373	Strategic Planning for Managing Municipal Solid Wastes with Consideration of Multiple Stakeholders. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 10744-10762	8.3	22
372	Introduction to Sustainability, Sustainable Design, and Process Integration **2017**, 1-14		1
371	Overview of Process Economics **2017**, 15-71		2
370	Benchmarking Process Performance Through Overall Mass Targeting **2017**, 73-125		1

351	Optimal Design of Cogeneration Systems Based on Flaring and Venting Streams and Accounting for the Involved Uncertainty. *Computer Aided Chemical Engineering*, **2017**, 40, 937-942	0.6	
350	Sustainable Optimization of Food Networks in Disenfranchised Communities. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 8895-8907	8.3	6
349	The implementation of inter-plant heat integration among multiple plants. Part I: A novel screening algorithm. *Energy*, **2017**, 140, 1018-1029	7.9	16
348	Using integrated process and microeconomic analyses to enable effective environmental policy for shale gas in the USA. *Clean Technologies and Environmental Policy*, **2017**, 19, 1775-1789	4.3	14
347	Including Inherent Safety in the Design of Chemical Processes. *Industrial & Engineering Chemistry Research*, **2017**, 56, 14507-14517	3.9	31
346	A Shortcut Approach to the Multi-scale Atomic Targeting and Design of CHO Symbiosis Networks. *Process Integration and Optimization for Sustainability*, **2017**, 1, 3-13	2	29
345	Optimal Planning for Sustainable Production of Avocado in Mexico. *Process Integration and Optimization for Sustainability*, **2017**, 1, 109-120	2	4
344	The implementation of inter-plant heat integration among multiple plants. Part II: The mathematical model. *Energy*, **2017**, 135, 382-393	7.9	19
343	Optimal Planning of Infrastructure for the Supply Chain of Shale Gas **2017**, 3-19		2
342	A review of biodiesel production from microalgae. *Clean Technologies and Environmental Policy*, **2017**, 19, 637-668	4.3	94
341	Optimal Design of Multiplant Cogeneration Systems with Uncertain Flaring and Venting. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 675-688	8.3	14
340	Optimization of the production of syngas from shale gas with economic and safety considerations. *Applied Thermal Engineering*, **2017**, 110, 678-685	5.8	47
339	Mathematical optimization of a supply chain for the production of fuel pellets from residual biomass. *Clean Technologies and Environmental Policy*, **2017**, 19, 721-734	4.3	9
338	Editorial overview: Process systems engineering: A chemical engineering perspective of the food-energy-water nexus. *Current Opinion in Chemical Engineering*, **2017**, 18, iii-iv	5.4	1
337	Optimal Design of Water Distribution Networks with Incorporation of Uncertainties and Energy Nexus. *Process Integration and Optimization for Sustainability*, **2017**, 1, 275-292	2	8
336	A Process Integration Approach to the Optimization of CO 2 Utilization via Tri-Reforming of Methane. *Computer Aided Chemical Engineering*, **2017**, 1993-1998	0.6	4
335	Techno-Economic Assessment of Benzene Production from Shale Gas. *Processes*, **2017**, 5, 33	2.9	25
334	Inherent Safety Evaluation for Process Flowsheets of Natural/Shale Gas Processes. *Computer Aided Chemical Engineering*, **2017**, 40, 1243-1248	0.6	1

333	Synthesis of Combined Heat and Reactive Mass-Exchange Networks **2017**, 431-439		1
332	Minimizing CO 2 emissions for syngas production units using Dry Reforming of Methane. *Computer Aided Chemical Engineering*, **2017**, 40, 2617-2622	0.6	0
331	Interplant Water Networks Coupled with Two-Stage Treatment and ZLD Options. *Computer Aided Chemical Engineering*, **2017**, 2683-2688	0.6	0
330	2 Water Management. *Green Chemistry and Chemical Engineering*, **2017**, 69-114		
329	A review of safety indices for process design. *Current Opinion in Chemical Engineering*, **2016**, 14, 42-48	5.4	68
328	Optimization of the Aromatic/Paraffinic Composition of Synthetic Jet Fuels. *Chemical Engineering and Technology*, **2016**, 39, 2217-2228	2	18
327	Multiobjective Optimization of Dual-Purpose Power Plants and Water Distribution Networks. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 6852-6866	8.3	20
326	Editorial overview: Process systems engineering. *Current Opinion in Chemical Engineering*, **2016**, 14, 110-111	5.4	
325	Synthesis of industrial park water reuse networks considering treatment systems and merged connectivity options. *Computers and Chemical Engineering*, **2016**, 91, 289-306	4	27
324	Environmental and economic analysis for the optimal reuse of water in a residential complex. *Journal of Cleaner Production*, **2016**, 130, 82-91	10.3	42
323	Fuzzy mixed integer non-linear programming model for the design of an algae-based eco-industrial park with prospective selection of support tenants under product price variability. *Journal of Cleaner Production*, **2016**, 136, 183-196	10.3	31
322	Involving economic, environmental and safety issues in the optimal purification of biobutanol. *Chemical Engineering Research and Design*, **2016**, 103, 365-376	5.5	15
321	A fuzzy mixed-integer linear programming model for optimal design of polygeneration systems with cyclic loads. *Environmental Progress and Sustainable Energy*, **2016**, 35, 1105-1112	2.5	7
320	Optimal Water Management under Uncertainty for Shale Gas Production. *Industrial & Engineering Chemistry Research*, **2016**, 55, 1322-1335	3.9	68
319	Optimal Synthesis of Refinery Property-Based Water Networks with Electrocoagulation Treatment Systems. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 147-158	8.3	17
318	Safety and techno-economic analysis of ethylene technologies. *Journal of Loss Prevention in the Process Industries*, **2016**, 39, 74-84	3.5	41
317	Application of stochastic analytic hierarchy process for evaluating algal cultivation systems for sustainable biofuel production. *Clean Technologies and Environmental Policy*, **2016**, 18, 1281-1294	4.3	21
316	Optimization across the Water–Energy Nexus for Integrating Heat, Power, and Water for Industrial Processes, Coupled with Hybrid Thermal-Membrane Desalination. *Industrial & Engineering Chemistry Research*, **2016**, 55, 3442-3466	3.9	37

315	Integration of Energy and Wastewater Treatment Alternatives with Process Facilities To Manage Industrial Flares during Normal and Abnormal Operations: Multiobjective Extendible Optimization Framework. *Industrial & Engineering Chemistry Research*, **2016**, 55, 2020-2034	3.9	25
314	Life cycle assessment for Ambrox® production from different chemical routes. *Journal of Cleaner Production*, **2016**, 130, 202-212	10.3	5
313	Optimal reconfiguration of a sugar cane industry to yield an integrated biorefinery. *Clean Technologies and Environmental Policy*, **2016**, 18, 553-562	4.3	22
312	Sustainable Process Integration in the Petrochemical Industries. *Advances in Chemical and Materials Engineering Book Series*, **2016**, 150-163	0.2	2
311	Mathematical Optimization of the Production of Fuel Pellets from Residual Biomass. *Computer Aided Chemical Engineering*, **2016**, 133-138	0.6	1
310	Synthesis and Design Strategies of Interplant Water Networks using Water Mains with Quality Specifications. *Computer Aided Chemical Engineering*, **2016**, 38, 655-660	0.6	3
309	Optimal Reuse of Flowback Wastewater in Shale Gas Fracking Operations Considering Economic and Safety Aspects. *Computer Aided Chemical Engineering*, **2016**, 38, 943-948	0.6	5
308	On the identification of optimal utility corridor locations in interplant water network synthesis. *Environmental Progress and Sustainable Energy*, **2016**, 35, 1492-1511	2.5	4
307	Optimal reuse of flowback wastewater in hydraulic fracturing including seasonal and environmental constraints. *AICHE Journal*, **2016**, 62, 1634-1645	3.6	37
306	Optimal planning and infrastructure development for shale gas production. *Energy Conversion and Management*, **2016**, 119, 91-100	10.6	49
305	Optimal Design of Integrated Solar Power Plants Accounting for the Thermal Storage System and CO2 Mitigation through an Algae System. *Industrial & Engineering Chemistry Research*, **2016**, 55, 11003-11011	3.9	2
304	Simultaneous synthesis of utility system and heat exchanger network incorporating steam condensate and boiler feedwater. *Energy*, **2016**, 113, 875-893	7.9	31
303	Industrial waste heat recovery and cogeneration involving organic Rankine cycles. *Clean Technologies and Environmental Policy*, **2015**, 17, 767-779	4.3	40
302	Analysis of two Alternatives to Produce Ethylene from Shale Gas. *Computer Aided Chemical Engineering*, **2015**, 485-490	0.6	3
301	An integrated approach for incorporating thermal membrane distillation in treating water in heavy oil recovery using SAGD. *Journal of Unconventional Oil and Gas Resources*, **2015**, 12, 6-14		24
300	Optimal design and integration of solar thermal collection, storage, and dispatch with process cogeneration systems. *Chemical Engineering Science*, **2015**, 136, 158-167	4.4	16
299	Synthesis of C-H-O Symbiosis Networks. *AICHE Journal*, **2015**, 61, 1242-1262	3.6	46
298	Optimization of multi-effect distillation process using a linear enthalpy model. *Desalination*, **2015**, 365, 261-276	10.3	24

297	Development of a topology of microalgae-based biorefinery: process synthesis and optimization using a combined forward/backward screening and superstructure approach. *Clean Technologies and Environmental Policy*, **2015**, 17, 2213-2228	4.3	17
296	Simultaneous design of water reusing and rainwater harvesting systems in a residential complex. *Computers and Chemical Engineering*, **2015**, 76, 104-116	4	21
295	A Process Integration Approach to the Assessment of CO2 Fixation through Dry Reforming. *ACS Sustainable Chemistry and Engineering*, **2015**, 3, 625-636	8.3	54
294	Involving integrated seawater desalination-power plants in the optimal design of water distribution networks. *Resources, Conservation and Recycling*, **2015**, 104, 181-193	11.9	15
293	A synthesis approach for industrial city water reuse networks considering central and distributed treatment systems. *Journal of Cleaner Production*, **2015**, 89, 231-250	10.3	44
292	Optimization of facility location and reallocation in an industrial plant through a multi-annual framework accounting for economic and safety issues. *Journal of Loss Prevention in the Process Industries*, **2015**, 33, 129-139	3.5	17
291	Optimal design of macroscopic water networks under parametric uncertainty. *Journal of Cleaner Production*, **2015**, 88, 172-184	10.3	29
290	Optimal design of thermal membrane distillation systems with heat integration with process plants. *Applied Thermal Engineering*, **2015**, 75, 154-166	5.8	23
289	Synthesis of optimal thermal membrane distillation networks. *AICHE Journal*, **2015**, 61, 448-463	3.6	19
288	Optimal design of domestic water-heating solar systems. *Clean Technologies and Environmental Policy*, **2015**, 17, 637-656	4.3	9
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