

The pinch design method for heat exchanger networks

Chemical Engineering Science

38, 745-763

DOI: 10.1016/0009-2509(83)80185-7

Citation Report

#	ARTICLE	IF	CITATIONS
1	Heat and power networks in process design. Part II: Design procedure for equipment selection and process matching. AIChE Journal, 1983, 29, 748-771.	3.6	115
2	Evolutionary synthesis of heat-exchanger networks. Computers and Chemical Engineering, 1984, 8, 67-80.	3.8	43
3	Heat transfer—a review of 1983 literature. International Journal of Heat and Mass Transfer, 1984, 27, 2179-2214.	4.8	5
4	DESIGN OF OPERABLE HEAT EXCHANGER NETWORKS. , 1984, , 599-618.		28
5	Heat Recovery and Exergy Balance in a Tomato Paste Plant. Journal of Food Science, 1985, 50, 934-939.	3.1	8
6	Computer-aided synthesis of heat exchange network. Journal of Heat Recovery Systems, 1985, 5, 425-435.	0.1	10
7	Mixed-integer programming approach for the synthesis of integrated process flowsheets. Computers and Chemical Engineering, 1985, 9, 463-482.	3.8	136
8	Designing heat exchanger networks for existing chemical plants. Computers and Chemical Engineering, 1985, 9, 483-498.	3.8	4
9	A hierarchical decision procedure for process synthesis. AIChE Journal, 1985, 31, 353-362.	3.6	283
10	A NOTE ON THE MINIMUM NUMBER OF UNITS FOR HEAT EXCHANGER NETWORK SYNTHESIS. Chemical Engineering Communications, 1985, 39, 371-380.	2.6	32
11	Optimal thermodynamic synthesis of thermal energy recovery systems. Chemical Engineering Science, 1986, 41, 1243-1255.	3.8	10
12	Simultaneous optimization and heat integration of chemical processes. AIChE Journal, 1986, 32, 123-138.	3.6	374
13	Synthesis of flexible heat exchanger networks for multiperiod operation. Computers and Chemical Engineering, 1986, 10, 153-168.	3.8	105
14	A new bounding strategy for synthesizing distillation schemes with energy integration. Computers and Chemical Engineering, 1986, 10, 545-550.	3.8	11
15	RESHEX: An interactive software package for the synthesis and analysis of resilient heat-exchanger networks—I. Computers and Chemical Engineering, 1986, 10, 577-589.	3.8	50
16	RESHEX: an interactive software package for the synthesis and analysis of resilient heat-exchanger networks—II. Computers and Chemical Engineering, 1986, 10, 591-599.	3.8	33
17	Hidden and pseudo pinch phenomena and relaxation in the synthesis of heat-exchange networks. Computers and Chemical Engineering, 1986, 10, 601-607.	3.8	14
18	Heat exchanger network synthesis by a depth-first method—a case study. Chemical Engineering Science, 1986, 41, 2989-2997.	3.8	2

#	ARTICLE	IF	CITATIONS
19	Process Integration – A Structured Approach to Operating Cost Reduction. Proceedings of the Institution of Mechanical Engineers, Part A: Power and Process Engineering, 1987, 201, 155-161.	0.1	0
20	Wärme-Integration und Prozeß-Optimierung. Chemie-Ingenieur-Technik, 1987, 59, 851-857.	0.8	13
21	Heat and power integration of chemical processes. AIChE Journal, 1987, 33, 898-915.	3.6	33
22	Synthesis of flexible heat exchanger networks with uncertain flowrates and temperatures. Computers and Chemical Engineering, 1987, 11, 319-336.	3.8	129
23	Resilience analysis of heat exchanger networks – I. temperature dependent heat capacities. Computers and Chemical Engineering, 1987, 11, 399-408.	3.8	12
24	Heat integration of reactors – I. Criteria for the placement of reactors into process flowsheet. Chemical Engineering Science, 1988, 43, 593-608.	3.8	44
25	Plenary paper received too late to be included at front of issue. Chemical Engineering Science, 1988, 43, 2303-2318.	3.8	23
26	Modeling of reactors for process heat integration. Computers and Chemical Engineering, 1988, 12, 189-194.	3.8	8
27	The synthesis of cost optimal heat exchanger networks. Computers and Chemical Engineering, 1988, 12, 503-530.	3.8	244
28	Analysis of the heat recovery in two crude distillation units. Heat Recovery Systems & CHP, 1988, 8, 483-488.	0.3	6
29	Scope for industrial heat pump applications in the United States. Heat Recovery Systems & CHP, 1988, 8, 279-287.	0.3	3
30	Analysis and Synthesis of Resilient Heat Exchanger Networks. Advances in Chemical Engineering, 1988, 14, 1-93.	0.9	9
31	SYNTHESIS OF HEAT EXCHANGER NETWORKS WITH DESIGNER IMPOSED CONSTRAINTS. Chemical Engineering Communications, 1988, 69, 149-168.	2.6	1
32	TOWARD THE SYNTHESIS OF GLOBAL OPTIMUM HEAT EXCHANGER NETWORKS: THE UNPINCHED CASE. Chemical Engineering Communications, 1989, 75, 57-88.	2.6	5
33	The energy saving effects of complex heat-integrated distillation configurations. Korean Journal of Chemical Engineering, 1989, 6, 185-195.	2.7	3
35	Gemeinschaftsarbeiten der DGF, 107. Mitteilung Die Dämpfung von Speisefetten und -Ärten zur Desodorierung und Entsäuerung V. Lipid - Fett, 1989, 91, 452-456.	0.4	0
36	Process optimization via simulated annealing: Application to network design. AIChE Journal, 1989, 35, 725-736.	3.6	167
37	Synthesis of mass exchange networks. AIChE Journal, 1989, 35, 1233-1244.	3.6	622

#	ARTICLE	IF	CITATIONS
38	Heat integration of reactorsâ€™II. Total flowsheet integration. Chemical Engineering Science, 1989, 44, 2667-2682.	3.8	15
39	Anwendung der Pinch-Methode auf die thermische Kopplung von chemischen RÃ¼hrkesselreaktoren mit weiteren Anlagenkomponenten. Chemie-Ingenieur-Technik, 1989, 61, 982-983.	0.8	0
40	Rapid analysis of heat recovery in industrial plants. Heat Recovery Systems & CHP, 1989, 9, 183-187.	0.3	4
42	A new dual-temperature design method for the synthesis of heat exchanger networks. Computers and Chemical Engineering, 1989, 13, 667-685.	3.8	36
43	A retrofit approach for heat exchanger networks. Computers and Chemical Engineering, 1989, 13, 703-715.	3.8	127
44	Synthesis of cascade refrigeration systems integrated with chemical processes. Computers and Chemical Engineering, 1989, 13, 247-258.	3.8	23
45	Synep1 : A methodology for energy integration and optimal heat exchanger network synthesis. Computers and Chemical Engineering, 1989, 13, 603-610.	3.8	24
46	A Resilience target for heat exchanger network synthesis. Computers and Chemical Engineering, 1989, 13, 821-837.	3.8	25
47	A simple technique for locating loops in heat exchanger networks. Computers and Chemical Engineering, 1989, 13, 859-860.	3.8	18
48	Development of an expert system for synthesis of heat exchanger networks. Computers and Chemical Engineering, 1989, 13, 1221-1227.	3.8	10
49	Energy savings through heat integration of continuous tank reactors into heat recovery systems. Chemical Engineering and Processing: Process Intensification, 1989, 26, 81-91.	3.6	1
50	Investigation of a running condition for a heat exchanger network.. Journal of Chemical Engineering of Japan, 1989, 22, 522-527.	0.6	0
51	A comprehensive optimization model of the heat exchanger network retrofit problem. Heat Recovery Systems & CHP, 1990, 10, 407-422.	0.3	41
52	Mixed-integer nonlinear programming techniques for the synthesis of engineering systems. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 1990, 1, 205-228.	2.1	82
53	A simple synthesis method for heat exchanger networks wth minimum number of matches. Chemical Engineering Science, 1990, 45, 1928-1932.	3.8	7
54	Analysis of an existing heat exchanger network and effects of heat pump installations. Heat Recovery Systems & CHP, 1990, 10, 285-296.	0.3	11
55	The synthesis of cost optimal heat exchanger networks. Heat Recovery Systems & CHP, 1990, 10, 301-328.	0.3	160
56	A new approach to heat exchanger network synthesis. Heat Recovery Systems & CHP, 1990, 10, 399-405.	0.3	1

#	ARTICLE	IF	CITATIONS
57	Toward a more realistic overall process synthesis—the combined approach. Computers and Chemical Engineering, 1990, 14, 1213-1236.	3.8	31
58	Algorithmic efficiency of simulated annealing for heat exchanger network design. Computers and Chemical Engineering, 1990, 14, 1039-1050.	3.8	65
59	Simultaneous optimization models for heat integration—II. Heat exchanger network synthesis. Computers and Chemical Engineering, 1990, 14, 1165-1184.	3.8	895
60	Systematic energy relaxation in MER heat exchanger networks. Computers and Chemical Engineering, 1990, 14, 601-611.	3.8	24
61	Improved optimization strategies for automated heat exchanger network synthesis through physical insights. Computers and Chemical Engineering, 1990, 14, 925-944.	3.8	110
62	Capital cost targets for heat exchanger networks comprising mixed materials of construction, pressure ratings and exchanger types. Computers and Chemical Engineering, 1990, 14, 319-335.	3.8	106
63	Synthesis of flexible heat exchanger networks—I. Convex networks. Computers and Chemical Engineering, 1990, 14, 197-211.	3.8	31
64	Cost optimum heat exchanger networks—1. Minimum energy and capital using simple models for capital cost. Computers and Chemical Engineering, 1990, 14, 729-750.	3.8	242
65	Cost optimum heat exchanger networks—2. targets and design for detailed capital cost models. Computers and Chemical Engineering, 1990, 14, 751-767.	3.8	142
66	A BEST-FIRST SEARCH STRATEGY FOR ENERGY RELAXATION IN MER HEAT EXCHANGER NETWORKS. Engineering Optimization, 1990, 16, 165-189.	2.6	2
67	Parametric optimization of a paper machine heat recovery system. Industrial & Engineering Chemistry Research, 1990, 29, 2252-2257.	3.7	0
68	A screening and optimization approach for the retrofit of heat-exchanger networks. Industrial & Engineering Chemistry Research, 1991, 30, 146-162.	3.7	113
69	Two Principles of Differential Second Law Heat Exchanger Design. Journal of Heat Transfer, 1991, 113, 329-336.	2.1	7
70	A note on the use of dual temperature approach in heat exchanger network synthesis. Computers and Chemical Engineering, 1991, 15, 305-312.	3.8	5
71	Heat recovery between areas of integrity. Computers and Chemical Engineering, 1991, 15, 809-832.	3.8	84
72	A genetic algorithmic framework for process design and optimization. Computers and Chemical Engineering, 1991, 15, 217-228.	3.8	101
73	Optimal synthesis of a heat-exchanger network. International Journal of Energy Research, 1991, 15, 31-39.	4.5	0
74	Diverse pinch concept for heat exchange network synthesis: the case of different heat transfer conditions. Chemical Engineering Science, 1991, 46, 1623-1634.	3.8	29

#	ARTICLE	IF	CITATIONS
75	Toward the synthesis of global optimum heat exchanger networks under multiple-periods of operation. Korean Journal of Chemical Engineering, 1991, 8, 95-104.	2.7	5
76	Integration of a New Process Into an Existing Site: A Case Study in the Application of Pinch Technology. Journal of Engineering for Gas Turbines and Power, 1991, 113, 159-168.	1.1	25
77	Optimal process design for specialty products. Computers and Chemical Engineering, 1992, 16, S321-S328.	3.8	2
78	The pinch design method for tasks with multiple pinches. Computers and Chemical Engineering, 1992, 16, 129-133.	3.8	7
79	A hierarchical procedure for the conceptual design of solids processes. Computers and Chemical Engineering, 1992, 16, 675-689.	3.8	32
80	Synhen: Microcomputer directed package of programs for heat exchanger network synthesis. Computers and Chemical Engineering, 1992, 16, 691-706.	3.8	5
81	Capital cost targets for networks with non-uniform heat exchanger specifications. Computers and Chemical Engineering, 1992, 16, 477-495.	3.8	23
82	Rule-based system for the synthesis of heat exchanger networks. Expert Systems With Applications, 1992, 5, 111-119.	7.6	2
83	Synthesis of heat exchanger networks with minimum number of units for pinched problems. Korean Journal of Chemical Engineering, 1992, 9, 117-127.	2.7	8
86	Advances in the methodologies of optimal thermal design. Desalination, 1993, 92, 79-101.	8.2	1
88	Wastewater minimisation. Chemical Engineering Science, 1994, 49, 981-1006.	3.8	945
89	Synthesis of combined heat and reactive mass-exchange networks. Chemical Engineering Science, 1994, 49, 2059-2074.	3.8	71
90	Design of distributed effluent treatment systems. Chemical Engineering Science, 1994, 49, 3127-3145.	3.8	194
91	Minimization of number of units in heat exchanger networks using a lumped approach. Computers and Chemical Engineering, 1994, 18, 71-74.	3.8	1
92	Application of the generalized stream structure in HEN synthesis. Computers and Chemical Engineering, 1994, 18, 345-368.	3.8	13
93	On Dynamics of Shell-and-Tube Heat Exchangers from the Viewpoint of the Network Theory.. 880-02 Nihon Kikai Gakkai RonbunshÅ« Transactions of the Japan Society of Mechanical Engineers Series B B-hen, 1994, 60, 2895-2903.	0.2	0
94	Intelligent System for Design of Heat Exchanger Networks with Improved Controllability. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1994, 27, 129-134.	0.4	0
95	Synthesis of optimal heat-induced separation networks. Chemical Engineering Science, 1995, 50, 81-97.	3.8	46

#	ARTICLE	IF	CITATIONS
96	Selecting stream splits in heat exchanger network design. Heat Recovery Systems & CHP, 1995, 15, 85-94.	0.3	3
97	Novel types of sensitivity analysis for additive MCDM methods. European Journal of Operational Research, 1995, 81, 281-290.	5.7	98
98	An Intelligent design environment for conceptual process design. Engineering Applications of Artificial Intelligence, 1995, 8, 115-127.	8.1	7
99	A new method for heat exchanger network synthesis using area targeting procedures. Computers and Chemical Engineering, 1995, 19, 197-222.	3.8	26
100	The placement of two-stream and multi-stream heat-exchangers in an existing network through path analysis. Computers and Chemical Engineering, 1995, 19, 143-148.	3.8	21
101	Automated synthesis of HENs using block decomposition and heuristic rules. Computers and Chemical Engineering, 1995, 19, 155-160.	3.8	7
102	Synthesis of Optimal Chemical Reactor Networks with Simultaneous Mass Integration. Industrial & Engineering Chemistry Research, 1996, 35, 4523-4536.	3.7	33
103	Equipartition of Forces: A New Principle for Process Design and Optimization. Industrial & Engineering Chemistry Research, 1996, 35, 4147-4153.	3.7	73
104	Prices of utilities and process structure. Computers and Chemical Engineering, 1996, 20, S183-S188.	3.8	2
105	Mixed-Integer Optimization Techniques for Algorithmic Process Synthesis. Advances in Chemical Engineering, 1996, , 171-246.	0.9	40
106	Industrial Applications of Chemical Process Synthesis. Advances in Chemical Engineering, 1996, , 1-62.	0.9	68
107	Identification of heat load loops and downstream paths in heat exchanger networks. Canadian Journal of Chemical Engineering, 1996, 74, 876-882.	1.7	12
108	A multiobjective programming approach to waste minimization in the utility systems of chemical processes. Chemical Engineering Science, 1996, 51, 3951-3965.	3.8	45
109	New trends in optimization-based approaches to process synthesis. Computers and Chemical Engineering, 1996, 20, 665-683.	3.8	87
110	Development of a methodology to reproduce and to optimize the operating conditions of a natural gas processing unit. Computers and Chemical Engineering, 1996, 20, S1511-S1516.	3.8	5
111	Design considerations for ammonia-water rankine cycle. Energy, 1996, 21, 835-841.	8.8	24
113	Chemical Reactor Network Targeting and Integration: An Optimization Approach. Advances in Chemical Engineering, 1996, 23, 247-300.	0.9	5
114	Systemic Approach Applied to Dual Pressure HRSG. , 1997, , .		2

#	ARTICLE	IF	CITATIONS
115	Combining Heat Integration with Mass Integration. , 1997, , 217-247.		1
116	Introduction to Pinch Analysis. , 1997, , 122-138.		15
117	Design of Batch Versus Continuous Processes. Chemical Engineering Research and Design, 1997, 75, 709-717.	5.6	42
118	Automated design method for heat exchanger network using block decomposition and heuristic rules. Computers and Chemical Engineering, 1997, 21, 1095-1104.	3.8	37
119	Combined exergy and pinch approach to process analysis. Computers and Chemical Engineering, 1997, 21, S23-S28.	3.8	22
120	Synthesis of heat-exchanger network by simulated annealing and NLP procedures. AIChE Journal, 1997, 43, 3007-3020.	3.6	64
121	Capital cost targets for mass exchange networks A special case: Water minimisation. Chemical Engineering Science, 1998, 53, 293-313.	3.8	83
122	On the state space approach to mass/heat exchanger network design**First presented in the 1990 Annual AIChE Meeting in Chicago, paper #22d.. Chemical Engineering Science, 1998, 53, 2595-2621.	3.8	76
123	Multiple Utilities Targeting for Heat Exchanger Networks. Chemical Engineering Research and Design, 1998, 76, 259-272.	5.6	82
124	Synthesis of multipass heat exchanger networks. AIChE Journal, 1998, 44, 999-1002.	3.6	6
125	Optimal synthesis of stagewise continuous crystallization process networks. AIChE Journal, 1998, 44, 1637-1645.	3.6	11
126	Synthesis of structural-constrained heat exchanger networks â€”II Split Networks. Computers and Chemical Engineering, 1998, 22, 1017-1035.	3.8	12
127	Synthesis of structural-constrained heat exchanger networksâ€”I. Series networks. Computers and Chemical Engineering, 1998, 22, 819-839.	3.8	14
128	A generalized method for HEN synthesis using stochastic optimization â€” I. General framework and MER optimal synthesis. Computers and Chemical Engineering, 1998, 22, 1503-1513.	3.8	98
129	A Customized MILP Approach to the Synthesis of Heat Recovery Networks Reaching Specified Topology Targets. Industrial & Engineering Chemistry Research, 1998, 37, 2479-2495.	3.7	12
130	Integrated exergy load distribution method and pinch analysis. Computers and Chemical Engineering, 1999, 23, 497-507.	3.8	24
131	Optimisation of water use in batch process industries. Computers and Chemical Engineering, 1999, 23, 1427-1437.	3.8	75
132	A multi-contaminant transshipment model for mass exchange networks and wastewater minimisation problems. Computers and Chemical Engineering, 1999, 23, 1439-1453.	3.8	128

#	ARTICLE	IF	CITATIONS
133	Interval-based targeting for pollution prevention via mass integration. Computers and Chemical Engineering, 1999, 23, 1527-1543.	3.8	34
134	Heat exchanger network synthesis: the possibility of randomization. Chemical Engineering Journal, 1999, 72, 209-216.	12.7	28
135	Mathematical programming approaches to the synthesis of chemical process systems. Korean Journal of Chemical Engineering, 1999, 16, 407-426.	2.7	128
136	Targeting procedures for energy savings by heat integration across plants. AIChE Journal, 1999, 45, 1721-1742.	3.6	87
137	A Mathematical Programming Model for Water Usage and Treatment Network Design. Industrial & Engineering Chemistry Research, 1999, 38, 2666-2679.	3.7	191
138	A New Method To Determine the Best Units for Breaking Heat Load Loops of Heat Exchanger Networks. Industrial & Engineering Chemistry Research, 1999, 38, 1496-1503.	3.7	15
139	Pollution prevention targets through integrated design and operation. Computers and Chemical Engineering, 2000, 24, 1445-1453.	3.8	15
140	An integrated approach to process design instruction. Computers and Chemical Engineering, 2000, 24, 1369-1374.	3.8	3
141	Conceptual design of industrial wastewater treatment processes: primary treatment. Computers and Chemical Engineering, 2000, 24, 1725-1730.	3.8	20
142	A review of recent design procedures for water networks in refineries and process plants. Computers and Chemical Engineering, 2000, 24, 2093-2113.	3.8	336
143	Capital and total cost targets for mass exchange networks. Computers and Chemical Engineering, 2000, 23, 1661-1679.	3.8	71
144	Mathematical modelling as a tool for environmental evaluation of industrial sectors in Colombia. Waste Management, 2000, 20, 617-623.	7.4	4
145	State of the art in process integration. Applied Thermal Engineering, 2000, 20, 1337-1345.	6.0	73
146	Rules for paths construction for HENs debottlenecking. Applied Thermal Engineering, 2000, 20, 1409-1420.	6.0	61
147	On the optimality conditions of water utilization systems in process plants with single contaminants. Chemical Engineering Science, 2000, 55, 5035-5048.	3.8	171
148	Energy Reuse by Matching Hot and Cold Streams in Advanced Life Support Systems. , 2000, , .		2
149	Retrofitting Design Using Step-by-Step Energy Relaxation. , 2000, , 2529-2533.		0
151	A Recursive Synthesis Method for Heat Exchanger Networks. II. Case Studies. Industrial & Engineering Chemistry Research, 2001, 40, 1176-1185.	3.7	0

#	ARTICLE	IF	CITATIONS
152	Multipurpose Heat-Exchanger Networks for Heat Integration Across Plants. Industrial & Engineering Chemistry Research, 2001, 40, 5585-5603.	3.7	32
153	A screening method for identifying economic improvement potentials in retrofit design. Computer Aided Chemical Engineering, 2001, 9, 573-578.	0.5	2
154	Using process integration technology for CLEANER production. Journal of Cleaner Production, 2001, 9, 1-23.	9.3	82
155	Loop breaking in heat exchanger networks by mathematical programming. Applied Thermal Engineering, 2001, 21, 1429-1448.	6.0	10
156	An Optimization Approach for Evolutionary Synthesis of Heat Exchanger Networks. Chemical Engineering Research and Design, 2001, 79, 143-150.	5.6	9
157	On the Use of Linear Models for the Design of Water Utilization Systems in Process Plants with a Single Contaminant. Chemical Engineering Research and Design, 2001, 79, 600-610.	5.6	141
158	A Visual Representation of Process Heat Exchange as a Basis for User Interaction and Stochastic Optimization. Chemical Engineering Research and Design, 2001, 79, 765-776.	5.6	7
159	ON A SYSTEMATIC DESIGN PROCEDURE FOR SINGLE COMPONENT WATER UTILIZATION SYSTEMS IN PROCESS PLANTS. Chemical Engineering Communications, 2001, 186, 183-203.	2.6	23
160	Pinch Technology without Tears. Energy Engineering: Journal of the Association of Energy Engineers, 2002, 99, 19-35.	0.5	0
161	Energy Targeting in Heat Exchanger Network Synthesis Using Rigorous Physical Property Calculations. Industrial & Engineering Chemistry Research, 2002, 41, 1511-1515.	3.7	17
162	A Critical Review and Annotated Bibliography for Heat Exchanger Network Synthesis in the 20th Century. Industrial & Engineering Chemistry Research, 2002, 41, 2335-2370.	3.7	391
163	Optimization of a heat exchanger network superstructure using nonlinear programming. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2002, 216, 89-104.	2.5	6
164	Eco-industrial parks: stimulating sustainable development in mixed industrial parks. Technovation, 2002, 22, 471-484.	7.8	158
165	Simultaneous flexibility targeting and synthesis of minimum-utility heat-exchanger networks with superstructure-based MILP formulation. Chemical Engineering and Processing: Process Intensification, 2002, 41, 501-518.	3.6	44
166	Integrated process design instruction. Computers and Chemical Engineering, 2002, 26, 295-306.	3.8	20
167	Simultaneous MINLP synthesis of heat exchanger networks comprising different exchanger types. Computers and Chemical Engineering, 2002, 26, 599-615.	3.8	63
168	Modified Water Pinch Method for Designing Resource-Efficient Chemical Engineering Systems. Doklady Chemistry, 2002, 383, 123-127.	0.9	2
169	Integration of Flue Gas into the Process Flowsheet by Combined Pinch-MINLP Approach. Chemical Engineering Research and Design, 2002, 80, 606-614.	5.6	8

#	ARTICLE	IF	CITATIONS
170	Mathematical Programming Model for Heat-Exchanger Network Synthesis Including Detailed Heat-Exchanger Designs. 2. Network Synthesis. Industrial & Engineering Chemistry Research, 2003, 42, 4019-4027.	3.7	60
171	Evaluating the environmental friendliness, economics and energy efficiency of chemical processes: heat integration. Clean Technologies and Environmental Policy, 2003, 5, 302-309.	4.1	22
172	Environmental and economic assessments of heat exchanger networks for optimum minimum approach temperature. Computers and Chemical Engineering, 2003, 27, 1577-1590.	3.8	20
173	Evaluation of hybrid optimization methods for the optimal design of heat integrated distillation sequences. Advances in Engineering Software, 2003, 34, 73-86.	3.8	17
174	Influence of variations in cost factors in structural optimisation of heat recovery systems with moist air streams. Applied Thermal Engineering, 2003, 23, 1807-1818.	6.0	4
175	Chapter 10 Pinch point analysis. Computer Aided Chemical Engineering, 2003, 13, 393-434.	0.5	2
176	Synthesis of heat recovery systems in paper machines with varying design parameters. Computer Aided Chemical Engineering, 2003, 14, 1043-1048.	0.5	1
177	Searching for enhanced energy systems with process integration in pulp and paper industries. Computer Aided Chemical Engineering, 2003, , 1061-1066.	0.5	3
178	HEAT EXCHANGER NETWORK SYNTHESIS CONSIDERING CHANGING PHASE STREAMS. Revista De Engenharia Térmica, 2004, 3, 87.	0.2	0
179	Synthesis of Separation Flowsheets. , 2004, , 263-324.		0
180	Synthesis of mass exchange network for batch processesâ€”Part I: Utility targeting. Chemical Engineering Science, 2004, 59, 1009-1026.	3.8	56
181	A minimum area (MA) targeting scheme for single component MEN and HEN synthesis. Computers and Chemical Engineering, 2004, 28, 1237-1247.	3.8	14
182	Pinch analysis for aggregate production planning in supply chains. Computers and Chemical Engineering, 2004, 28, 993-999.	3.8	69
183	Two-Level Optimization Algorithm for Heat Exchanger Networks Including Pressure Drop Considerations. Industrial & Engineering Chemistry Research, 2004, 43, 6766-6773.	3.7	24
185	Superstructure Decomposition and Parametric Optimization Approach for the Synthesis of Distributed Wastewater Treatment Networks. Industrial & Engineering Chemistry Research, 2004, 43, 2175-2191.	3.7	58
186	Simultaneous Synthesis of Flexible Heat-Exchange Networks with Uncertain Source-Stream Temperatures and Flow Rates. Industrial & Engineering Chemistry Research, 2004, 43, 5916-5928.	3.7	54
187	Multicriteria synthesis of flexible heat-exchanger networks with uncertain source-stream temperatures. Chemical Engineering and Processing: Process Intensification, 2005, 44, 89-100.	3.6	15
188	Targeting and design of water networks for fixed flowrate and fixed contaminant load operations. Chemical Engineering Science, 2005, 60, 255-268.	3.8	296

#	ARTICLE	IF	CITATIONS
189	New rigorous one-step MILP formulation for heat exchanger network synthesis. Computers and Chemical Engineering, 2005, 29, 1945-1976.	3.8	58
190	Design and evolution of water networks by source shifts. Chemical Engineering Science, 2005, 60, 2089-2093.	3.8	56
191	Studies on simultaneous energy and water minimisationâ€”Part I: Systems with no water re-use. Chemical Engineering Science, 2005, 60, 3279-3290.	3.8	142
192	A new systematic approach for water network design. Clean Technologies and Environmental Policy, 2005, 7, 154-161.	4.1	34
193	Synthesis of large-scale heat exchanger networks using a sequential match reduction approach. Computers and Chemical Engineering, 2005, 29, 993-1007.	3.8	59
194	Pollution Prevention and Control Procedure Case Study: An Application for Petroleum Refineries. Journal of the Air and Waste Management Association, 2005, 55, 792-802.	1.9	2
196	Controllability of Heat Exchanger Networks. Heat Transfer Engineering, 2006, 27, 38-49.	1.9	9
197	A discrete interactive graphical method for heat exchanger network synthesis. Computer Aided Chemical Engineering, 2006, 21, 877-882.	0.5	1
198	Global energy targets and optimal operating conditions for waste energy recovery in Bisphenol-A plant. Applied Thermal Engineering, 2006, 26, 374-381.	6.0	11
199	Design of heat exchanger networks using randomized algorithm. Computers and Chemical Engineering, 2006, 30, 1046-1053.	3.8	47
200	A general method for the optimum design of heat recovery steam generators. Energy, 2006, 31, 3342-3361.	8.8	65
201	Energy Level Composite Curvesâ€”a new graphical methodology for the integration of energy intensive processes. Applied Thermal Engineering, 2006, 26, 1378-1384.	6.0	49
202	Targeting Techniques for Enhancing Process Yield. Chemical Engineering Research and Design, 2006, 84, 943-951.	5.6	13
203	Process integration techniques for optimizing seawater cooling systems and biocide discharge. Clean Technologies and Environmental Policy, 2006, 8, 203-215.	4.1	9
204	Critical issues in heat transfer for fuel cell systems. Energy Conversion and Management, 2006, 47, 3552-3561.	9.2	27
205	Unified conceptual approach to targeting and design of water and hydrogen networks. AIChE Journal, 2006, 52, 1071-1082.	3.6	215
206	Heat integration. Process Systems Engineering, 2006, 7, 231-257.	0.1	0
207	A hybrid methodology for detailed heat exchanger design in the optimal synthesis of heat exchanger networks. Computer Aided Chemical Engineering, 2006, , 979-984.	0.5	2

#	ARTICLE	IF	CITATIONS
208	Multi Objective Pinch Analysis (MOPA) Using PROMETHEE to Evaluate Resource Efficiency. , 2006, , 565-570.		1
209	Key concepts of pinch analysis. , 2007, , 15-40.		5
210	Data extraction and energy targeting. , 2007, , 41-98.		5
211	Heat exchanger network design. , 2007, , 99-159.		3
213	Extended Modeling Framework for Heat and Power Integration in Batch and Semi-continuous Processes. Chemical Product and Process Modeling, 2007, 2, .	0.9	6
214	WASTE REDUCTION FOR CHEMICAL PLANT OPERATIONS. , 2007, , 89-124.		1
215	Steam system design using a novel graphical targeting method and MILP model. Computer Aided Chemical Engineering, 2007, , 1115-1120.	0.5	0
216	Synthesis and Integration of Chemical Processes from a Mass, Energy, and Entropy Perspective. Industrial & Engineering Chemistry Research, 2007, 46, 8756-8766.	3.7	18
217	HEAT-EXCHANGER NETWORKS. , 2007, , 327-383.		1
218	Process optimisation to minimise energy use in food processing. , 2007, , 59-89.		5
220	Minimisation of fuel energy wastage by improved heat exchanger network design—an industrial case study. Asia-Pacific Journal of Chemical Engineering, 2007, 2, 575-584.	1.5	6
221	Pinch analysis revisited: New rules for utility targeting. Applied Thermal Engineering, 2007, 27, 1653-1656.	6.0	17
222	A deterministic algorithm for the synthesis of maximum energy recovery heat exchanger network. Computers and Chemical Engineering, 2007, 31, 773-781.	3.8	7
223	Optimal heat exchanger network synthesis with the detailed heat transfer equipment design. Computers and Chemical Engineering, 2007, 31, 1432-1448.	3.8	65
224	Synthesis of flexible heat exchange networks and mass exchange networks. Computers and Chemical Engineering, 2007, 31, 1619-1632.	3.8	40
225	Retrofitting for DME process by energy-flow framework diagram. Chemical Engineering and Processing: Process Intensification, 2007, 46, 2-9.	3.6	4
226	Design of robust heat recovery systems in paper machines. Chemical Engineering and Processing: Process Intensification, 2007, 46, 910-917.	3.6	17
227	MINLP synthesis of optimal cooling networks. Chemical Engineering Science, 2007, 62, 5728-5735.	3.8	42

#	ARTICLE	IF	CITATIONS
228	Effect of network arrangement on the heat transfer area of cooling networks. Applied Thermal Engineering, 2007, 27, 2650-2656.	6.0	14
230	Targets for Heat Exchanger Network Synthesis with Different Heat Transfer Coefficients and Non-uniform Exchanger Specifications. Chemical Engineering Research and Design, 2007, 85, 1447-1457.	5.6	14
231	Improved heat exchanger networks for energy conservation in palm oil refineries. International Journal of Food Science and Technology, 2007, 22, 209-218.	2.7	1
232	An Explicit Solution for Thermal Calculation and Synthesis of Superstructure Heat Exchanger Networks. Chinese Journal of Chemical Engineering, 2007, 15, 296-301.	3.5	26
233	Improving Energetic Performance and Water Usage in an Industrial Ethanol Distillery. Chemical Engineering Research and Design, 2007, 85, 526-532.	5.6	1
234	Integrated water resource management through water reuse network design for clean production technology: State of the art. Korean Journal of Chemical Engineering, 2007, 24, 567-576.	2.7	19
235	A nonlinear nonconvex minimum total heat transfer area formulation for ocean thermal energy conversion (OTEC) systems. Applied Thermal Engineering, 2008, 28, 1015-1021.	6.0	16
236	Simultaneous optimization approach for integrated water-allocation and heat-exchange networks. Chemical Engineering Science, 2008, 63, 3664-3678.	3.8	110
237	Interval-based MINLP superstructure synthesis of heat exchange networks. Chemical Engineering Research and Design, 2008, 86, 245-257.	5.6	56
238	Towards Integrated Process and Control System Synthesis for Heat-Integrated Plants. Canadian Journal of Chemical Engineering, 2006, 84, 219-229.	1.7	5
239	Efficient design of feedwater heaters network in steam power plants using pinch technology and exergy analysis. International Journal of Energy Research, 2008, 32, 1-11.	4.5	64
240	Heat exchanger network synthesis based on minimum rule variations. Applied Thermal Engineering, 2008, 28, 1234-1249.	6.0	9
241	Synthesis of heat exchanger networks using genetic algorithms. Applied Thermal Engineering, 2008, 28, 1763-1773.	6.0	53
242	Hint: An educational software for heat exchanger network design with the pinch method. Education for Chemical Engineers, 2008, 3, e6-e14.	4.8	43
243	Heat exchanger network design using geometric mean temperature difference. Computers and Chemical Engineering, 2008, 32, 1726-1734.	3.8	14
244	Optimal synthesis of heat exchanger networks involving isothermal process streams. Computers and Chemical Engineering, 2008, 32, 1918-1942.	3.8	100
245	Simultaneous optimization strategy for synthesizing heat exchanger networks with multi-stream mixers. Chemical Engineering Research and Design, 2008, 86, 299-309.	5.6	12
246	Simultaneous Retrofit and Heat Integration of Chemical Processes. Industrial & Engineering Chemistry Research, 2008, 47, 5512-5528.	3.7	41

#	ARTICLE	IF	CITATIONS
247	Multiobjective Optimal Design of Heat Exchanger Networks Using New Adaptations of the Elitist Nondominated Sorting Genetic Algorithm, NSGA-II. Industrial & Engineering Chemistry Research, 2008, 47, 3489-3501.	3.7	30
248	Exergy: Its Potential and Limitations in Environmental Science and Technology. Environmental Science & Technology, 2008, 42, 2221-2232.	10.0	270
249	Steam System Network Synthesis Using Process Integration. Industrial & Engineering Chemistry Research, 2008, 47, 4405-4413.	3.7	21
250	Minimizing water and energy use in the batch and semi-continuous processes in the food and beverage industry. , 2008, , 256-303.		1
251	Multi-Objective Genetic Algorithm and Simulated Annealing with the Jumping Gene Adaptations. Advances in Process Systems Engineering, 2008, , 91-129.	0.3	4
252	Multi-Objective Synthesis Optimization of Heat Exchanger Networks With Arbitrary Topology. , 2008, , .		1
254	Simulation and Energy Integration of a Liquefied Natural Gas (LNG) Plant. , 2009, , 131-135.		26
255	An Effective Technique for the Synthesis and Optimization of Steam System Networks. Computer Aided Chemical Engineering, 2009, 27, 477-482.	0.5	1
256	Optimal Synthesis of Heat Exchanger Networks Using Enthalpy-Temperature Functions to Describe Streams. Computer Aided Chemical Engineering, 2009, 27, 387-392.	0.5	0
257	An extension of the problem table algorithm for multiple utilities targeting. Energy Conversion and Management, 2009, 50, 1124-1128.	9.2	17
258	An innovative process for simultaneous removal of CO ₂ and SO ₂ from flue gas of a power plant by energy integration. Energy Conversion and Management, 2009, 50, 2885-2892.	9.2	35
259	Systems approach to reducing energy usage and carbon dioxide emissions. AIChE Journal, 2009, 55, 2202-2207.	3.6	6
260	Energy saving in a crude distillation unit by a preflash implementation. Applied Thermal Engineering, 2009, 29, 1642-1647.	6.0	49
261	A simultaneous optimization approach for the design of wastewater and heat exchange networks based on cost estimation. Journal of Cleaner Production, 2009, 17, 162-171.	9.3	64
262	Simultaneous optimal integration of water utilization and heat exchange networks using holistic mathematical programming. Korean Journal of Chemical Engineering, 2009, 26, 1161-1174.	2.7	11
263	Analysis of the hybrid copper oxide-copper sulfate cycle for the thermochemical splitting of water for hydrogen production. International Journal of Hydrogen Energy, 2009, 34, 4179-4188.	7.1	11
264	A monogenetic algorithm for optimal design of large-scale heat exchanger networks. Chemical Engineering and Processing: Process Intensification, 2009, 48, 1506-1516.	3.6	55
265	Thermally integrated bio-syngas-production for biorefineries. Chemical Engineering Research and Design, 2009, 87, 1328-1339.	5.6	20

#	ARTICLE	IF	CITATIONS
266	Numerical construction of HEN composite curves and their attributes. Computers and Chemical Engineering, 2009, 33, 181-190.	3.8	7
267	A globally convergent mathematical model for synthesizing topologically constrained water recycle networks. Computers and Chemical Engineering, 2009, 33, 1279-1288.	3.8	20
268	A hybrid genetic algorithm for synthesis of heat exchanger networks. Computers and Chemical Engineering, 2009, 33, 1169-1181.	3.8	89
269	A new approach for shell targeting of a heat exchanger network. Computers and Chemical Engineering, 2009, 33, 1460-1467.	3.8	1
270	Paths combination for HENs retrofit. Applied Thermal Engineering, 2009, 29, 3103-3109.	6.0	13
271	The synthesis of cost optimal heat exchanger networks with unconstrained topology. Applied Thermal Engineering, 2009, 29, 3518-3528.	6.0	34
272	Pinch design method in the case of a limited number of process streams. Energy, 2009, 34, 593-612.	8.8	19
273	Improving energy recovery for water minimisation. Energy, 2009, 34, 880-893.	8.8	52
274	Applying heat integration total site based pinch technology to a large industrial area in Japan to further improve performance of highly efficient process plants. Energy, 2009, 34, 1687-1692.	8.8	93
275	Estimating the maximum possible internal heat integrations of individual processes. Energy, 2009, 34, 1372-1377.	8.8	3
276	Optimal assignment of multiple utilities in heat exchange networks. Applied Thermal Engineering, 2009, 29, 2633-2642.	6.0	12
277	Using Process Integration for Steam System Network Optimization with Sustained Boiler Efficiency. Computer Aided Chemical Engineering, 2009, , 1281-1286.	0.5	1
278	Evaluation of Synergy Effect in the Horizontal Merger of Companies in a Petrochemical Complex. Industrial & Engineering Chemistry Research, 2009, 48, 11017-11033.	3.7	7
279	Evolution of Resource Allocation Networks. Industrial & Engineering Chemistry Research, 2009, 48, 7152-7167.	3.7	34
280	Method for Evaluation of Thermochemical and Hybrid Water-Splitting Cycles. Industrial & Engineering Chemistry Research, 2009, 48, 8985-8998.	3.7	3
281	Self-Heat Recuperation Technology for Energy Saving in Chemical Processes. Industrial & Engineering Chemistry Research, 2009, 48, 7682-7686.	3.7	96
282	A Disjunctive Programming Model for Simultaneous Synthesis and Detailed Design of Cooling Networks. Industrial & Engineering Chemistry Research, 2009, 48, 2991-3003.	3.7	30
283	Synthesis of Large-Scale Heat Exchanger Networks by a Monogenetic Algorithm. Computer Aided Chemical Engineering, 2009, 27, 729-734.	0.5	10

#	ARTICLE	IF	CITATIONS
284	Operational Flexibility of Heat Exchanger Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 970-975.	0.4	1
286	Efficient synthesis of large-scale heat exchanger networks using monogenetic algorithm. Heat and Mass Transfer, 2010, 46, 1087-1096.	2.1	19
287	Process integration, modelling and optimisation for energy saving and pollution reduction. Applied Thermal Engineering, 2010, 30, 2270-2280.	6.0	146
288	Recent development in the retrofit of heat exchanger networks. Applied Thermal Engineering, 2010, 30, 2281-2289.	6.0	102
289	Design and analysis of biodiesel production from algae grown through carbon sequestration. Clean Technologies and Environmental Policy, 2010, 12, 239-254.	4.1	151
290	Optimal heat exchanger network synthesis usingÂparticle swarm optimization. Optimization and Engineering, 2010, 11, 459-470.	2.4	70
291	Process integration of sodium hypophosphite production. Applied Thermal Engineering, 2010, 30, 2306-2314.	6.0	25
292	Advanced energy saving in the reaction section of the hydro-desulfurization process with self-heat recuperation technology. Applied Thermal Engineering, 2010, 30, 2300-2305.	6.0	25
293	STEPâ€”A new graphical tool for simultaneous targeting and design of a heat exchanger network. Chemical Engineering Journal, 2010, 162, 106-121.	12.7	73
294	Targeting and design of energy allocation networks for carbon emission reduction. Chemical Engineering Science, 2010, 65, 6155-6168.	3.8	47
295	A randomized algorithm for the efficient synthesis of heat exchanger networks. Computers and Chemical Engineering, 2010, 34, 1632-1639.	3.8	18
296	Tight energy integration: Dynamic impact and control advantages. Computers and Chemical Engineering, 2010, 34, 1457-1466.	3.8	24
297	Review: Important contributions in development and improvement of the heat integration techniques. Computers and Chemical Engineering, 2010, 34, 1171-1179.	3.8	138
298	Advanced energetics of a Multiple-Effects-Evaporation (MEE) desalination plant. Part II: Potential of the cost formation process and prospects for energy saving by process integration. Desalination, 2010, 259, 44-52.	8.2	30
299	Criteria for the decomposition of energy systems in local/global optimizations. Energy, 2010, 35, 1157-1163.	8.8	17
300	The HEATSEP method for the synthesis of thermal systems: An application to the S-Graz cycle. Energy, 2010, 35, 976-981.	8.8	35
301	Process integration in bioprocess industry: waste heat recovery in yeast and ethyl alcohol plant. Energy, 2010, 35, 704-717.	8.8	33
302	Seasonal energy utilization optimization in an enterprise. Energy, 2010, 35, 3932-3940.	8.8	6

#	ARTICLE	IF	CITATIONS
303	Optimization of an industrial retrofitted heat exchanger network, using a stage-wise model. Energy, 2010, 35, 4748-4753.	8.8	22
305	Total Cost Targeting for Heat Exchanger Networks Including Pumping Costs. Computer Aided Chemical Engineering, 2010, , 1135-1140.	0.5	1
306	Ecological Optimization of Generalized Irreversible Chemical Engines. International Journal of Chemical Reactor Engineering, 2010, 8, .	1.1	9
307	Synthesis and Optimization of Steam System Networks. 2. Multiple Steam Levels. Industrial & Engineering Chemistry Research, 2010, 49, 9154-9164.	3.7	9
308	Retrofitting Heat Exchanger Networks Based on Simple Pinch Analysis. Industrial & Engineering Chemistry Research, 2010, 49, 3967-3971.	3.7	50
309	Assessment of Methanol Synthesis Utilizing Exhaust CO ₂ for Chemical Storage of Electrical Energy. Industrial & Engineering Chemistry Research, 2010, 49, 11073-11078.	3.7	131
310	Particle Swarm Optimization algorithm for optimization of utility systems in chemical processes. , 2010, , .		0
311	On Synthesis and Optimization of Steam System Networks. 1. Sustained Boiler Efficiency. Industrial & Engineering Chemistry Research, 2010, 49, 9143-9153.	3.7	6
313	Synthesis of Heat Exchanger Networks with Optimal Placement of Multiple Utilities. Industrial & Engineering Chemistry Research, 2010, 49, 2849-2856.	3.7	55
314	Application of water pinch technology for water and wastewater minimization in aluminum anodizing industries. International Journal of Environmental Science and Technology, 2010, 7, 281-290.	3.5	14
315	New Design Methodology Based on Self-Heat Recuperation for Production by Azeotropic Distillation. Energy & Fuels, 2010, 24, 6099-6102.	5.1	18
316	References for Chapters 10, 11, 12, and 13.. , 2010, , 679-686.		1
317	Total Sites Integrating Renewables With Extended Heat Transfer and Recovery. Heat Transfer Engineering, 2010, 31, 733-741.	1.9	53
318	The Use of Pinch Technology to Reduce Utility Consumption in a Natural Gas Processing Plant. Petroleum Science and Technology, 2010, 28, 1316-1330.	1.5	3
319	Targeting for process HENs design in the context of total sites. , 2011, , .		0
320	Energy Recovery and Recycle Network Optimization Considering Energy Load Variation for Large Public Buildings. , 2011, , .		1
321	Exergy Recuperative CO ₂ Gas Separation in Post-Combustion Capture. Industrial & Engineering Chemistry Research, 2011, 50, 10128-10135.	3.7	26
322	On Synthesis and Optimization of Cooling Water Systems with Multiple Cooling Towers. Industrial & Engineering Chemistry Research, 2011, 50, 3775-3787.	3.7	31

#	ARTICLE	IF	CITATIONS
323	Multiobjective Optimization of Water-Using Networks with Multiple Contaminants. Industrial & Engineering Chemistry Research, 2011, 50, 5651-5660.	3.7	7
324	Energy Induced Separation Network Synthesis of an Olefin Compression Section: A Case Study. Industrial & Engineering Chemistry Research, 2011, 50, 1610-1623.	3.7	13
325	Internally and Partially Heat-Integrated Distillation System for Ternary Separation. Industrial & Engineering Chemistry Research, 2011, 50, 5733-5738.	3.7	10
326	Security of Industrial Water Supply and Management. NATO Science for Peace and Security Series C: Environmental Security, 2011, , .	0.2	7
327	Heat Integration in Process Water Networks. Industrial & Engineering Chemistry Research, 2011, 50, 3695-3704.	3.7	33
328	Heat Integration by Multiple Hot Discharges/Feeds between Plants. Industrial & Engineering Chemistry Research, 2011, 50, 10744-10754.	3.7	23
330	Targeting the optimum steam system for power generation with increased flexibility in the steam power island design. Energy, 2011, 36, 4625-4632.	8.8	23
331	Thermal analysis and new insights to support decision making in retrofit and relaxation of heat exchanger networks. Applied Thermal Engineering, 2011, 31, 3479-3499.	6.0	39
332	Natural gas based hydrogen production with zero carbon dioxide emissions. International Journal of Hydrogen Energy, 2011, 36, 12853-12868.	7.1	22
333	Unified targeting algorithm for diverse process integration problems of resource conservation networks. Chemical Engineering Research and Design, 2011, 89, 2686-2705.	5.6	33
334	Energy integration across multiple water allocation networks with negligible contaminant effects. Asia-Pacific Journal of Chemical Engineering, 2011, 6, 527-536.	1.5	4
335	Selecting the Optimum Predistillation Scheme for Heavy Crude Oils. Industrial & Engineering Chemistry Research, 2011, 50, 10549-10556.	3.7	9
336	Design for environment: a state-of-the-art review. Clean Technologies and Environmental Policy, 2011, 13, 227-240.	4.1	48
337	Efficient synthesis of heat exchanger networks combining heuristic approaches with a genetic algorithm. Heat and Mass Transfer, 2011, 47, 1019-1026.	2.1	13
338	Entransy-dissipation-based thermal resistance analysis of heat exchanger networks. Science Bulletin, 2011, 56, 3289.	1.7	24
339	Water network synthesis in refinery. Korean Journal of Chemical Engineering, 2011, 28, 1975-1985.	2.7	5
340	Global superstructure optimization for the design of integrated process water networks. AIChE Journal, 2011, 57, 434-457.	3.6	165
341	Integrated design of diesel hydrotreating processes. Chemical Engineering Research and Design, 2011, 89, 1025-1036.	5.6	31

#	ARTICLE	IF	CITATIONS
342	Synthesis of multipass heat exchanger networks based on pinch technology. Computers and Chemical Engineering, 2011, 35, 1257-1264.	3.8	14
343	Effects of fouling on performance of retrofitted heat exchanger networks: A thermo-hydraulic based analysis. Computers and Chemical Engineering, 2011, 35, 907-917.	3.8	27
344	Design and control of energy integrated SOFC systems for in situ hydrogen production and power generation. Computers and Chemical Engineering, 2011, 35, 1691-1704.	3.8	46
345	Integration and management of renewables into Total Sites with variable supply and demand. Computers and Chemical Engineering, 2011, 35, 1815-1826.	3.8	98
346	A new graphical approach for simultaneous mass and energy minimisation. Applied Thermal Engineering, 2011, 31, 1021-1030.	6.0	54
347	Multiobjective synthesis of heat exchanger networks minimizing the total annual cost and the environmental impact. Applied Thermal Engineering, 2011, 31, 1099-1113.	6.0	56
348	Estimation of maximum steam pressure by a mathematical linear technique. Energy, 2011, 36, 2434-2439.	8.8	3
349	Novel graphical approach as fouling pinch for increasing fouling formation period in heat exchanger network (HEN) state of the art. Energy Conversion and Management, 2011, 52, 117-124.	9.2	10
350	Modeling, synthesis and optimization of heat exchanger networks. Application to fuel processing systems for PEM fuel cells. International Journal of Hydrogen Energy, 2011, 36, 9098-9114.	7.1	17
351	Conventional versus specific types of heat exchangers in the case of polluted flue gas as the process fluid – A review. Applied Thermal Engineering, 2011, 31, 1-13.	6.0	46
352	Optimization of heat exchanger network. Applied Thermal Engineering, 2011, 31, 779-784.	6.0	34
353	Total cost target for heat exchanger networks considering simultaneously pumping power and area effects. Applied Thermal Engineering, 2011, 31, 1964-1975.	6.0	22
354	Small and micro combined heat and power (CHP) systems for the food and beverage processing industries. , 2011, , 395-426.		1
355	CO ₂ emissions reduction targeting for existing plant through heat exchanger network retrofit and fuel switching with MINLP. , 2011, , .		1
356	Dynamics and control of high duty counter-current heat exchangers. , 2011, , .		8
357	Heat integration — History, recent developments and achievements. , 2011, , .		1
358	Optimal Heat Exchanger Network Synthesis via Particle Swarm Optimization. Applied Mechanics and Materials, 0, 148-149, 1468-1472.	0.2	0
359	Solving Large-Scale Heat Exchanger Network Synthesis Problems Using Particle Swarm Optimization. Applied Mechanics and Materials, 2011, 148-149, 636-640.	0.2	0

#	ARTICLE	IF	CITATIONS
360	Minimisation of exergy destruction in an ethane recovery turboexpander process using Aspen Plus process simulator. International Journal of Exergy, 2011, 8, 425.	0.4	0
361	Design Principles and Sizing Approach of Unfired Once-Through Steam Generators. , 2011, , .		0
362	Multi-objective Optimization: Bio-mimetic Adaptations of Genetic Algorithm. Indian Chemical Engineer, 2012, 54, 1-11.	1.5	1
363	The New Pinch Design Method for Heat Exchanger Networks. Advanced Materials Research, 0, 512-515, 1253-1257.	0.3	4
364	Techno-Economic Analysis of Integrated Gasification Fuel Cell Power Plants Capturing CO ₂ . , 2012, , .		3
365	Modular design of heat exchanger networks. International Journal of Process Systems Engineering, 2012, 2, 178.	0.2	0
366	Design Criteria and Optimization of Heat Recovery Steam Cycles for High-Efficiency, Coal-Fired, Fischer-Tropsch Plants. , 2012, , .		3
367	Energy consumption reduction in CO ₂ capturing and sequestration of an LNG plant through process integration and waste heat utilization. International Journal of Greenhouse Gas Control, 2012, 10, 215-228.	4.6	30
368	Judicious generation of alternative water network designs with manual evolution strategy. Chemical Engineering Research and Design, 2012, 90, 1245-1261.	5.6	14
369	Multi-period design of heat exchanger networks. Chemical Engineering Research and Design, 2012, 90, 1883-1895.	5.6	40
370	Performance assessment with Pinch technology and integrated heat pumps for vaporized concentration processing. Journal of the Taiwan Institute of Chemical Engineers, 2012, 43, 226-234.	5.3	9
371	Parameters identification of a chemical tank: A case study. , 2012, , .		0
372	Exergy Analysis of Biomass Drying Based on Self-Heat Recuperation Technology and Its Application to Industry: a Simulation and Experimental Study. Industrial & Engineering Chemistry Research, 2012, 51, 9997-10007.	3.7	25
373	Design of Entire Energy System for Chemical Plants. Industrial & Engineering Chemistry Research, 2012, 51, 9980-9996.	3.7	28
374	Improvement on the Simultaneous Optimization Approach for Heat Exchanger Network Synthesis. Industrial & Engineering Chemistry Research, 2012, 51, 6455-6460.	3.7	10
375	Evolution of aluminum recycling initiated by the introduction of next-generation vehicles and scrap sorting technology. Resources, Conservation and Recycling, 2012, 66, 8-14.	10.8	91
377	Multi-objective design of heat-exchanger networks considering several life cycle impacts using a rigorous MILP-based dimensionality reduction technique. Applied Energy, 2012, 98, 149-161.	10.1	39
378	Optimization techniques for heat exchanger networks using the minimum rule (MR). Applied Thermal Engineering, 2012, 45-46, 108-117.	6.0	7

#	ARTICLE	IF	CITATIONS
379	MATHEMATICAL MODELS FOR OPTIMAL RESOURCE UTILIZATION IN PROCESS INDUSTRIES. Advances in Process Systems Engineering, 2012, , 195-231.	0.3	0
380	A PROCESS INTEGRATION FRAMEWORK FOR THE OPTIMAL DESIGN OF COMBINED HEAT AND POWER SYSTEMS IN THE PROCESS INDUSTRIES. Advances in Process Systems Engineering, 2012, , 423-461.	0.3	3
381	Up-to-date technologies in waste to energy field. Reviews in Chemical Engineering, 2012, 28, .	4.4	10
382	Total Site targeting with process specific minimum temperature difference (T_{min}). Energy, 2012, 44, 20-28.	8.8	87
383	Minimisation of a heat exchanger networks' cost over its lifetime. Energy, 2012, 45, 264-276.	8.8	34
384	Heat integration of regenerative Rankine cycle and process surplus heat through graphical targeting and mathematical modeling technique. Energy, 2012, 45, 556-569.	8.8	22
385	Heat Integration. , 2012, , 147-163.		8
386	Fouling and Uncertainty Margins in Tubular Heat Exchanger Design: An Alternative. Heat Transfer Engineering, 2012, 33, 1094-1104.	1.9	12
387	Synthesis of Interplant Water-Allocation and Heat-Exchange Networks. Part 1: Fixed Flow Rate Processes. Industrial & Engineering Chemistry Research, 2012, 51, 4299-4312.	3.7	24
388	Energy Conservation of a Multi-Effect Distillation Column with Internal Heat Integration. Journal of Chemical Engineering of Japan, 2012, 45, 840-849.	0.6	5
389	Self-Heat Recuperation: Theory and Applications. , 0, , .		1
390	Identifying redundant environmental objectives in the design of heat-exchanger networks using rigorous dimensionality reduction techniques.. Computer Aided Chemical Engineering, 2012, , 202-206.	0.5	0
392	The pinch technology combined with a heat pump applied in a three-effect evaporator and energy-saving performance assessment. Korean Journal of Chemical Engineering, 2012, 29, 341-348.	2.7	11
393	Exergy recuperative CO ₂ gas separation in pre-combustion capture. Clean Technologies and Environmental Policy, 2012, 14, 465-474.	4.1	11
394	Energy optimization in heat integrated water allocation networks. Chemical Engineering Science, 2012, 69, 352-364.	3.8	43
395	Heat exchanger network synthesis using a stagewise superstructure with non-isothermal mixing. Chemical Engineering Science, 2012, 73, 30-43.	3.8	85
396	Supply and target based superstructure synthesis of heat and mass exchanger networks. Chemical Engineering Research and Design, 2012, 90, 266-287.	5.6	29
397	Application of intensified heat transfer for the retrofit of heat exchanger network. Applied Energy, 2012, 89, 45-59.	10.1	80

#	ARTICLE	IF	CITATIONS
398	Carbon emission reduction targeting through process integration and fuel switching with mathematical modeling. Applied Energy, 2012, 92, 686-693.	10.1	14
399	Design criteria and optimization of heat recovery steam cycles for integrated reforming combined cycles with CO ₂ capture. Applied Energy, 2012, 92, 255-268.	10.1	40
400	District heating in sequential energy supply. Applied Energy, 2012, 95, 123-131.	10.1	81
401	An improved crude oil atmospheric distillation process for energy integration: Part I: Energy and exergy analyses of the process when a flash is installed in the preheating train. Applied Thermal Engineering, 2012, 32, 125-131.	6.0	32
402	An alternative strategy for global optimization of heat exchanger networks. Applied Thermal Engineering, 2012, 43, 75-90.	6.0	39
403	An improved crude oil atmospheric distillation process for energy integration: Part II: New approach for energy saving by use of residual heat. Applied Thermal Engineering, 2012, 40, 132-144.	6.0	16
404	Simultaneous synthesis of a biogas process and heat exchanger network. Applied Thermal Engineering, 2012, 43, 91-100.	6.0	7
405	Rigorous multiple utility targeting in heat exchanger networks. Energy Conversion and Management, 2012, 59, 74-85.	9.2	13
406	A double-pinch criterion for regenerative Rankine cycles. Energy, 2012, 40, 258-270.	8.8	11
407	Intercompany Energy Integration. Journal of Industrial Ecology, 2012, 16, 689-698.	5.5	48
408	Simultaneous synthesis of structural-constrained heat exchanger networks with and without stream splits. Canadian Journal of Chemical Engineering, 2013, 91, 830-842.	1.7	57
409	Design and analysis of heat exchanger networks for integrated Ca-looping systems. Applied Energy, 2013, 111, 690-700.	10.1	49
410	SePTA—A new numerical tool for simultaneous targeting and design of heat exchanger networks. Computers and Chemical Engineering, 2013, 57, 30-47.	3.8	11
411	An automated environmental and economic evaluation methodology for the optimization of a sour water stripping plant. Journal of Cleaner Production, 2013, 44, 56-68.	9.3	24
412	Retrofit of Crude Units Preheating Trains: Mathematical Programming versus Pinch Technology. Industrial & Engineering Chemistry Research, 2013, 52, 14913-14926.	3.7	16
413	Exergy analysis of multi-stage crude distillation units. Frontiers of Chemical Science and Engineering, 2013, 7, 437-446.	4.4	9
414	Recent developments in Process Integration. Chemical Engineering Research and Design, 2013, 91, 2037-2053.	5.6	180
415	A novel conceptual design by integrating NGL recovery and LNG regasification processes for maximum energy savings. AIChE Journal, 2013, 59, 4673-4685.	3.6	23

#	ARTICLE	IF	CITATIONS
416	A Method for Flexible Heat Exchanger Network Design under Severe Operation Uncertainty. Chemical Engineering and Technology, 2013, 36, 757-765.	1.5	23
417	Magnetocaloric heat circulator based on self-heat recuperation technology. Chemical Engineering Science, 2013, 101, 5-12.	3.8	16
418	Numerical optimization of steam cycles and steam generators designs for coal to FT plants. Chemical Engineering Research and Design, 2013, 91, 1467-1482.	5.6	20
419	Supply-based superstructure synthesis of heat and mass exchange networks. Computers and Chemical Engineering, 2013, 56, 184-201.	3.8	30
420	Forty years of Heat Integration: Pinch Analysis (PA) and Mathematical Programming (MP). Current Opinion in Chemical Engineering, 2013, 2, 461-474.	7.8	317
421	Improving high temperature heat capture for power generation in gasification plants. International Journal of Heat and Mass Transfer, 2013, 61, 129-137.	4.8	13
422	Optimal heat exchanger network synthesis: A case study comparison. Applied Thermal Engineering, 2013, 51, 801-826.	6.0	102
423	Defining "Waste Heat" for industrial processes. Applied Thermal Engineering, 2013, 61, 134-142.	6.0	64
424	Simultaneous synthesis of heat exchanger networks with operability considerations: Flexibility and controllability. Computers and Chemical Engineering, 2013, 55, 158-180.	3.8	58
425	Investigating the thermodynamics and economics of operating the thermal power plant under uncertain conditions. Energy Conversion and Management, 2013, 75, 325-335.	9.2	4
426	Simultaneous synthesis approaches for cost-effective heat exchanger networks. Chemical Engineering Science, 2013, 98, 231-245.	3.8	61
427	Margin design, online optimization, and control approach of a heat exchanger network with bypasses. Computers and Chemical Engineering, 2013, 53, 102-121.	3.8	17
428	Nonlinear model predictive control of energy-integrated process systems. Systems and Control Letters, 2013, 62, 723-731.	2.3	27
429	Synthesis of integrated absorption refrigeration systems involving economic and environmental objectives and quantifying social benefits. Applied Thermal Engineering, 2013, 52, 402-419.	6.0	38
431	Process simulation and energy optimization of the enzyme-catalyzed biodiesel production. Energy, 2013, 54, 84-96.	8.8	45
432	Improving Energy Efficiency of Process of Direct Adipic Acid Synthesis in Flow Using Pinch Analysis. Industrial & Engineering Chemistry Research, 2013, 52, 7827-7835.	3.7	12
433	An alternative disjunctive optimization model for heat integration with variable temperatures. Computers and Chemical Engineering, 2013, 56, 12-26.	3.8	35
434	A novel exergy recuperative drying module and its application for energy-saving drying with superheated steam. Chemical Engineering Science, 2013, 100, 392-401.	3.8	36

#	ARTICLE	IF	CITATIONS
435	Graphical Analysis of the Integration of Heat Pumps in Chemical Process Systems. Industrial & Engineering Chemistry Research, 2013, 52, 8305-8310.	3.7	10
436	Advanced multimedia engineering education in energy, process integration and optimisation. Applied Energy, 2013, 101, 33-40.	10.1	35
437	Sustaining high energy efficiency in existing processes with advanced process integration technology. Applied Energy, 2013, 101, 26-32.	10.1	58
438	Extending Total Site Methodology to Address Varying Energy Supply and Demand. , 2013, , 226-261.		1
439	Optimal integration of organic Rankine cycles with industrial processes. Energy Conversion and Management, 2013, 73, 285-302.	9.2	67
440	Heat Integration: Targets and Heat Exchanger Network Design. , 2013, , 129-167.		15
441	Heat Integration in Batch Processes. , 2013, , 310-349.		2
442	A Unified Targeting Algorithm for Diverse Process Integration Problems. , 2013, , 524-570.		0
443	Applications of Pinch Technology to Total Sites: A Heavy Chemical Industrial Complex and a Steel Plant. , 2013, , 752-764.		0
444	A Process Integration Approach for Supply Chain Development. , 2013, , 571-593.		2
445	Application of Process Integration Methodologies to the Thermal Processing of Waste. , 2013, , 799-819.		0
446	Epilogue: The Importance of Problem Formulation and Data Extraction in Process Integration. , 2013, , 1099-1116.		0
447	Aspen Simulation of Heat Exchange Network for the Conversion System of Sulphuric Acid Made with the Sulphur. Advanced Materials Research, 0, 860-863, 762-765.	0.3	1
448	Heat exchanger network synthesis. , 2013, , 585-620.		17
449	Aspen Optimization of Heat Exchange Network for the Conversion System of Sulphuric Acid Made with the Sulphur. Advanced Materials Research, 0, 860-863, 766-769.	0.3	0
450	Evaluation of a Self-Heat Recuperative Thermal Process Based on Thermodynamic Irreversibility and Exergy. Journal of Chemical Engineering of Japan, 2013, 46, 87-91.	0.6	31
451	Application of Genetic Algorithm on Heat Exchanger Network Optimization. Research Journal of Applied Sciences, Engineering and Technology, 2013, 6, 3378-3383.	0.1	0
452	Multum in Parvo. Computer Aided Chemical Engineering, 2014, , 15-24.	0.5	6

#	ARTICLE	IF	CITATIONS
453	Heat-Exchanger Networks. , 2014, , 267-316.		0
454	Power-to-Gas: Storing Surplus Electrical Energy. A Design Study.. Energy Procedia, 2014, 63, 7993-8009.	1.8	54
455	Distillation in Refining. , 2014, , 155-190.		9
456	Heat Exchanger Network Optimization Using Differential Evolution with Stream Splitting. Applied Mechanics and Materials, 0, 625, 373-377.	0.2	1
457	Optimal configuration of the distributed energy system based on the multi-objective pinch analysis. , 2014, , .		0
458	Heat Exchanger Network Synthesis using MINLP Stage-wise Model with Pinch Analysis and Relaxation. Computer Aided Chemical Engineering, 2014, 33, 139-144.	0.5	5
459	Multi-Objective Optimization and Decision Support in Process Engineering “ Implementation and Application. Chemie-Ingenieur-Technik, 2014, 86, 1065-1072.	0.8	46
460	Heat integration of a tetrahydrofuran recovery system to save energy. Asia-Pacific Journal of Chemical Engineering, 2014, 9, 303-308.	1.5	0
461	Optimal operation of heat exchanger networks with stream split: Only temperature measurements are required. Computers and Chemical Engineering, 2014, 70, 35-49.	3.8	27
462	Improved energy efficiency in juice production through waste heat recycling. Applied Energy, 2014, 130, 757-763.	10.1	5
463	A novel approach to hot oil system design for energy conservation. Applied Thermal Engineering, 2014, 66, 423-434.	6.0	8
464	Energy optimization of integrated atmospheric and vacuum crude distillation units in oil refinery with light crude. Asia-Pacific Journal of Chemical Engineering, 2014, 9, 181-195.	1.5	9
465	Floating pinch method for utility targeting in heat exchanger network (HEN). Chemical Engineering Research and Design, 2014, 92, 119-126.	5.6	27
466	Techno-economic and environmental assessment of essential oil extraction from Citronella (Cymbopogon winteriana) and Lemongrass (Cymbopogon citratus): A Colombian case to evaluate different extraction technologies. Industrial Crops and Products, 2014, 54, 175-184.	5.2	39
467	Optimum heat storage design for solar-driven absorption refrigerators integrated with heat exchanger networks. AIChE Journal, 2014, 60, 909-930.	3.6	9
468	Energy and water interactions: implications for industry. Current Opinion in Chemical Engineering, 2014, 5, 15-21.	7.8	38
469	Design and optimization of a proton exchange membrane fuel cell CHP system for residential use. Energy and Buildings, 2014, 69, 381-393.	6.7	68
470	A Two-step Design Method for Shaft Work Targeting on Low-temperature Process. Chinese Journal of Chemical Engineering, 2014, 22, 664-668.	3.5	4

#	ARTICLE	IF	CITATIONS
471	Efficient algorithm for simultaneous synthesis of heat exchanger networks. Chemical Engineering Science, 2014, 105, 53-68.	3.8	45
472	Systematic retrofit design with Response Surface Method and process integration techniques: A case study for the retrofit of a hydrocarbon fractionation plant. Chemical Engineering Research and Design, 2014, 92, 2052-2070.	5.6	13
473	Indirect thermal integration for batch processes. Applied Thermal Engineering, 2014, 62, 229-238.	6.0	28
474	Optimal design of inter-plant waste energy integration. Applied Thermal Engineering, 2014, 62, 633-652.	6.0	45
475	Thermal integration of heat transfer fluid systems. Asia-Pacific Journal of Chemical Engineering, 2014, 9, 1-15.	1.5	7
476	Heat exchanger network design of large-scale industrial site with layout inspired constraints. Computers and Chemical Engineering, 2014, 71, 426-445.	3.8	15
477	Enthalpy Table Algorithm for design of Heat Exchanger Network as optimal solution in Pinch technology. Applied Thermal Engineering, 2014, 73, 1113-1128.	6.0	12
478	Synthesis of Resource Conservation Networks in an Integrated Pulp and Paper Biorefinery. Industrial & Engineering Chemistry Research, 2014, 53, 10417-10428.	3.7	7
479	Energy Integration Manager: A Workflow for Long Term Validity of Total Site Analysis and Heat Recovery Strategies. Computer Aided Chemical Engineering, 2014, 33, 1819-1824.	0.5	1
480	Simultaneous Target of HEN and Columns with Variable Feed Temperatures for a Toluene Disproportionation Plant. Industrial & Engineering Chemistry Research, 2014, 53, 10429-10438.	3.7	13
481	Water and Energy Issues in Gas-to-Liquid Processes: Assessment and Integration of Different Gas-Reforming Alternatives. ACS Sustainable Chemistry and Engineering, 2014, 2, 216-225.	6.7	28
482	Simultaneous Optimization and Heat Integration Based on Rigorous Process Simulations. Computer Aided Chemical Engineering, 2014, 34, 477-482.	0.5	5
483	Application of Entransy Analysis in Self-Heat Recuperation Technology. Industrial & Engineering Chemistry Research, 2014, 53, 1274-1285.	3.7	11
484	Trade-off between energy and distance related costs for different connection patterns in heat integration across plants. Applied Thermal Engineering, 2014, 70, 857-866.	6.0	30
485	Improving energy efficiency for local energy systems. Applied Energy, 2014, 131, 26-39.	10.1	11
486	Systematic approach to industrial oven optimisation for energy saving. Applied Thermal Engineering, 2014, 71, 72-77.	6.0	21
487	Graphical Method for Integrating Purification Processes in Hydrogen Systems with Constraints of Flow Rate and Concentration. Industrial & Engineering Chemistry Research, 2014, 53, 3246-3256.	3.7	20
488	A game-theory based optimization strategy to configure inter-plant heat integration schemes. Chemical Engineering Science, 2014, 118, 60-73.	3.8	30

#	ARTICLE	IF	CITATIONS
489	Integrating first, second, and third generation biorefineries: Incorporating microalgae into the sugarcane biorefinery. Chemical Engineering Science, 2014, 118, 126-140.	3.8	143
490	Minimization of Thermal Oil Flow Rate for Indirect Integration of Multiple Plants. Industrial & Engineering Chemistry Research, 2014, 53, 13146-13156.	3.7	32
491	Pinch Point Analysis. Computer Aided Chemical Engineering, 2014, 35, 525-564.	0.5	17
492	Water integration in industrial zones: a spatial representation with direct recycle applications. Clean Technologies and Environmental Policy, 2014, 16, 1637-1659.	4.1	42
493	Synthesis of large-scale multi-stream heat exchanger networks using a stepwise optimization method. Journal of the Taiwan Institute of Chemical Engineers, 2014, 45, 508-517.	5.3	14
494	EVHE – A new method for the synthesis of HEN. Computers and Chemical Engineering, 2014, 64, 95-102.	3.8	4
495	Heat integration of fractionating systems in para-xylene plants based on column optimization. Energy, 2014, 72, 311-321.	8.8	16
496	Simultaneous Optimization of the Complex Fractionator and Heat Exchanger Network Considering the Constraints of Variable Heat Removals in Delayed Coking Units. Industrial & Engineering Chemistry Research, 2014, 53, 13073-13086.	3.7	7
497	Design of Steam Cycles for Oxy-combustion Coal based Power Plants with Emphasis on Heat Integration. Energy Procedia, 2014, 51, 119-126.	1.8	12
498	1. Process Integration and Intensification: an introduction. , 2014, , 1-12.		0
499	Modeling and Optimization of a Steam System in a Chemical Plant Containing Multiple Direct Drive Steam Turbines. Industrial & Engineering Chemistry Research, 2014, 53, 11021-11032.	3.7	34
500	Optimization of heat integration with variable stream data and non-linear process constraints. Computers and Chemical Engineering, 2014, 65, 81-88.	3.8	13
501	A heuristic Lagrangean approach for the synthesis of multiperiod heat exchanger networks. Applied Thermal Engineering, 2014, 63, 177-191.	6.0	28
502	Synthesis of heat exchanger networks featuring batch streams. Applied Energy, 2014, 114, 30-44.	10.1	16
503	A derivative based method for cost optimal area allocation in heat exchanger networks. Applied Thermal Engineering, 2014, 70, 1084-1096.	6.0	5
504	Comparison between pinch analysis and bridge analysis to retrofit the heat exchanger network of a kraft pulp mill. Applied Thermal Engineering, 2014, 70, 369-379.	6.0	45
505	Energy and mining – the home truths. Journal of Cleaner Production, 2014, 84, 233-255.	9.3	59
506	Energy and economic performance of novel integrated gasifier fuel cell (IGFC) cycles with carbon capture. International Journal of Greenhouse Gas Control, 2014, 26, 169-184.	4.6	53

#	ARTICLE	IF	CITATIONS
507	Limitations in using Euler's formula in the design of heat exchanger networks with Pinch Technology. Computers and Chemical Engineering, 2014, 68, 123-127.	3.8	5
508	Review of Heat Exchanger Network Retrofitting Methodologies and Their Applications. Industrial & Engineering Chemistry Research, 2014, 53, 11205-11220.	3.7	74
509	2. Setting energy targets and Heat Integration. , 2014, , 13-66.		0
510	3. Synthesis of Heat Exchanger Networks. , 2014, , 67-98.		0
511	Hydrogen plant heat exchanger networks synthesis using coupled Genetic Algorithm-LP method. Journal of Natural Gas Science and Engineering, 2014, 19, 62-73.	4.4	10
512	A graphical method for integrating work exchange network. Applied Energy, 2014, 114, 588-599.	10.1	34
513	Application of the self-heat recuperation technology for energy saving in biomass drying system. Fuel Processing Technology, 2014, 117, 66-74.	7.2	40
514	Modeling and control of heat networks with storage: The single-producer multiple-consumer case. , 2015, , .		4
516	Integrating compressors into heat exchanger networks above ambient temperature. AIChE Journal, 2015, 61, 3770-3785.	3.6	28
517	Simultaneous integration of water and energy in heat-integrated water allocation networks. AIChE Journal, 2015, 61, 2202-2214.	3.6	25
518	Reasons to apply operability analysis in the design of integrated biorefineries. Biofuels, Bioproducts and Biorefining, 2015, 9, 147-157.	3.7	13
519	Process synthesis for cascade refrigeration system based on exergy analysis. AIChE Journal, 2015, 61, 2471-2488.	3.6	15
520	Integrating expanders into heat exchanger networks above ambient temperature. AIChE Journal, 2015, 61, 3404-3422.	3.6	23
521	Sustainable process design by the process to planet framework. AIChE Journal, 2015, 61, 3320-3331.	3.6	28
522	Simultaneous optimization of a heat integrated coal gasification process. Chemical Engineering Research and Design, 2015, 98, 136-146.	5.6	7
523	Synthetic natural gas via integrated high-temperature electrolysis and methanation: Part I—Energy performance. Journal of Energy Storage, 2015, 1, 22-37.	8.1	114
524	Multi-objective optimization on a heat exchanger network retrofit with a heat pump and analysis of CO ₂ emissions control. Applied Energy, 2015, 154, 696-708.	10.1	38
525	A grid-based facilities allocation approach with safety and optimal heat exchanger networks synthesis. Computers and Chemical Engineering, 2015, 80, 92-100.	3.8	8

#	ARTICLE	IF	CITATIONS
526	Thermo-economic optimisation of industrial milk spray dryer exhaust to inlet air heat recovery. Energy, 2015, 90, 95-104.	8.8	35
527	Simultaneous heat integrated resource allocation network targeting for total annual cost considering non-isothermal mixing. Chemical Engineering Science, 2015, 134, 385-398.	3.8	18
528	Multi-objective optimization of heat exchanger networks based on Analysis of minimum temperature difference and accumulated CO ₂ emissions. Applied Thermal Engineering, 2015, 87, 736-748.	6.0	15
529	Simultaneous synthesis of a heat exchanger network with multiple utilities using utility substages. Computers and Chemical Engineering, 2015, 79, 70-79.	3.8	22
530	Optimization research of the circulating water consumption based on stage-wise superstructure algorithm. , 2015, , .		0
531	Optimization of velocity for energy saving and mitigating fouling in a crude oil preheat train with fixed network structure. Energy, 2015, 93, 1478-1488.	8.8	13
532	Indirect heat integration across plants using hot water circles. Chinese Journal of Chemical Engineering, 2015, 23, 992-997.	3.5	23
533	A new efficiency parameter for exergy analysis in low temperature processes. International Journal of Exergy, 2015, 17, 135.	0.4	20
534	Synthetic natural gas via integrated high-temperature electrolysis and methanation: Part II – Economic analysis. Journal of Energy Storage, 2015, 2, 64-79.	8.1	76
535	Efficient simultaneous synthesis for heat exchanger network with simulated annealing algorithm. Applied Thermal Engineering, 2015, 78, 136-149.	6.0	85
536	A hierarchical approach for the design improvements of an Organocat biorefinery. Bioresource Technology, 2015, 181, 321-329.	9.6	14
537	A new graphical-based approach for mass integration and exchange network design. Chemical Engineering Science, 2015, 127, 239-252.	3.8	22
538	Electrical circuit analogy for heat transfer analysis and optimization in heat exchanger networks. Applied Energy, 2015, 139, 81-92.	10.1	121
539	Generalized Pinch Analysis Scheme Using MATLAB. Chemical Engineering and Technology, 2015, 38, 530-536.	1.5	1
540	Entransy dissipation-based constraint for optimization of heat exchanger networks in thermal systems. Energy, 2015, 86, 696-708.	8.8	43
541	Large size biogas-fed Solid Oxide Fuel Cell power plants with carbon dioxide management: Technical and economic optimization. Journal of Power Sources, 2015, 294, 669-690.	7.8	59
542	Optimization of Heat-Integrated Crude Oil Distillation Systems. Part II: Heat Exchanger Network Retrofit Model. Industrial & Engineering Chemistry Research, 2015, 54, 5001-5017.	3.7	36
543	Water and energy integration: A comprehensive literature review of non-isothermal water network synthesis. Computers and Chemical Engineering, 2015, 82, 144-171.	3.8	92

#	ARTICLE	IF	CITATIONS
544	Energetic, exergetic and economic assessment of oxygen production from two columns cryogenic air separation unit. <i>Energy</i> , 2015, 90, 1298-1316.	8.8	123
545	Improving the solvent-extraction process of rice bran oil. <i>Chemical Engineering Research and Design</i> , 2015, 104, 1-10.	5.6	18
546	Computational strategies for large-scale MILP transshipment models for heat exchanger network synthesis. <i>Computers and Chemical Engineering</i> , 2015, 82, 68-83.	3.8	31
547	Experimental and simulation investigations on self-heat recuperative fluidized bed dryer for biomass drying with superheated steam. <i>Fuel Processing Technology</i> , 2015, 136, 79-86.	7.2	14
548	Integrating input–output models with pinch technology for enterprise sustainability analysis. <i>Clean Technologies and Environmental Policy</i> , 2015, 17, 2255-2265.	4.1	12
549	A new graphical representation of water footprint pinch analysis for chemical processes. <i>Clean Technologies and Environmental Policy</i> , 2015, 17, 1987-1995.	4.1	17
550	Multi-functional heat pumps integration in power plants for CO2 capture and sequestration. <i>Applied Energy</i> , 2015, 147, 258-268.	10.1	23
551	Simultaneous process optimization and heat integration based on rigorous process simulations. <i>Computers and Chemical Engineering</i> , 2015, 81, 180-199.	3.8	33
552	A methodology for the synthesis of heat exchanger networks having large numbers of uncertain parameters. <i>Energy</i> , 2015, 92, 373-382.	8.8	39
553	A novel graphical technique for Pinch Analysis applications: Energy Targets and grassroots design. <i>Energy Conversion and Management</i> , 2015, 96, 499-510.	9.2	26
554	Simultaneous optimization of heat-integrated crude oil distillation systems. <i>Chinese Journal of Chemical Engineering</i> , 2015, 23, 1518-1522.	3.5	10
555	Retrofit of heat exchanger networks without topology modifications and additional heat transfer area. <i>Applied Energy</i> , 2015, 159, 381-390.	10.1	30
556	Technical and economic working domains of industrial heat pumps: Part 1 – Single stage vapour compression heat pumps. <i>International Journal of Refrigeration</i> , 2015, 55, 168-182.	3.4	60
557	Water–energy nexus in biofuels production and renewable based power. <i>Sustainable Production and Consumption</i> , 2015, 2, 96-108.	11.0	19
558	Sub-ambient heat exchanger network design including expanders. <i>Chemical Engineering Science</i> , 2015, 138, 712-729.	3.8	27
559	Sustainable design and synthesis of energy systems. <i>Current Opinion in Chemical Engineering</i> , 2015, 10, 77-86.	7.8	102
560	Sub-ambient heat exchanger network design including compressors. <i>Chemical Engineering Science</i> , 2015, 137, 631-645.	3.8	26
561	Simultaneous Heat Exchanger Network Synthesis Involving Nonisothermal Mixing Streams with Temperature-Dependent Heat Capacity. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 8979-8987.	3.7	15

#	ARTICLE	IF	CITATIONS
562	Energy integration study on a hybrid electric vehicle energy system, using process integration techniques. Applied Thermal Engineering, 2015, 91, 834-847.	6.0	14
563	Design of integrated biorefineries. Computers and Chemical Engineering, 2015, 81, 40-56.	3.8	72
564	Energy, carbon dioxide and water use implications of hydrous ethanol production. Energy Conversion and Management, 2015, 105, 900-907.	9.2	43
565	Process Integration and Heat Exchanger Networks. , 2015, , 491-622.		2
566	Energy transfer diagram for site-wide analysis and application to a kraft pulp mill. Applied Thermal Engineering, 2015, 75, 547-560.	6.0	16
568	Heat integration and optimization of hydrogen production for a 1 kW low-temperature proton exchange membrane fuel cell. Chemical Engineering Science, 2015, 123, 81-91.	3.8	9
569	An algorithm for optimal waste heat recovery from chemical processes. Computers and Chemical Engineering, 2015, 73, 17-22.	3.8	2
570	Process analysis and economic optimization of intensified process alternatives for simultaneous industrial scale production of dimethyl carbonate and propylene glycol. Chemical Engineering Research and Design, 2015, 93, 411-431.	5.6	33
571	Synthesis of multipass heat exchanger network with the optimal number of shells and tubes based on pinch technology. Chemical Engineering Research and Design, 2015, 93, 185-193.	5.6	17
572	Heat recovery networks synthesis of large-scale industrial sites: Heat load distribution problem with virtual process subsystems. Energy Conversion and Management, 2015, 89, 985-1000.	9.2	12
573	Improving second generation bioethanol production in sugarcane biorefineries through energy integration. Applied Thermal Engineering, 2016, 109, 819-827.	6.0	31
574	Application Algorithm Development of Pinch Technology in Heat Integration Problem. Journal of Chemical Engineering & Process Technology, 2016, 07, .	0.1	2
575	Appropriate placement of compressors and expanders in sub-ambient processes. Computer Aided Chemical Engineering, 2016, 38, 1767-1772.	0.5	3
576	EVALUATION OF TOTAL ANNUAL COSTS OF HEAT EXCHANGER NETWORKS USING MODIFIED PINCH ANALYSIS. Nigerian Journal of Technology, 2016, 35, 537.	0.3	2
577	Embedding Sustainability in Product and Process Development – The Role of Process Systems Engineers. , 2016, , 353-378.		2
578	Process and Economic Optimisation of a Milk Processing Plant with Solar Thermal Energy. Computer Aided Chemical Engineering, 2016, , 1347-1352.	0.5	9
579	Synthesis of large-scale heat exchanger networks using a T-Q diagram method. Canadian Journal of Chemical Engineering, 2016, 94, 1955-1964.	1.7	9
580	An efficient method based on the uniformity principle for synthesis of large-scale heat exchanger networks. Applied Thermal Engineering, 2016, 107, 565-574.	6.0	21

#	ARTICLE	IF	CITATIONS
581	Optimal synthesis of a heat-integrated petroleum refinery configuration. Canadian Journal of Chemical Engineering, 2016, 94, 1939-1946.	1.7	3
582	Impact of problem formulation on LNG process optimization. AIChE Journal, 2016, 62, 3598-3610.	3.6	13
583	Technical-Economic Study of the Esterification Process of Used Vegetable Oils (UVOs) Using Heat Exchange Networks (HENs). Advanced Materials Research, 2016, 1139, 40-45.	0.3	1
584	Design of a water allocation and energy network for multi-contaminant problems using multi-objective optimization. Chemical Engineering Research and Design, 2016, 103, 348-364.	5.6	22
585	Methodological framework for economical and controllable design of heat exchanger networks: Steady-state analysis, dynamic simulation, and optimization. Applied Thermal Engineering, 2016, 104, 439-449.	6.0	12
586	Heat and work integration: Fundamental insights and applications to carbon dioxide capture processes. Energy Conversion and Management, 2016, 121, 36-48.	9.2	46
587	A novel hybrid chaotic ant swarm algorithm for heat exchanger networks synthesis. Applied Thermal Engineering, 2016, 104, 707-719.	6.0	38
588	Designing a heat-exchange system upon the reconstruction and synthesis of optimal systems of distillation columns. Theoretical Foundations of Chemical Engineering, 2016, 50, 178-187.	0.7	20
589	Mathematical programming synthesis of non-isothermal water networks by using a compact/reduced superstructure and an MINLP model. Clean Technologies and Environmental Policy, 2016, 18, 1779-1813.	4.1	35
590	Potential for energy savings by heat recovery in an integrated steel supply chain. Applied Thermal Engineering, 2016, 103, 592-606.	6.0	50
591	A Novel Sensible Heat Pump Scheme for Industrial Heat Recovery. Industrial & Engineering Chemistry Research, 2016, 55, 967-977.	3.7	19
592	Application of energy management coupled with fuel switching on a hydrotreater unit. Egyptian Journal of Petroleum, 2016, 25, 65-74.	2.6	9
593	Conceptual insights to debottleneck the Network Pinch in heat-integrated crude oil distillation systems without topology modifications. Energy Conversion and Management, 2016, 126, 329-341.	9.2	21
594	Systematic optimization methodology for heat exchanger network and simultaneous process design. Computers and Chemical Engineering, 2016, 95, 146-160.	3.8	8
595	Process Pathways Optimization for a Lignocellulosic Biorefinery Producing Levulinic Acid, Succinic Acid, and Ethanol. Industrial & Engineering Chemistry Research, 2016, 55, 10699-10717.	3.7	40
596	Sizing of Hybrid Power System with varying current type using numerical probabilistic approach. Applied Energy, 2016, 184, 1364-1373.	10.1	20
597	Work-heat exchanger network synthesis (WHENS). Energy, 2016, 113, 1006-1017.	8.8	39
598	Optimal heat exchanger network synthesis with operability and safety considerations. Clean Technologies and Environmental Policy, 2016, 18, 2381-2400.	4.1	16

#	ARTICLE	IF	CITATIONS
599	Design and application of a millistructured heat exchanger reactor for an energy-efficient process. Chemical Engineering and Processing: Process Intensification, 2016, 108, 109-116.	3.6	18
600	Automated heat exchanger network synthesis by using hybrid natural algorithms and parallel processing. Computers and Chemical Engineering, 2016, 94, 370-386.	3.8	55
601	A process integration approach for the production of biological iso-propanol, butanol and ethanol using gas stripping and adsorption as recovery methods. Biochemical Engineering Journal, 2016, 116, 176-194.	3.6	39
602	A simultaneous methodology for the optimal design of integrated water and energy networks considering pressure drops in process industries. Chemical Engineering Research and Design, 2016, 103, 442-454.	5.6	8
603	Designing integrated local production systems: A study on the food-energy-water nexus. Journal of Cleaner Production, 2016, 135, 1065-1084.	9.3	101
604	Pinch Analysis and Process Integration. , 2016, , 125-162.		19
605	Improving coke-plant efficiency by dry quenching with natural gas. Coke and Chemistry, 2016, 59, 61-67.	0.4	4
606	An area method for visualizing heat-transfer imperfection of a heat exchanger network in terms of temperature-heat-flow-rate diagrams. Science China Technological Sciences, 2016, 59, 1517-1523.	4.0	5
607	Correct integration of compressors and expanders in above ambient heat exchanger networks. Energy, 2016, 116, 1282-1293.	8.8	30
608	Uniformity factor of temperature difference in heat exchanger networks. Applied Thermal Engineering, 2016, 102, 1366-1373.	6.0	13
609	Synthesis of mass exchange networks for single and multiple periods of operations considering detailed cost functions and column performance. Chemical Engineering Research and Design, 2016, 103, 391-404.	5.6	9
610	Linking pinch analysis and bridge analysis to save energy by heat-exchanger network retrofit. Applied Thermal Engineering, 2016, 106, 443-472.	6.0	33
611	Automated targeting model for synthesis of heat exchanger network with utility systems. Applied Energy, 2016, 162, 1272-1281.	10.1	27
612	Optimum energy integration of thermal hydrolysis through pinch analysis. Renewable Energy, 2016, 96, 1093-1102.	8.9	25
613	NLP model and stochastic multi-start optimization approach for heat exchanger networks. Applied Thermal Engineering, 2016, 94, 458-471.	6.0	25
614	A knowledge-based system for low-grade waste heat recovery in the process industries. Applied Thermal Engineering, 2016, 94, 590-599.	6.0	40
615	The water-energy-food nexus and process systems engineering: A new focus. Computers and Chemical Engineering, 2016, 91, 49-67.	3.8	234
616	Optimum synthesis of an electrodialysis framework with a Background Process II: Optimization and synthesis of a water network. Chemical Engineering Science, 2016, 147, 189-199.	3.8	3

#	ARTICLE	IF	CITATIONS
617	Synthesis of heat exchanger network considering pressure drop and layout of equipment exchanging heat. Energy, 2016, 101, 484-495.	8.8	15
618	Feasible heat recovery of interplant heat integration between two plants via an intermediate medium analyzed by Interplant Shifted Composite Curves. Applied Thermal Engineering, 2016, 94, 90-98.	6.0	25
619	Steam system network synthesis with hot liquid reuse: I. The mathematical model for steam level selection. Computers and Chemical Engineering, 2016, 85, 210-215.	3.8	3
620	Retrofit of heat exchanger networks with heat transfer enhancement based on an area ratio approach. Applied Energy, 2016, 165, 22-35.	10.1	36
621	Optimization of heat exchanger networks based on Lagrange multiplier method with the entransy balance equation as constraint. International Journal of Heat and Mass Transfer, 2016, 95, 109-115.	4.8	25
622	Maximising heat recovery in batch processes via product streams storage and shifting. Journal of Cleaner Production, 2016, 112, 2802-2812.	9.3	15
623	Heat integration for bio-oil hydroprocessing coupled with aqueous phase steam reforming. Chemical Engineering Research and Design, 2016, 107, 73-80.	5.6	18
624	Selection of minimum temperature difference (\hat{T}_{min}) for heat exchanger network synthesis based on trade-off plot. Applied Energy, 2016, 162, 1259-1271.	10.1	10
625	Evaluating the potential of process sites for waste heat recovery. Applied Energy, 2016, 161, 627-646.	10.1	96
626	Review of metaheuristics applied to heat exchanger network design. International Transactions in Operational Research, 2017, 24, 7-26.	2.7	38
627	Strategy to synthesize integrated solar energy coproduction processes with optimal process intensification. Case study: Efficient solar thermal hydrogen production. Computers and Chemical Engineering, 2017, 105, 328-347.	3.8	14
628	Crosslinked polymeric coatings: Preparation, characterization, and diffusion studies. Progress in Organic Coatings, 2017, 105, 149-162.	3.9	34
629	A Unified Total Site Heat Integration targeting method for isothermal and non-isothermal utilities. Energy, 2017, 119, 10-25.	8.8	37
630	Simultaneous optimization of multi-plant heat integration using intermediate fluid circles. Energy, 2017, 121, 306-317.	8.8	38
631	Integrated process for simultaneous production of jet fuel range alkenes and N -methylformanilide using biomass-derived gamma-valerolactone. Journal of Industrial and Engineering Chemistry, 2017, 48, 173-179.	5.8	13
632	Optimizing the CSP-Calcium Looping integration for Thermochemical Energy Storage. Energy Conversion and Management, 2017, 136, 85-98.	9.2	136
633	A novel Random Walk algorithm with Compulsive Evolution for heat exchanger network synthesis. Applied Thermal Engineering, 2017, 115, 1118-1127.	6.0	40
634	Impact of Nonuniform Fouling on Operating Temperatures in Heat Exchanger Networks. Heat Transfer Engineering, 2017, 38, 753-761.	1.9	10

#	ARTICLE	IF	CITATIONS
635	In-building waste water heat recovery: An urban-scale method for the characterisation of water streams and the assessment of energy savings and costs. <i>Applied Energy</i> , 2017, 192, 110-125.	10.1	49
636	Thermodynamic analysis on theoretical models of cycle combined heat exchange process: The reversible heat exchange process. <i>Energy</i> , 2017, 124, 565-578.	8.8	6
637	Temperature driving force (TDF) curves for heat exchanger network retrofit – A case study and implications. <i>Energy</i> , 2017, 123, 283-295.	8.8	33
638	Simultaneous chemical process synthesis and heat integration with unclassified hot/cold process streams. <i>Computers and Chemical Engineering</i> , 2017, 101, 210-225.	3.8	19
639	Conceptual Design of Methyl Ethyl Ketone Production via 2,3-Butanediol for Fuels and Chemicals. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 3947-3957.	3.7	36
640	Coupling design of interunit heat integration in an industrial crude distillation plant using pinch analysis. <i>Applied Thermal Engineering</i> , 2017, 117, 145-154.	6.0	21
641	Integration of heat exchanger network considering the pressure variation of distillation column. <i>Applied Thermal Engineering</i> , 2017, 116, 777-783.	6.0	15
642	Energy integration on multi-periods for vehicle thermal powertrains. <i>Canadian Journal of Chemical Engineering</i> , 2017, 95, 253-264.	1.7	8
643	Process integration and superstructure optimization of Organic Rankine Cycles (ORCs) with heat exchanger network synthesis. <i>Computers and Chemical Engineering</i> , 2017, 107, 257-270.	3.8	53
644	Holistic view of CO ₂ reduction potential from energy use by an individual processing company. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 77, 336-343.	16.4	3
645	Costs and environmental impacts multi-objective heat exchanger networks synthesis using a meta-heuristic approach. <i>Applied Energy</i> , 2017, 203, 304-320.	10.1	24
646	Multi-Objective Genetic Algorithm and Simulated Annealing with the Jumping Gene Adaptations. <i>Advances in Process Systems Engineering</i> , 2017, , 93-133.	0.3	1
647	Optimal retrofit of heat exchanger networks: A stepwise approach. <i>Computers and Chemical Engineering</i> , 2017, 106, 243-268.	3.8	18
648	Integrated strategy for N-methylformanilide production from carbon dioxide of flue gas in coal-fired power plant. <i>Energy Conversion and Management</i> , 2017, 139, 135-139.	9.2	2
649	Energy optimization for maximum energy saving with optimal modification in Continuous Catalytic Regeneration Reformer Process. <i>Energy</i> , 2017, 120, 774-784.	8.8	6
650	Optimization of coal-based methanol distillation scheme using process superstructure method to maximize energy efficiency. <i>Energy</i> , 2017, 119, 110-120.	8.8	38
651	An alternative energy flow model for analysis and optimization of heat transfer systems. <i>International Journal of Heat and Mass Transfer</i> , 2017, 108, 712-720.	4.8	90
652	Thermodynamic Optimization of heat recovery ORCs for heavy duty Internal Combustion Engine: pure fluids vs. zeotropic mixtures. <i>Energy Procedia</i> , 2017, 129, 168-175.	1.8	21

#	ARTICLE	IF	CITATIONS
653	A systematic methodology for the techno-economic optimization of Organic Rankine Cycles. Energy Procedia, 2017, 129, 26-33.	1.8	32
654	The implementation of inter-plant heat integration among multiple plants. Part I: A novel screening algorithm. Energy, 2017, 140, 1018-1029.	8.8	19
655	Catalytic production of 1,4-pentanediol from corn stover. Bioresource Technology, 2017, 245, 442-448.	9.6	14
656	Simultaneous Utility and Heat Exchanger Area Targeting for Integrated Process Synthesis and Heat Integration. Industrial & Engineering Chemistry Research, 2017, 56, 11847-11859.	3.7	17
657	Selection of energy conservation projects through Financial Pinch Analysis. Energy, 2017, 138, 602-615.	8.8	40
658	Financial risks management of heat exchanger networks under uncertain utility costs via multi-objective optimization. Energy, 2017, 139, 98-117.	8.8	15
659	Modeling of a continuous water desalination process using directional solvent extraction. Desalination, 2017, 420, 114-124.	8.2	27
660	Mathematical modelling of sustainable wastewater reuse networks considering CO2 emissions. Korean Journal of Chemical Engineering, 2017, 34, 2648-2661.	2.7	1
661	On the simultaneous integration of heat and carbon dioxide in industrial parks. Applied Thermal Engineering, 2017, 127, 81-94.	6.0	23
662	Simultaneous design of separation sequences and whole process energy integration. Chemical Engineering Research and Design, 2017, 125, 166-180.	5.6	10
663	New transshipment type MINLP model for heat exchanger network synthesis. Chemical Engineering Science, 2017, 173, 537-559.	3.8	18
664	Insight-Based Approach for the Design of Integrated Local Food-Energy-Water Systems. Environmental Science & Technology, 2017, 51, 8643-8653.	10.0	18
665	Simultaneous synthesis of non-isothermal water networks integrated with process streams. Energy, 2017, 141, 2587-2612.	8.8	20
666	Energy, Water, Cost, and Greenhouse Gas Implications of Steam-Assisted Gravity Drainage Surface Facility Technologies. Process Integration and Optimization for Sustainability, 2017, 1, 87-107.	2.6	2
667	The implementation of inter-plant heat integration among multiple plants. Part II: The mathematical model. Energy, 2017, 135, 382-393.	8.8	19
668	Targeting for cogeneration potential and steam allocation for steam distribution network. Applied Thermal Engineering, 2017, 113, 1610-1621.	6.0	17
669	An MILP model for simultaneous mass allocation and heat exchange networks design. Chemical Engineering Science, 2017, 158, 411-428.	3.8	25
670	Modeling and Control of Heat Networks With Storage: The Single-Producer Multiple-Consumer Case. IEEE Transactions on Control Systems Technology, 2017, 25, 414-428.	5.2	21

#	ARTICLE	IF	CITATIONS
671	A novel simultaneous optimization model with efficient stream arrangement for heat exchanger network synthesis. Applied Thermal Engineering, 2017, 110, 1659-1673.	6.0	32
672	Large-scale heat exchanger networks synthesis using simulated annealing and the novel rocket fireworks optimization. AIChE Journal, 2017, 63, 1582-1601.	3.6	68
673	Heat Exchanger Network Synthesis without stream splits using parallelized and simplified simulated Annealing and Particle Swarm Optimization. Chemical Engineering Science, 2017, 158, 96-107.	3.8	88
674	Carbon dioxide and heat integration of industrial parks. Journal of Cleaner Production, 2017, 155, 47-56.	9.3	33
675	A novel disjunctive model for the simultaneous optimization and heat integration. Computers and Chemical Engineering, 2017, 96, 149-168.	3.8	27
676	FI2EPI: A heat management tool for process integration. Applied Thermal Engineering, 2017, 114, 523-536.	6.0	7
678	Energy Integrated Distillation Column Sequence by Driving Force Method and Pinch Analysis. Energy Procedia, 2017, 142, 3895-3901.	1.8	0
679	Process integration for the supercritical production of biodiesel and the production of lignocellulosic bioethanol. Computer Aided Chemical Engineering, 2017, 40, 931-936.	0.5	5
680	A New Disjunctive Formulation for the Simultaneous Optimization and Heat Integration with Cold/Hot and Unclassified Streams. Computer Aided Chemical Engineering, 2017, 40, 2167-2172.	0.5	0
681	Heat Integration. , 2017, , 215-238.		8
682	General Superstructure Synthesis and Bi-level Solution Strategy for Industrial Heat Pumping. Computer Aided Chemical Engineering, 2017, 40, 1159-1164.	0.5	1
684	Process Integration: Current Status and Future Challenges. Computer Aided Chemical Engineering, 2017, 40, 9-12.	0.5	2
685	Synthesis Of Mass Exchanger Network Considering Piping And Pumping Costs Using Process Integration Principles. Journal of Chemical Engineering & Process Technology, 2017, 08, .	0.1	0
686	A Natural Gas Monetization Approach with Carbon Dioxide and Excess Heat Integration in Industrial Parks. Computer Aided Chemical Engineering, 2017, 40, 1963-1968.	0.5	2
687	Power-to-Gas through High Temperature Electrolysis and Carbon Dioxide Methanation: Reactor Design and Process Modeling. Industrial & Engineering Chemistry Research, 2018, 57, 4007-4018.	3.7	77
688	Targeting and synthesis of single-impurity total water systems using coordinated transshipment models. Clean Technologies and Environmental Policy, 2018, 20, 271-289.	4.1	4
689	Process Integration Using Block Superstructure. Industrial & Engineering Chemistry Research, 2018, 57, 4377-4398.	3.7	30
690	Towards an energy-friendly and cleaner solvent-extraction of vegetable oil. Journal of Environmental Management, 2018, 217, 196-206.	7.8	24

#	ARTICLE	IF	CITATIONS
691	An Optimization-Based Approach for Simultaneous Chemical Process and Heat Exchanger Network Synthesis. Industrial & Engineering Chemistry Research, 2018, 57, 6330-6343.	3.7	15
692	Flexibility Assessment of Heat Exchanger Networks: From a Thorough Data Extraction to Robustness Evaluation. Chemical Engineering Research and Design, 2018, 131, 571-583.	5.6	10
693	Hydrogen/formic acid production from natural gas with zero carbon dioxide emissions. Journal of Natural Gas Science and Engineering, 2018, 49, 84-93.	4.4	12
694	Sustainability assessment of combined steam and dry reforming versus triâ€reforming of methane for syngas production. Asia-Pacific Journal of Chemical Engineering, 2018, 13, e2168.	1.5	21
695	Heuristics with performance guarantees for the minimum number of matches problem in heat recovery network design. Computers and Chemical Engineering, 2018, 113, 57-85.	3.8	10
696	A novel random walk algorithm with compulsive evolution combined with an optimum-protection strategy for heat exchanger network synthesis. Energy, 2018, 152, 694-708.	8.8	28
697	Optimal heat pump integration in industrial processes. Applied Energy, 2018, 219, 68-92.	10.1	69
698	A heat integration method with multiple heat exchange interfaces. Energy, 2018, 152, 476-488.	8.8	15
699	Design of mixed energyâ€integrated batch process networks by Pseudoâ€direct approach. AIChE Journal, 2018, 64, 55-67.	3.6	4
700	A new heuristic algorithm with the step size adjustment strategy for heat exchanger network synthesis. Energy, 2018, 143, 12-24.	8.8	20
701	Simultaneous integrated design for heat exchanger network and cooling water system. Applied Thermal Engineering, 2018, 128, 1510-1519.	6.0	23
702	An integrated random walk algorithm with compulsive evolution and fine-search strategy for heat exchanger network synthesis. Applied Thermal Engineering, 2018, 128, 861-876.	6.0	27
703	Disjunctive model for the simultaneous optimization and heat integration with unclassified streams and area estimation. Computers and Chemical Engineering, 2018, 108, 217-231.	3.8	19
704	A pinchâ€like targeting framework for systematic thermal process intensification. AIChE Journal, 2018, 64, 877-885.	3.6	5
706	Analysis and revamping of heat exchanger networks for crude oil refineries using temperature driving force graphical technique. Clean Technologies and Environmental Policy, 2018, 20, 243-258.	4.1	4
707	Area Targeting of Heat Exchanger Network (Hen) Using a Modified Pinch Technique. IOP Conference Series: Earth and Environmental Science, 2018, 173, 012003.	0.3	2
708	Reprint of: Heuristics with performance guarantees for the minimum number of matches problem in heat recovery network design. Computers and Chemical Engineering, 2018, 116, 422-450.	3.8	0
709	Case study of power generation and CO2 emissions reduction potential from introduction of Organic Rankine Cycle on Atyrau Oil Refinery Plant Vacuum Distillation Unit. Materials Today: Proceedings, 2018, 5, 22859-22870.	1.8	2

#	ARTICLE	IF	CITATIONS
710	3. Synthesis of Heat Exchanger Networks. , 2018, , 71-102.		0
711	2. Setting energy targets and Heat Integration. , 2018, , 13-70.		0
712	1. Process Integration and Intensification: An Introduction. , 2018, , 1-12.		1
713	Simultaneous Optimization of Non-Isothermal Design of Water Networks with Regeneration and Recycling. Process Integration and Optimization for Sustainability, 2018, 2, 183-203.	2.6	11
714	New directions in the implementation of Pinch Methodology (PM). Renewable and Sustainable Energy Reviews, 2018, 98, 439-468.	16.4	222
715	Operating Oil Refinery Units Under Uncertainty: Thermodynamic and Economic Implications. Green Energy and Technology, 2018, , 907-923.	0.6	0
716	Optimization of water-energy nexus: A network representation-based graphical approach. Applied Energy, 2018, 224, 230-250.	10.1	71
717	Simultaneous diagnosis and retrofit of heat exchanger network via individual process stream mapping. Energy, 2018, 155, 1113-1128.	8.8	24
718	Heat-exchanger network synthesis. , 2018, , 577-609.		0
720	Heat exchanger network synthesis using genetic algorithm and differential evolution. Computers and Chemical Engineering, 2018, 117, 82-96.	3.8	47
721	Carbon emission reduction in the Brazilian electricity sector using Carbon Sources Diagram. Energy, 2018, 159, 134-150.	8.8	15
722	Multi-objective optimization of multi-period interplant heat integration using steam system. Energy, 2018, 159, 950-960.	8.8	29
723	An energy hub approach for direct interplant heat integration. Energy, 2018, 159, 878-890.	8.8	8
724	Multi Region Carbon Capture and Storage Network in Indonesia Using Pinch Design Method. Process Integration and Optimization for Sustainability, 2018, 2, 321-341.	2.6	9
726	Design and simulation of an integrated process for biodiesel production from waste cooking oil using supercritical methanolysis. Energy, 2018, 161, 299-307.	8.8	20
727	Synthesis of Heat-Integrated Water Allocation Networks: A Meta-Analysis of Solution Strategies and Network Features. Energies, 2018, 11, 1158.	3.1	18
728	Numerical Representation for Heat Exchanger Networks Binding Topology and Thermodynamics. Computer Aided Chemical Engineering, 2018, 43, 1457-1462.	0.5	4
729	Coordination between bypass control and economic optimization for heat exchanger network. Energy, 2018, 160, 318-329.	8.8	20

#	ARTICLE	IF	CITATIONS
730	Feasibility of energy integration for high-pressure biofuels production processes. Computer Aided Chemical Engineering, 2018, , 1523-1528.	0.5	2
731	A Sequential Integration between Optimal Flexible Heat Exchanger Network Synthesis and Control Structure Design. Industrial & Engineering Chemistry Research, 2018, 57, 11094-11111.	3.7	3
732	A heat integration method with location-dependent heat distribution losses. Computer Aided Chemical Engineering, 2018, 44, 1195-1200.	0.5	0
733	Comparison of working fluids and cycle optimization for heat recovery ORCs from large internal combustion engines. Energy, 2018, 158, 396-416.	8.8	81
734	Systematic Design, Analysis and Optimization of Water-Energy Nexus. Computer Aided Chemical Engineering, 2019, 47, 227-232.	0.5	4
735	An updated review on application of nanofluids in heat exchangers for saving energy. Energy Conversion and Management, 2019, 198, 111886.	9.2	293
736	Population-diversity enhancement strategy against clustering of individuals in stochastic method for heat exchanger network synthesis. Numerical Heat Transfer; Part A: Applications, 2019, 76, 139-159.	2.1	2
737	Application of plate heat exchangers into heat exchanger networks retrofit with fixed structure. Computer Aided Chemical Engineering, 2019, 46, 505-510.	0.5	1
738	Batch process heat storage integration: A simple and effective graphical approach. Energy, 2019, 185, 804-818.	8.8	18
739	Practical heat pump and storage integration into non-continuous processes: A hybrid approach utilizing insight based and nonlinear programming techniques. Energy, 2019, 182, 236-253.	8.8	16
740	Pinch Methods for Efficient Use of Water in Food Industry: A Survey Review. Sustainability, 2019, 11, 4492.	3.2	20
741	Hybrid Optimization Methodology (Exergy/Pinch) and Application on a Simple Process. Energies, 2019, 12, 3324.	3.1	6
742	Incorporating Location Aspects in Process Integration Methodology. Energies, 2019, 12, 3338.	3.1	15
743	Integrating pinch analysis and process simulation within equation-oriented simulators. Computers and Chemical Engineering, 2019, 130, 106555.	3.8	14
744	Novel Process Design Combined with Reactive Distillation and Pressure-Swing Distillation for Propylene Glycol Monomethyl Ether Acetate Synthesis. Industrial & Engineering Chemistry Research, 2019, 58, 19211-19225.	3.7	10
745	Exergy-based analysis combined with LCA for waste heat recovery in coal-fired CHP plants. Energy, 2019, 169, 247-262.	8.8	27
746	Gasification of wood biomass with renewable hydrogen for the production of synthetic natural gas. Fuel, 2019, 242, 520-531.	6.4	50
747	A new framework for work and heat exchange network synthesis and optimization. Energy Conversion and Management, 2019, 183, 617-632.	9.2	24

#	ARTICLE	IF	CITATIONS
748	A Pinch-Based Approach for Targeting Carbon Capture, Utilization, and Storage Systems. Industrial & Engineering Chemistry Research, 2019, 58, 3188-3198.	3.7	20
749	Nonsmooth Formulation for Handling Unclassified Process Streams in the Optimization of Work and Heat Exchange Networks. Industrial & Engineering Chemistry Research, 2019, 58, 9526-9539.	3.7	7
750	Combined Pinch and Exergy Evaluation for Fault Analysis in a Steam Power Plant Heat Exchanger Network. Journal of Energy Resources Technology, Transactions of the ASME, 2019, 141, .	2.3	13
751	An improved design method for retrofitting industrial heat exchanger networks based on Pinch Analysis. Chemical Engineering Research and Design, 2019, 148, 260-270.	5.6	35
752	Non-structural model of heat exchanger network: Modeling and optimization. International Journal of Heat and Mass Transfer, 2019, 140, 752-766.	4.8	18
753	A methodology for designing thermodynamic energy conversion systems in industrial mass/heat integration problems based on MILP models. Energy, 2019, 185, 121-135.	8.8	9
754	Challenges and future directions for process and product synthesis and design. Computers and Chemical Engineering, 2019, 128, 421-436.	3.8	24
755	Synthesis of Heat-Integrated Water Allocation Networks Through Pinch Analysis. Process Integration and Optimization for Sustainability, 2019, 3, 515-531.	2.6	10
756	A comparative assessment of electrification strategies for industrial sites: Case of milk powder production. Applied Energy, 2019, 250, 1383-1401.	10.1	42
757	Heat exchanger network synthesis combining Simulated Annealing and Differential Evolution. Energy, 2019, 181, 654-664.	8.8	43
758	Applying pinch and exergy analysis for energy efficient design of diesel hydrotreating unit. Journal of Cleaner Production, 2019, 232, 337-349.	9.3	29
759	A review on heat and mass integration techniques for energy and material minimization during CO2 capture. International Journal of Energy and Environmental Engineering, 2019, 10, 367-387.	2.5	27
760	Nonlinear control of high duty counter-current heat exchangers using reduced order model. Applied Thermal Engineering, 2019, 157, 113720.	6.0	5
761	Applying multiple decomposition methods and optimization techniques for achieving optimal cost in mixed materials heat exchanger networks. International Journal of Energy Research, 2019, 43, 3711-3722.	4.5	4
762	Optimisation of several industrial and recently developed AJAM naphtha isomerization processes using model based techniques. Computers and Chemical Engineering, 2019, 126, 403-420.	3.8	3
763	Comparative exergy and economic assessment of fossil and biomass-based routes for ammonia production. Energy Conversion and Management, 2019, 194, 22-36.	9.2	47
764	Transshipment type heat exchanger network model for intra- and inter-plant heat integration using process streams. Energy, 2019, 178, 853-866.	8.8	19
765	Optimization heat transfer coefficient in retrofit heat exchanger network using pinch analysis and Killer Whale algorithm. AIP Conference Proceedings, 2019, , .	0.4	3

#	ARTICLE	IF	CITATIONS
766	Heat recovery from spray dryer exhaust air: An example from an infant formula factory installation. Drying Technology, 2019, 37, 623-631.	3.1	4
767	Optimal design of heat and water recovery system utilizing waste flue gases for refinery CO2 reduction. Computers and Chemical Engineering, 2019, 124, 140-152.	3.8	5
768	Heat exchanger networks retrofit with an extended superstructure model and a meta-heuristic solution approach. Computers and Chemical Engineering, 2019, 125, 380-399.	3.8	23
769	Evaluation of the Complexity, Controllability and Observability of Heat Exchanger Networks Based on Structural Analysis of Network Representations. Energies, 2019, 12, 513.	3.1	16
770	Energy and CO2 management for chemical and related industries: issues, opportunities and challenges. BMC Chemical Engineering, 2019, 1, .	3.4	18
771	Cost-Optimal Heat Exchanger Network Synthesis Based on a Flexible Cost Functions Framework. Energies, 2019, 12, 784.	3.1	14
772	Optimal heat rejection pressure of CO2 heat pump water heaters based on pinch point analysis. International Journal of Refrigeration, 2019, 106, 592-603.	3.4	26
773	Indirect Heat Integration across Plants: Novel Representation of Intermediate Fluid Circles. Industrial & Engineering Chemistry Research, 2019, 58, 7233-7246.	3.7	4
774	Perspectives for low-temperature waste heat recovery. Energy, 2019, 176, 1037-1043.	8.8	189
775	Enhancement of efficiency for steam cycle of thermal power plants using process integration. Energy, 2019, 173, 364-373.	8.8	15
776	Temperature Disturbance Management in a Heat Exchanger Network for Maximum Energy Recovery Considering Economic Analysis. Energies, 2019, 12, 594.	3.1	11
777	Heat integration and heat recovery steam cycle optimization for a low-carbon lignite/biomass-to-jet fuel demonstration project. Applied Energy, 2019, 239, 1322-1342.	10.1	27
778	A Case Study of Industrial Symbiosis in the Humber Region Using the EPOS Methodology. Sustainability, 2019, 11, 6940.	3.2	19
779	Energy Complex of a Municipality on the Example of Luleå (Sweden). E3S Web of Conferences, 2019, 140, 03005.	0.5	1
780	Synthesis of Optimal Heat Exchanger Networks with Quantified Uncertainties and Non-isothermal Mixing. Journal of Physics: Conference Series, 2019, 1378, 022018.	0.4	2
781	Analysis of Heat Cascade Through Process Components to Reduce the Energy Consumption in Industrial Systems. Process Integration and Optimization for Sustainability, 2019, 3, 237-254.	2.6	7
782	Simulation and heat exchanger network designs for a novel single-column cryogenic air separation process. Chinese Journal of Chemical Engineering, 2019, 27, 1498-1509.	3.5	4
783	Optimal Synthesis of Heat-Integrated Water Regeneration Network. Industrial & Engineering Chemistry Research, 2019, 58, 1310-1321.	3.7	12

#	ARTICLE	IF	CITATIONS
784	A hybrid method for synthesis of integrated water and regeneration networks with variable removal ratios. Journal of Environmental Management, 2019, 231, 666-678.	7.8	13
785	Work and heat integration—A new field in process synthesis and process systems engineering. AIChE Journal, 2019, 65, e16477.	3.6	9
786	Synthesis of heat exchanger networks with economic and environmental assessment using fuzzy-Analytic Hierarchy Process. Chemical Engineering Science, 2019, 195, 185-200.	3.8	19
787	Approaches for retrofitting heat exchanger networks within processes and Total Sites. Journal of Cleaner Production, 2019, 211, 884-894.	9.3	51
788	Improving the network pinch approach for heat exchanger network retrofit with bridge analysis. Canadian Journal of Chemical Engineering, 2019, 97, 687-696.	1.7	13
789	Blueprint: A methodology facilitating data exchanges to enhance the detection of industrial symbiosis opportunities – application to a refinery. Chemical Engineering Science, 2020, 211, 115254.	3.8	19
790	Combined exergy analysis, energy integration and optimization of syngas and ammonia production plants: A cogeneration and syngas purification perspective. Journal of Cleaner Production, 2020, 244, 118647.	9.3	23
791	Optimal synthesis of multi-plant heat exchanger networks considering both direct and indirect methods. Chinese Journal of Chemical Engineering, 2020, 28, 456-465.	3.5	3
792	Optimal design of heat exchanger networks. , 2020, , 231-317.		22
793	Network-Based Analysis of Dynamical Systems. SpringerBriefs in Computer Science, 2020, , .	0.2	1
794	Approximation algorithms for process systems engineering. Computers and Chemical Engineering, 2020, 132, 106599.	3.8	3
795	A novel hybrid strategy for cost-optimal heat exchanger network synthesis suited for large-scale problems. Applied Thermal Engineering, 2020, 167, 114771.	6.0	29
796	Waste-to-hydrogen: Recycling HCl to produce H ₂ and Cl ₂ . Applied Energy, 2020, 259, 114184.	10.1	16
797	New set of Graphical Axes for Grassroots Design of Heat Exchanger Networks for Chemical Engineering Applications. Computer Aided Chemical Engineering, 2020, 48, 637-642.	0.5	2
798	Optimal use of Process Streams as Working Fluids in Work and Heat Exchange Networks (WHENs). Computer Aided Chemical Engineering, 2020, , 739-744.	0.5	0
799	Pinch and exergy evaluation of Kalina/Rankine/gas/steam combined power cycles for tri-generation of power, cooling and hot water using liquefied natural gas regasification. Energy Conversion and Management, 2020, 223, 113328.	9.2	26
800	Design of optimal heat exchanger network with fluctuation probability using break-even analysis. Energy, 2020, 212, 118583.	8.8	11
801	Application of optimization method based on discretized thermal energy in condensing heat recovery system of combined heat and power plant. Energy, 2020, 213, 119013.	8.8	4

#	ARTICLE	IF	CITATIONS
802	A novel two-step synthesis method with weakening strategy for solving large-scale heat exchanger networks. Journal of Cleaner Production, 2020, 275, 123103.	9.3	11
803	A pinch-based method for defining pressure manipulation routes in work and heat exchange networks. Renewable and Sustainable Energy Reviews, 2020, 131, 109989.	16.4	14
804	Energy management model to minimize fuel consumption and control harmful gas emissions. International Journal of Energy and Water Resources, 2020, 4, 453-463.	2.2	15
805	Pinch analysis for sustainable process design and integration. , 2020, , 275-291.		0
806	Heat exchanger network design. , 2020, , 131-194.		1
807	Large-scale introduction of forest-based biorefineries: Actor perspectives and the impacts of a dynamic biomass market. Biomass and Bioenergy, 2020, 142, 105782.	5.7	5
808	Cost Reduction of Fluid Catalytic Cracking Unit in Kaduna Refining and Petrochemical Company using Pinch Technology. Nigerian Journal of Technological Development, 2020, 17, 189-196.	0.6	0
809	Simultaneous Optimization Method for Directly Integrating ORC with HEN to Achieve Exergy-Economy Multiobjective. Industrial & Engineering Chemistry Research, 2020, 59, 21488-21501.	3.7	10
810	Key concepts of pinch analysis. , 2020, , 35-61.		0
811	Data extraction and energy targeting. , 2020, , 63-130.		0
812	Multiobjective Optimization of Interplant Heat Exchanger Networks Considering Utility Steam Supply and Various Locations of Interplant Steam Generation/Utilization. Industrial & Engineering Chemistry Research, 2020, 59, 14433-14446.	3.7	10
813	Economic Benefit Evaluation of Waste Heat Recovery in Coal-fired CHP System Based on Exergoeconomic Analysis. IOP Conference Series: Materials Science and Engineering, 2020, 721, 012059.	0.6	1
814	Optimal heat exchanger network synthesis by sequential splitting of process streams. Computers and Chemical Engineering, 2020, 142, 107042.	3.8	15
815	Optimization of a novel cryogenic air separation process based on cold energy recovery of LNG with exergoeconomic analysis. Journal of Cleaner Production, 2020, 275, 123027.	9.3	29
816	A design method for the integration of heat and control in a process of toluene hydrodealkylation. IOP Conference Series: Materials Science and Engineering, 2020, 778, 012073.	0.6	2
817	Synthesis of performance-optimal heat exchanger networks using attainable regions. Computers and Chemical Engineering, 2020, 142, 107043.	3.8	1
818	Gradual Synthesis of Heat Exchanger Networks Taking into Account Economic, Environmental, and Safety Factors. Industrial & Engineering Chemistry Research, 2020, 59, 20123-20130.	3.7	4
819	Economic Evaluation of Large-Scale Biorefinery Deployment: A Framework Integrating Dynamic Biomass Market and Techno-Economic Models. Sustainability, 2020, 12, 7126.	3.2	42

#	ARTICLE	IF	CITATIONS
822	Edible Coating and Pulsed Light to Increase the Shelf Life of Food Products. Food Engineering Reviews, 2021, 13, 544-569.	5.9	24
823	Disaster-Resilient Design of Manufacturing Facilities Through Process Integration: Principal Strategies, Perspectives, and Research Challenges. Frontiers in Sustainability, 2020, 1, .	2.6	28
824	Optimization of the Natural Gas Purification Process Based on Exergy Analysis. Geofluids, 2020, 2020, 1-9.	0.7	0
825	Simultaneous Optimization of a Heat-Integrated Coal-to-SNG/MeOH Polygeneration Process Based on Rigorous Kinetic Models. Industrial & Engineering Chemistry Research, 2020, 59, 22247-22257.	3.7	4
826	Energy saving potential of 6-component aromatic mixture via Energy Integrated Distillation Columns Sequence (EIDCS) method. IOP Conference Series: Materials Science and Engineering, 2020, 884, 012016.	0.6	1
827	Heat flow diagram as an extension of bridge retrofit method to save energy in heat exchanger networks. Applied Energy, 2020, 267, 114971.	10.1	13
828	Combined pinch and mathematical programming method for coupling integration of reactor and threshold heat exchanger network. Energy, 2020, 205, 118070.	8.8	12
829	Simulation-Based Estimates of Life Cycle Inventory Gate-to-Gate Process Energy Use for 151 Organic Chemical Syntheses. ACS Sustainable Chemistry and Engineering, 2020, 8, 8519-8536.	6.7	20
830	Simultaneous synthesis of sub and above-ambient heat exchanger networks including expansion process based on an enhanced superstructure model. Chinese Journal of Chemical Engineering, 2020, 28, 1344-1356.	3.5	3
831	A review on superstructure optimization approaches in process system engineering. Computers and Chemical Engineering, 2020, 136, 106808.	3.8	116
832	A Mixed-Integer Linear Programming Formulation for Optimizing Multi-Scale Material and Energy Integration. Frontiers in Energy Research, 2020, 8, .	2.3	44
833	Modeling and optimization of inter-plant indirect heat exchanger networks by a difference evolutionary algorithm. Chemical Engineering Science, 2020, 227, 115924.	3.8	8
834	Practical Energy Retrofit of Heat Exchanger Network Not Containing Utility Path. Energies, 2020, 13, 2711.	3.1	4
835	Critical Analysis of Process Integration Options for Joule-Cycle and Conventional Heat Pumps. Energies, 2020, 13, 635.	3.1	13
836	Pinch and sensitivity analyses of hydrogen liquefaction process in a hybridized system of biomass gasification plant, and cryogenic air separation cycle. Journal of Cleaner Production, 2020, 258, 120548.	9.3	31
837	An extended method for work and heat integration considering practical operating constraints. Energy Conversion and Management, 2020, 206, 112469.	9.2	5
838	Insightful Analysis and Targeting of the Optimal Hot Feed toward Energy Saving. Industrial & Engineering Chemistry Research, 2020, 59, 835-845.	3.7	4
839	Optimization and utilities relocation approach for the improvement of heat exchanger network designs. Chemical Engineering Research and Design, 2020, 156, 209-225.	5.6	12

#	ARTICLE	IF	CITATIONS
840	Waste heat and renewable energy integration in buildings. Energy and Buildings, 2020, 211, 109803.	6.7	17
841	Non-structural model for heat exchanger network synthesis allowing for stream splitting. Energy, 2020, 201, 117461.	8.8	23
842	A game theory based method for inter-plant heat integration considering cost allocation. Chinese Journal of Chemical Engineering, 2020, 28, 1652-1660.	3.5	4
843	Simultaneous Synthesis of Heat Exchanger Networks Considering Steam Supply and Various Steam Heater Locations. Energies, 2020, 13, 1467.	3.1	3
844	A Framework for Flexible and Cost-Efficient Retrofit Measures of Heat Exchanger Networks. Energies, 2020, 13, 1472.	3.1	11
845	A shortcut method for simultaneous energy and heat exchange area optimization with variable stream conditions. Applied Thermal Engineering, 2020, 175, 115363.	6.0	2
846	Low-Olefin Production Process Based on Fischer-Tropsch Synthesis: Process Synthesis, Optimization, and Techno-Economic Analysis. Industrial & Engineering Chemistry Research, 2020, 59, 8728-8739.	3.7	19
847	Industrial symbiosis tools—A review. Journal of Cleaner Production, 2021, 280, 124327.	9.3	40
848	Exergy analysis of renewable jet fuel production through hydro-conversion of glyceride-based oil. Applied Thermal Engineering, 2021, 182, 115934.	6.0	4
849	Extended hierarchical decomposition approach for the synthesis of biorefinery processes. Chemical Engineering Research and Design, 2021, 166, 40-54.	5.6	11
850	Optimal Selection of Shale Gas Processing and NGL Recovery Plant from Multiperiod Simulation. Process Integration and Optimization for Sustainability, 2021, 5, 123-138.	2.6	4
851	Smart supply-side management of optimal hydro reservoirs using the water/energy nexus concept: A hydropower pinch analysis. Applied Energy, 2021, 281, 116136.	10.1	24
852	Integrated regional waste management to minimise the environmental footprints in circular economy transition. Resources, Conservation and Recycling, 2021, 168, 105292.	10.8	44
853	A hierarchical optimization and design of double Kalina Cycles for waste heat recovery. Energy, 2021, 219, 119593.	8.8	19
854	Urban and industrial symbiosis for circular economy: Total EcoSite Integration. Journal of Environmental Management, 2021, 279, 111829.	7.8	43
855	Heat exchanger network synthesis with detailed exchanger designs—2. Hybrid optimization strategy for synthesis of heat exchanger networks. AIChE Journal, 2021, 67, .	3.6	7
856	Heat exchanger network retrofit with heat exchanger and material type selection: A review and a novel method. Renewable and Sustainable Energy Reviews, 2021, 138, 110479.	16.4	40
857	Energy, exergy and pinch analyses of an integrated cryogenic natural gas process based on coupling of absorption-compression refrigeration system, organic Rankine cycle and solar parabolic trough collectors. Journal of Thermal Analysis and Calorimetry, 2021, 145, 925-953.	3.6	7

#	ARTICLE	IF	CITATIONS
858	Small-scale biorefineries based on plantain and avocado residues. , 2021, , 349-374.		2
859	Graphical Analysis of Plant-Wide Heat Cascade for Increasing Energy Efficiency in the Production of Ethanol and Sugar from Sugarcane. Process Integration and Optimization for Sustainability, 2021, 5, 335-359.	2.6	5
860	Efficient Strategy for the Synthesis of Work and Heat Exchange Networks. Industrial & Engineering Chemistry Research, 2021, 60, 1756-1773.	3.7	5
861	Process Design and Sustainable Developmentâ€”A European Perspective. Processes, 2021, 9, 148.	2.8	22
862	Heat integration applied on low thermal energy system: Building complex case study. E3S Web of Conferences, 2021, 234, 00046.	0.5	1
863	Process intensification and integration in the production of biojet fuel. , 2021, , 171-199.		0
864	Unstructured Model of Heat Exchanger Network Based on Temperature Level Range. Modeling and Simulation, 2021, 10, 597-608.	0.1	0
865	Plate-fin heat exchanger network modeling, design and optimization â€” a novel and comprehensive algorithm. Journal of Engineering, Design and Technology, 2021, 19, 1017-1043.	1.7	4
866	A Hybrid Metaheuristicâ€”Deterministic Optimization Strategy for Waste Heat Recovery in Industrial Plants. Industrial & Engineering Chemistry Research, 2021, 60, 3711-3722.	3.7	10
867	A method for faster application of process integration techniques in retrofit situations. Journal of Cleaner Production, 2021, 284, 124698.	9.3	6
868	Tech-economic and environmental analysis of energy-efficient shale gas and flue gas coupling system for chemicals manufacture and carbon capture storage and utilization. Energy, 2021, 217, 119348.	8.8	16
869	Improved management of water resources in process industry by accounting for fluctuations of water content in feed streams and products. Journal of Water Process Engineering, 2021, 39, 101870.	5.6	8
870	Systematic Analysis Reveals Thermal Separations Are Not Necessarily Most Energy Intensive. Joule, 2021, 5, 330-343.	24.0	20
871	State of the art methods for combined water and energy systems optimisation in Kraft pulp mills. Optimization and Engineering, 2021, 22, 1831-1852.	2.4	12
872	Energy intensification of steam methane reformer furnace in ammonia production by application of digital twin concept. International Journal of Sustainable Energy, 2022, 41, 12-28.	2.4	5
873	Evaluation of Different Flare Gas Recovery Alternatives with Exergy and Exergoeconomic Analyses. Arabian Journal for Science and Engineering, 2022, 47, 5501-5520.	3.0	7
875	A framework for the design and analysis of integrated multi-product biorefineries from agricultural and forestry wastes. Renewable and Sustainable Energy Reviews, 2021, 139, 110687.	16.4	62
876	Evaluation of multiple time carbon capture and storage network with capital-carbon trade-off. Journal of Cleaner Production, 2021, 291, 125710.	9.3	17

#	ARTICLE	IF	CITATIONS
877	Flexibility analysis and design of heat exchanger network for syngas-to-methanol process. International Journal of Coal Science and Technology, 2021, 8, 1468-1478.	6.0	4
878	A user workflow for combining process simulation and pinch analysis considering ecological factors. Chemical Product and Process Modeling, 2020, .	0.9	1
879	Heat Exchanger Network Retrofit of an Oleochemical Plant through a Cost and Energy Efficiency Approach. ChemEngineering, 2021, 5, 17.	2.4	3
880	A Framework for Design and Operation Optimization for Utilizing Low-Grade Industrial Waste Heat in District Heating and Cooling. Energies, 2021, 14, 2190.	3.1	9
881	Graphical Design and Analysis of Mass Exchange Networks Using Composition Driving Forces. South African Journal of Chemical Engineering, 2021, 36, 94-104.	2.4	3
882	Passivity based control of heat exchanger networks with application to nuclear heating. Energy, 2021, 223, 120107.	8.8	5
883	Multiple-solution heat exchanger network synthesis using P-HENS solver. Journal of the Taiwan Institute of Chemical Engineers, 2022, 130, 103859.	5.3	9
884	Synthesis of stream-split heat exchanger networks using non-structural model considering serial equipment in stream branches and submixing of substreams. Canadian Journal of Chemical Engineering, 2022, 100, 933-948.	1.7	1
885	Heat Exchanger Network synthesis considering prohibited and restricted matches. Energy, 2021, 225, 120214.	8.8	9
886	Design and economic analysis of industrial-scale methanol-to-olefins plants. Journal of the Taiwan Institute of Chemical Engineers, 2022, 130, 103893.	5.3	9
887	Techno-Economic Optimization of an Integrated Biomass Waste Gasifier-Solid Oxide Fuel Cell Plant. Frontiers in Energy Research, 2021, 9, .	2.3	3
889	Optimum Integration of Regeneration in Heat-Integrated Water Networks Through a Hybrid Approach. Process Integration and Optimization for Sustainability, 2021, 5, 707.	2.6	1
890	Design Optimization and Dynamic Simulation of Steam Cycle Power Plants: A Review. Frontiers in Energy Research, 2021, 9, .	2.3	9
891	Environmental sustainability challenges of China's edible vegetable oil industry: From farm to factory. Resources, Conservation and Recycling, 2021, 170, 105606.	10.8	29
892	Heat exchange systems with minimal irreversibility. Chemical Engineering Research and Design, 2021, 171, 317-326.	5.6	4
893	Thirty years of mass exchanger network synthesis – A systematic review. Journal of Cleaner Production, 2021, 304, 127112.	9.3	17
894	A Simple Criterion for Feasibility of Heat Integration between Distillation Streams Based on Relative Volatilities. Industrial & Engineering Chemistry Research, 2021, 60, 10286-10302.	3.7	6
895	Bi-objective Pinch Analysis of heat integrated water conservation networks. Journal of Cleaner Production, 2021, 312, 127676.	9.3	11

#	ARTICLE	IF	CITATIONS
896	The Use of Nanocellulose in Edible Coatings for the Preservation of Perishable Fruits and Vegetables. Coatings, 2021, 11, 990.	2.6	25
897	The E-S-T Method Based on the Grand Composite Curve Links Energy Consumption with Number of Stages and Stage Temperatures for Binary Mixture Distillation. Process Integration and Optimization for Sustainability, 0, , 1.	2.6	1
898	Multi-objective optimization of a solid oxide fuel cell-based integrated system to select the optimal closed thermodynamic cycle and heat coupling scheme simultaneously. International Journal of Hydrogen Energy, 2021, 46, 31828-31853.	7.1	3
899	Combined heat and power plant using a multi-objective Henry gas solubility optimization algorithm: A thermodynamic investigation of energy, exergy, and economic (3E) analysis. Heliyon, 2021, 7, e08003.	3.2	9
900	A reliable approach for heat exchanger networks synthesis with stream splitting by coupling genetic algorithm with modified quasi-linear programming method. Chemical Engineering Science, 2022, 248, 117140.	3.8	16
901	A multiperiod approach for waste heat and renewable energy integration of industrial sites. Renewable and Sustainable Energy Reviews, 2021, 148, 111232.	16.4	9
902	Heat recovery in an actual LNG supply chain: Retrofitting of designed heat exchange networks (HENs) for potential fuel saving. Chemical Engineering and Processing: Process Intensification, 2021, 166, 108477.	3.6	7
903	The Role of Biowaste: A Multi-Objective Optimization Platform for Combined Heat, Power and Fuel. Frontiers in Energy Research, 2021, 9, .	2.3	11
904	Linking pinch analysis and shifted temperature driving force plot for analysis and retrofit of heat exchanger network. Journal of Cleaner Production, 2021, 315, 128235.	9.3	11
905	Pyosyn: A new framework for conceptual design modeling and optimization. Computers and Chemical Engineering, 2021, 153, 107414.	3.8	9
906	Practicable total-site heat integration plan for retrofitting multiple heat exchanger networks. Chemical Engineering Research and Design, 2021, 174, 137-157.	5.6	8
907	Steel scrap generation in the EU-28 since 1946 – Sources and composition. Resources, Conservation and Recycling, 2021, 173, 105692.	10.8	20
908	A trust region framework for heat exchanger network synthesis with detailed individual heat exchanger designs. Computers and Chemical Engineering, 2021, 153, 107447.	3.8	9
909	A hybrid approach for heat integration in water conservation networks through non-isothermal mixing. Energy, 2021, 233, 121143.	8.8	9
910	An improved algorithm for synthesis of heat exchanger network with a large number of uncertain parameters. Energy, 2021, 233, 121199.	8.8	13
911	Artificial intelligence techniques in refrigeration system modelling and optimization: A multi-disciplinary review. Sustainable Energy Technologies and Assessments, 2021, 47, 101488.	2.7	23
912	A conceptual efficient design of energy recovery systems using a new energy-area key parameter. Energy Reports, 2021, 7, 1079-1090.	5.1	9
913	Conceptual approach for simultaneous targeting and design of refinery desulfurization solvent network. Chemical Engineering Research and Design, 2021, 175, 1-9.	5.6	2

#	ARTICLE	IF	CITATIONS
914	Sustainable process integration of electrification technologies with industrial energy systems. Energy, 2022, 239, 122060.	8.8	10
915	Application of exergy analysis and enhanced process integration. , 2022, , 61-105.		1
916	Einfluss der CO ₂ -Bepreisung nach BEHG auf die Kosten von W�rmeversorgung und Nutzung von Abw�rme in deutschen Industriebetrieben. Zeitschrift f�r Energiewirtschaft, 2021, 45, 25-33.	0.2	0
917	Uncertainty Region Decomposition Approach for Problem of Flexible One-Stage Heat Exchange Network Design. Studies in Systems, Decision and Control, 2021, , 323-334.	1.0	0
918	Thermodynamic Analysis and Process Optimization of Organosilicon Distillation Systems. SSRN Electronic Journal, 0, , .	0.4	0
919	Heat Integration Across Plants Considering Distance Factor. , 2017, , 621-648.		1
920	Operationalisierung von Nachhaltigkeit im Produktionskontext: Integrierte Ressourceneffizienzanalyse zur Senkung der Klimabelastung von Produktionsstandorten der chemischen Industrie. , 2016, , 349-363.		1
922	Basic Concepts in Heat Exchanger Network Modelling. , 1988, , 495-510.		3
923	Process Integration��an Innovative Approach to Energy Strategy. , 1988, , 191-197.		1
924	THE DESIGN OF FLEXIBLE HEAT EXCHANGER NETWORKS. , 1984, , 547-565.		9
925	AN ALGORITHM TO DEVELOP HEAT EXCHANGER NETWORKS WITH THE MINIMUM NUMBER OF STREAM SPLITS AND MAXIMUM ENERGY RECOVERY. , 1984, , 583-598.		1
926	References, Part 6. , 2005, , 251-301.		1
928	Synthesis of Heat Exchanger Networks Considering Location of Process Stream Sources.. Journal of Chemical Engineering of Japan, 1998, 31, 330-339.	0.6	3
929	A Simple Method for Finding Optimal Paths of Hot and Cold Streams inside Shell and Tube Heat Exchangers to Reduce Pumping Cost in Heat Exchanger Network Problems. Chemical and Biochemical Engineering Quarterly, 2020, 34, 131-148.	0.9	6
930	A Heat Exchanger Networks Synthesis Approach Based on Inherent Safety. Journal of Chemical Engineering Research Updates, 2015, 2, 22-29.	0.1	6
931	AUTOMATIC EVOLUTION OF HEAT EXCHANGER NETWORKS WITH SIMULTANEOUS HEAT EXCHANGER DESIGN. Brazilian Journal of Chemical Engineering, 1999, 16, 25-40.	1.3	5
932	Fluid dynamical considerations on heat exchanger networks. Brazilian Journal of Chemical Engineering, 2000, 17, 19-27.	1.3	2
933	The influence of heat exchanger design on the synthesis of heat exchanger networks. Brazilian Journal of Chemical Engineering, 2000, 17, 735-750.	1.3	6

#	ARTICLE	IF	CITATIONS
935	Minimizing Hot and Cold Utility Requirements for Vegetable Oil Refinery Plant Using Pinch Analysis *. International Journal of Scientific Engineering and Technology, 2015, 4, 298-301.	0.2	2
936	Simplification of Data Acquisition in Process Integration Retrofit Studies Based on Uncertainty and Sensitivity Analysis. Frontiers in Energy Research, 2019, 7, .	2.3	7
937	Water and Energy Nexus in China: Current Situation and Future Perspective in Energy Industry, Water Industry and Agriculture. Journal of Fundamentals of Renewable Energy and Applications, 2017, 04, .	0.2	3
938	INCREASING ENERGETIC EFFICIENCY IN SUGAR, ETHANOL, AND ELECTRICITY PRODUCING PLANTS. , 0, , 583-600.		2
939	Energy integration on a gasoline engine for efficiency improvement. International Journal of Thermodynamics, 2017, 20, 70-70.	1.0	1
940	An improved treble-level assisting optimization strategy to enhance algorithm search ability in heat exchanger network design. Journal of the Taiwan Institute of Chemical Engineers, 2021, 129, 162-170.	5.3	2
941	Analysis and Optimization of Cooling Water System Operating Cost under Changes in Ambient Temperature and Working Medium Flow. Energies, 2021, 14, 6903.	3.1	2
943	Effiziente Energieanwendung. , 2002, , 713-896.		0
944	Berechnung von Wärmeübertragern. , 2002, , 40-106.		3
946	Evaluating the Environmental Friendliness, Economics and Energy Efficiency of Chemical Processes: Heat Integration. , 2004, , 355-369.		0
950	Tight Energy Integration. , 2009, , 955-969.		0
951	A New Systematic Method for Optimal Heat Recovery Networks Design with Minimum Area and Exergy Loss. Journal of Applied Sciences, 2010, 10, 2737-2740.	0.3	1
952	A Process Integration Technique for Steam System Synthesis Involving Multiple Levels. Computer Aided Chemical Engineering, 2012, , 460-464.	0.5	1
953	Pinch Analysis of Process Plants Increase in Efficiency: A Review. International Journal of Scientific Research (Ahmedabad, India), 2012, 2, 133-134.	5.0	0
954	Energy Saving Technology. SpringerBriefs in Applied Sciences and Technology, 2013, , 3-14.	0.4	4
956	Integration of Cu-Cl Cycle of Hydrogen Production with Nuclear and Renewable Energy Systems for Better Environment. , 2013, , 409-432.		0
957	Fuzzy Analogical Gates Approach for Heat Exchangers Networks. International Journal of Computer Applications, 2013, 73, 1-8.	0.2	25
958	New Concepts in Thermodynamics for Better Chemical Process Design. , 1985, , 297-339.		6

#	ARTICLE	IF	CITATIONS
959	PLENARY PAPER RECEIVED TOO LATE TO BE INCLUDED AT FRONT OF ISSUE; Thermodynamic Analysis in Chemical Process and Reactor Design. , 1988, , 2303-2318.		1
960	Retrofitting Heat Exchanger Networks: A Two Stage Approach. , 1989, , 265-285.		2
961	Design of a Vapour Compression Heat Pump in a Heat Exchanger Network. , 1991, , 3-18.		0
962	Operability, Controllability and Observability of Chemical Plants â€” A Practical Industrial Point of View. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1991, 24, 135-140.	0.4	0
963	New Criteria for the Design of Optimal Heat Exchanger Networks. , 1993, , 929-940.		0
964	INTELLIGENT SYSTEM FOR DESIGN OF HEAT EXCHANGER NETWORKS WITH IMPROVED CONTROLLABILITY. , 1994, , 129-134.		0
965	Berechnung von WÄrmeÄ¼bertragern. , 1997, , 69-127.		1
966	Optimizing the Design of Heat Exchanger Networks in Crude Oil Refineries. Profiles in Operations Research, 2015, , 217-296.	0.4	1
967	INTEGRAÃ§Ã£o ENERGÃ‰TICA DA BIORREFINARIA DE CANA-DE-ÃÃ§CAR UTILIZANDO O PRÃ‰-TRATAMENTO HIDROTÃ‰RMICO PARA O BAGAÃ§ÃO. , 0, , .		0
968	Fuzzy Approach for Heat Exchanger Network. International Journal of Computer Applications, 2015, 123, 10-15.	0.2	0
969	Energy-Efcient Technologies: Major Appliances and Space Conditioning Equipment. , 2015, , 683-702.		0
970	Energy Management through Heat Integration: a Simple Algorithmic Approach for Introducing Pinch Analysis. MaÇšallatî ÇŞÄmiËžatî Al-SulâĀn QÄbÄ«s Li-l-buâĀĀ Al-Ëĵilmiyyatî Al-ËžulÄ«m Wa-al-handasatî, 2017, 20, 1.	0.1	0
971	Pinch analysis application in designing gasification pellets boiler. IMK-14 - Istrazivanje I Razvoj, 2016, 22, 9-14.	0.0	0
972	Generic Approach to Sustainability Improvements in Manufacturing Ovens. Smart Innovation, Systems and Technologies, 2016, , 99-109.	0.6	0
973	A Composite-Curve-Based Biomass Procurement Planning Approach. , 2017, , 749-770.		0
974	Chemical engineering systems modeling and efficiency analysis of heat and mass exchange. Technology Audit and Production Reserves, 2017, 2, 30-37.	0.1	0
975	Energy Integration of Kero Hydrotreating Unit, A Case Study of Nigerian Refinery. Journal of Chemical Engineering & Process Technology, 2018, 09, .	0.1	2
976	Approximation Algorithms for Process Systems Engineering. Computer Aided Chemical Engineering, 2018, 43, 565-566.	0.5	0

#	ARTICLE	IF	CITATIONS
977	DESIGN OF SUSTAINABLE INDUSTRIAL WATER NETWORKS: 1. GENESIS OF THE SYSTEMATIC METHODS. Water and Water Purification Technologies Scientific and Technical News, 2019, 24, 34-44.	0.2	0
978	DESIGN OF SUSTAINABLE INDUSTRIAL WATER NETWORKS: 2. "SEQUENTIAL" SYNTHESIS METHODS. Water and Water Purification Technologies Scientific and Technical News, 2019, 25, 25-37.	0.2	0
979	Improved Heat Exchanger Network Synthesis without Stream Splits Based on Comprehensive Learning Particle Swarm Optimizer. ACS Omega, 2021, 6, 29459-29470.	3.5	2
980	Overcoming decision paralysisâ€”A digital twin for decision making in energy system design. Applied Energy, 2022, 306, 117954.	10.1	39
981	Design Heat Exchanger: Optimization and Efficiency. International Journal of Advanced Network, Monitoring, and Controls, 2020, 5, 30-35.	0.2	0
982	CHAPTER 6. Continuous Crystallization of Bulk and Fine Chemicals. , 2020, , 248-265.		0
983	Advances in Petroleum Refining Processes. , 2013, , 197-221.		0
984	How will tramp elements affect future steel recycling in Europe? â€” A dynamic material flow model for steel in the EU-28 for the period 1910 to 2050. Resources, Conservation and Recycling, 2022, 179, 106072.	10.8	20
985	Synthesis of Cost-Optimal Heat Exchanger Networks Using a Novel Stochastic Algorithm and a Modified Stage-Wised Superstructure. Processes, 2021, 9, 2060.	2.8	2
986	Temperature driven internal heat integration in an energy-efficient partial double annular column. Korean Journal of Chemical Engineering, 2022, 39, 263-274.	2.7	7
987	Process Integration and Electrification for Efficient Milk Evaporation Systems. SSRN Electronic Journal, 0, , .	0.4	1
988	Heat Exchanger Network Design Using MATLAB. Chemical Engineering and Technology, 2022, 45, 508-516.	1.5	1
990	Novel Mathematical Approaches for the Structural Synthesis of Heat Exchanger Networks. Industrial & Engineering Chemistry Research, 2022, 61, 464-486.	3.7	1
991	Improving inter-plant integration of syngas production technologies by the recycling of CO2 and by-product of the Fischer-Tropsch process. International Journal of Hydrogen Energy, 2022, 47, 31755-31772.	7.1	6
992	Enhanced energy efficiency and reduced CO2 emissions by hybrid heat integration in dimethyl carbonate production systems. Separation and Purification Technology, 2022, 287, 120598.	7.9	7
993	Synthesis of large-scale total water network with multiple water resources under seasonal flow rate constraints. Journal of Cleaner Production, 2022, 337, 130462.	9.3	7
994	Partial energy integration between biofuels production processes: Effect on costs, CO2 emissions and process safety. Chemical Engineering Research and Design, 2022, 159, 918-930.	5.6	6
995	Optimal heat transfer systems design: Models and approaches. Mathematical Methods in the Applied Sciences, 2022, 45, 8151-8169.	2.3	2

#	ARTICLE	IF	CITATIONS
996	Flexible Heat Integration System in First-/Second-Generation Ethanol Production Via Screening Pinch-Based Method and Multiperiod Model. SSRN Electronic Journal, 0, , .	0.4	0
997	Holistic View on Synthetic Natural Gas Production: A Technical, Economic and Environmental Analysis. Energies, 2022, 15, 1608.	3.1	9
999	Incorporating machine learning for thermal engines modeling in industrial waste heat recovery. Chemical Engineering Research and Design, 2022, 181, 239-252.	5.6	5
1000	An extended stage-wise superstructure for heat exchanger network synthesis with intermediate placement of multiple utilities. Energy, 2022, 248, 123372.	8.8	6
1001	An advanced Grid Diagram for heat exchanger network retrofit with detailed plate heat exchanger design. Energy, 2022, 248, 123485.	8.8	18
1002	Simultaneous Minimization of Cost and Area of a Heat Exchanger Network (HEN) Using a Modified Pinch Technique. , 2021, , .		0
1003	Minimization of the Total Annual Cost (TAC) of a Heat Exchanger Network Using Aspen Hysys. , 2021, , .		0
1004	Heat Exchanger Network Optimization Based on the Participatory Evolution Strategy for Streams. Energies, 2021, 14, 8392.	3.1	0
1005	A Graphical Method for Combined Heat Pump and Indirect Heat Recovery Integration. Energies, 2022, 15, 2829.	3.1	4
1006	Optimization of regeneration temperature for energy integrated water allocation networks. Cleaner Engineering and Technology, 2022, , 100490.	4.0	1
1007	Thermodynamic analysis and process optimization of organosilicon distillation systems. Energy, 2022, 252, 124006.	8.8	5
1008	Pinch Technology without Tears. Energy Engineering: Journal of the Association of Energy Engineers, 2002, 99, 19-35.	0.5	0
1009	Wärmeübertragungsnetzwerke. , 0, , 88-98.		0
1013	HEAT EXCHANGER NETWORK SYNTHESIS CONSIDERING CHANGING PHASE STREAMS. Revista De Engenharia Têrmica, 2004, 3, .	0.2	0
1014	HYBRID GENETIC ALGORITHM TO THE SYNTHESIS OF OPTIMAL HEAT EXCHANGER NETWORKS. Revista De Engenharia Têrmica, 2005, 4, .	0.2	0
1015	Anstrich. Wärme- und Kälte dämmung. Lärmschutz. , 0, , 877-905.		0
1016	Optimally designed solvent system for lignocellulosic biomass conversion supported by property predictions. Sustainable Energy and Fuels, 2022, 6, 2734-2744.	4.9	1
1017	Optimal Operation of Heat Exchanger Networks. IFAC-PapersOnLine, 2022, 55, 375-380.	0.9	0

#	ARTICLE	IF	CITATIONS
1018	Aplicação da metodologia Pinch no processo de produção de cumeno / Application of the Pinch methodology in the cumene production process. Brazilian Applied Science Review, 2022, 6, 798-818.	0.1	0
1019	Industrial park heat integration considering centralized and distributed waste heat recovery cycle systems. Applied Energy, 2022, 318, 119207.	10.1	7
1020	Co-production of 1,4-pentanediol and adipic acid from corn stover with biomass-derived co-solvent: Process synthesis and analysis. Journal of Cleaner Production, 2022, 359, 131920.	9.3	10
1021	Optimal Profit Distribution in Interplant Waste Heat Integration through a Hybrid Approach. Energy, 2022, 253, 124001.	8.8	2
1022	Multiperiod Heat Exchanger Network Synthesis With Pinch-Based Strategies and Metaheuristics. Frontiers in Sustainability, 2022, 3, .	2.6	0
1023	Maximising the valorisation of organic waste locally available via carbon-to-nitrogen ratio Supply Composite Curve shifting. Journal of Cleaner Production, 2022, , 132389.	9.3	0
1024	Effect of Heat Duty Over Process Variables in Gasoline-Diesel Distillation Operation Following Energy Conservation. SSRN Electronic Journal, 0, , .	0.4	0
1026	Thermodynamic analysis of low-temperature and high-pressure (cryo-compressed) hydrogen storage processes cooled by mixed-refrigerants. International Journal of Hydrogen Energy, 2022, 47, 28932-28944.	7.1	17
1027	Online control system reconfiguration towards long period energy-saving optimization of heat exchanger networks. Journal of Cleaner Production, 2022, 367, 132940.	9.3	3
1029	A targeting algorithm for segregated heat integrated water allocation network. Computers and Chemical Engineering, 2022, 165, 107942.	3.8	1
1030	Heat exchanger network synthesis considering detailed thermal-hydraulic performance: Methods and perspectives. Renewable and Sustainable Energy Reviews, 2022, 168, 112810.	16.4	11
1031	Process integration and electrification for efficient milk evaporation systems. Energy, 2022, 258, 124885.	8.8	14
1032	Dynamic coupling of reactor and heat exchanger network considering catalyst deactivation. Energy, 2022, 260, 125161.	8.8	3
1033	Pinch Analysis for Heat Integration of Pulverized Coke Chemical Looping Gasification Coupled with Coke-Oven Gas to Methanol and Ammonia. Processes, 2022, 10, 1879.	2.8	2
1034	Designing compact heat recovery systems to increase energy efficiency. Chemical Engineering Research and Design, 2022, 187, 413-424.	5.6	1
1035	Highly effective hydrogenation of CO ₂ to methanol over Cu/ZnO/Al ₂ O ₃ catalyst: A process economy & environmental aspects. Fuel, 2023, 332, 126027.	6.4	25
1036	Systematic process energy optimization via multi-level heat integration: A case study on low-temperature reforming for methanol synthesis. Computer Aided Chemical Engineering, 2022, , 1207-1212.	0.5	0
1037	Analysis and design of integrated renewable energy and CO ₂ capture, utilization, and storage systems for low-cost emissions reduction. Computer Aided Chemical Engineering, 2022, , 133-138.	0.5	0

#	ARTICLE	IF	CITATIONS
1038	Synthesis of heat exchanger network with complex phase transition based on pinch technology and carbon tax. IFAC-PapersOnLine, 2022, 55, 418-423.	0.9	1
1039	Enhanced superstructure optimization for heat exchanger network synthesis using deterministic approach. Frontiers in Sustainability, 0, 3, .	2.6	0
1040	State-of-the-art review of heat integrated water allocation network synthesis. Computers and Chemical Engineering, 2022, 167, 108003.	3.8	4
1041	Energy and Economic Analysis of Power Generation Using Residual Pressure of a Circulating Cooling Water System. Sustainability, 2022, 14, 12931.	3.2	0
1042	Systematic Framework for CO2 Transport Design of CCS System in the Archipelagic State. Process Integration and Optimization for Sustainability, 2023, 7, 269-292.	2.6	1
1044	Ethanol to diesel: a sustainable alternative for the heavy-duty transportation sector. Sustainable Energy and Fuels, 2023, 7, 693-707.	4.9	3
1045	Applications of Process Integration Methodologies in the pulp and paper industry. , 2023, , 783-810.		0
1046	Heat Integration “ Performance Targets and Heat Exchanger Network Design. , 2023, , 149-185.		0
1047	Fifty years of Heat Integration. , 2023, , 73-99.		1
1048	A Process Integration Approach for Supply Chain Development. , 2023, , 633-657.		0
1049	Applying Process Integration to thermal processing of waste. , 2023, , 845-874.		0
1050	Total Site with Varying Supply and Demand (Including Renewables). , 2023, , 253-308.		0
1051	Analysis of Heat Cascade to Increase Plant Energy Efficiency in Retrofit Situations. , 2023, , 811-844.		0
1052	Design method of general heat exchanger networks with heat pumps based on thermal energy discretization and matching. Journal of Cleaner Production, 2023, 384, 135620.	9.3	2
1053	A mathematical formulation for robust targeting in heat integrated water allocation network. Energy, 2023, 264, 126078.	8.8	0
1054	Comprehensive integration of mass and energy utilization for refinery and synthetic plant of chemicals. Energy, 2023, 265, 126370.	8.8	0
1055	Sustainable Energy Efficient Industrial Facility Design. , 0, , .		0
1057	A Framework for Recovering Waste Heat Energy from Food Processing Effluent. Water (Switzerland), 2023, 15, 12.	2.7	2

#	ARTICLE	IF	CITATIONS
1058	A generic algorithm-based application for pinch-exergy prediction in process industries: A case study. Energy and Environment, 0, , 0958305X2211434.	4.6	0
1059	Metaheuristic optimization of double flash based combined heat and power system by using process simulator as black-box function generator. , 0, , .		0
1060	Optimal Economicâ€“Environmental Design of Heat Exchanger Network in Naphtha Cracking Center Considering Fuel Type and CO2 Emissions. Energies, 2022, 15, 9538.	3.1	0
1061	Approaches and application of heat and water network integration in chemical process system engineering: A review. Chemical Engineering and Processing: Process Intensification, 2023, 183, 109263.	3.6	1
1062	Graphsep: An integrated construction method of vapor compression cycle and heat exchanger network. Energy Conversion and Management, 2023, 277, 116576.	9.2	1
1063	Absorption mechanism-based approach for synthesis of refinery desulfurization solvent network. Chemical Engineering Science, 2023, 269, 118465.	3.8	3
1065	Improved energy recovery from the condensed steam as part of HEN retrofit. Energy, 2023, 270, 126727.	8.8	1
1066	Flexible heat integration system in first-/second-generation ethanol production via screening pinch-based method and multiperiod model. Energy, 2023, 271, 127017.	8.8	4
1067	Intelligent search strategy applied in heat exchanger network synthesis. Energy Reports, 2023, 9, 11-27.	5.1	1
1068	Multi-objective optimization for work-integrated heat exchange network coupled with interstage multiple utilities. Energy, 2023, 273, 127240.	8.8	4
1069	Optimization of Chenzhuang Combined Station through Pinch Analysis. Journal of Physics: Conference Series, 2023, 2442, 012036.	0.4	0
1070	Time dependent Pinch analysis with sensor data and unsupervised learning algorithms. Journal of Physics: Conference Series, 2023, 2430, 012001.	0.4	1
1071	A method for simultaneous retrofit of heat exchanger networks and tower operations for an existing natural gas purification process. E-Prime, 2021, 1, 100019.	2.0	7
1072	Enabling in-depth analysis in heat exchanger network synthesis via graph-theoretic tool: Experiences in Swinburne University of Technology Sarawak Campus. Education for Chemical Engineers, 2023, 43, 100-112.	4.8	2
1073	Energy-Saving Analysis of Epichlorohydrin Plant Based on Entransy. Processes, 2023, 11, 954.	2.8	0
1074	A techno-economic survey on high- to low-temperature waste heat recovery cycles for UK glass sector. International Journal of Green Energy, 0, , 1-17.	3.8	0
1075	Concept Development for Industrial Heating Networks under Consideration of Low Temperature Waste Heat: A Data-Driven Decision Support. Procedia CIRP, 2023, 116, 336-341.	1.9	0
1076	Thermodynamic analysis of a dual reverse Brayton cycle (dual-RBC) hydrogen liquefaction process precooled by mixed-refrigerant. International Journal of Hydrogen Energy, 2023, 48, 31254-31266.	7.1	2

#	ARTICLE	IF	CITATIONS
1077	Process Intensification in Catalysis. , 2017, , 749-792.		0
1078	Optimization of the multi-level steam production and supply in industrial parks. Chemical Engineering Research and Design, 2023, 195, 308-322.	5.6	4
1079	Multiscale process integration techniques for inherently safer design. Methods in Chemical Process Safety, 2023, , .	1.0	0
1080	Technical and economic analysis of ethylene production process with considering energy and water minimization through pinch technique. Environment, Development and Sustainability, 0, , .	5.0	1
1081	Matrix Non-Structural Model and Its Application in Heat Exchanger Network without Stream Split. Processes, 2023, 11, 1843.	2.8	1
1082	Onshore hydrogen production from boil-off gas (BOG) via natural gas steam reforming process: Process simulation and techno-economic analysis. International Journal of Hydrogen Energy, 2024, 52, 1046-1057.	7.1	1
1083	Process development for production of platform chemicals from white birch: Insights from techno-economic and life-cycle assessment. Chemical Engineering Journal, 2023, 472, 144955.	12.7	3
1084	Comparative Exergy and Environmental Assessment of the Residual Biomass Gasification Routes for Hydrogen and Ammonia Production. Entropy, 2023, 25, 1098.	2.2	3
1085	Towards achieving SDG-6 in steel industry: A superstructure optimization-based approach. Journal of Water Process Engineering, 2023, 55, 104158.	5.6	0
1086	A Tabu-Matching Heuristic Algorithm Based on Temperature Feasibility for Efficient Synthesis of Heat Exchanger Networks. Processes, 2023, 11, 2713.	2.8	0
1087	Hybrid renewable energy utility systems for industrial sites: A review. Renewable and Sustainable Energy Reviews, 2023, 188, 113802.	16.4	2
1088	Retrofit heat exchanger network optimization via graph-theoretical approach: Pinch-bounded N-best solutions allows positional swapping. Energy, 2023, 283, 129029.	8.8	1
1089	Formulating data-driven surrogate models for process optimization. Computers and Chemical Engineering, 2023, 179, 108411.	3.8	5
1090	A Novel Chessboard Model for Optimization of Mass Exchange Network Synthesis. Industrial & Engineering Chemistry Research, 2023, 62, 16794-16810.	3.7	0
1091	A comprehensive review of recent advancements and developments in heat exchanger network synthesis techniques. Science China Technological Sciences, 0, , .	4.0	0
1092	Maximization of the Heat Transfer Irreversibility. , 2024, 146, .		0
1093	Flare-to-hydrogen in oil and gas industries: Techno-economic feasibility of a net-negative alternative. Energy Conversion and Management, 2024, 300, 117926.	9.2	0
1094	A heuristic algorithm with a dynamic generation strategy for optimizing energy systems. Applied Thermal Engineering, 2024, 236, 121833.	6.0	0

#	ARTICLE	IF	CITATIONS
1095	Physical Feasibility and Synthesis of Heat Exchange Systems According to Thermodynamic Parameters. Theoretical Foundations of Chemical Engineering, 2023, 57, 524-536.	0.7	0
1096	An anti-greedy random walk algorithm for heat exchanger network synthesis. Chemical Engineering Research and Design, 2024, 203, 219-232.	5.6	0
1097	Pinch and exergy assessment of an innovative hydrogen and methane purification process configuration based on solar renewable energy. Fuel, 2024, 359, 130391.	6.4	0
1098	Multi-objective optimization of heat exchanger network with disturbances based on graph theory and decoupling. Chemical Engineering Science, 2024, 287, 119763.	3.8	0
1099	Process integration methods for multi-period carbon trading. Journal of Cleaner Production, 2024, 447, 141131.	9.3	0
1100	Production of 1±-olefins from biomass gasification: Process development and multi-objective optimization for techno-economic and environmental goals. Carbon Capture Science & Technology, 2024, 11, 100203.	10.4	0
1101	Energy Optimization through Heat and Power Integration on a Chlorobenzenes Production Plant. Processes, 2024, 12, 569.	2.8	0