Zdravko Kravanja

List of Publications by Year
in descending order

185	5,773	81743	88477
papers	citations	39 h-index	70 g-index

188	188	188	3141
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Review of Footprint analysis tools for monitoring impacts on sustainability. Journal of Cleaner Production, 2012, 34, 9-20.	4.6	682
2	Forty years of Heat Integration: Pinch Analysis (PA) and Mathematical Programming (MP). Current Opinion in Chemical Engineering, 2013, 2, 461-474.	3.8	317
3	Simultaneous optimization models for heat integrationâ€"I. Area and energy targeting and modeling of multi-stream exchangers. Computers and Chemical Engineering, 1990, 14, 1151-1164.	2.0	292
4	Recent developments in Process Integration. Chemical Engineering Research and Design, 2013, 91, 2037-2053.	2.7	180
5	Total footprints-based multi-criteria optimisation of regional biomass energy supply chains. Energy, 2012, 44, 135-145.	4.5	179
6	Synthesis of regional networks for the supply of energy and bioproducts. Clean Technologies and Environmental Policy, 2010, 12, 635-645.	2.1	132
7	Sustainable renewable energy supply networks optimization â€“ The gradual transition to a renewable energy system within the European Union by 2050. Renewable and Sustainable Energy Reviews, 2021, 146, 111186.	8.2	131
8	Simultaneous optimization models for heat integrationâ€"III. Process and heat exchanger network optimization. Computers and Chemical Engineering, 1990, 14, 1185-1200.	2.0	126
9	Multi-period synthesis of optimally integrated biomass and bioenergy supply network. Computers and Chemical Engineering, 2014, 66, 57-70.	2.0	117
10	Water and energy integration: A comprehensive literature review of non-isothermal water network synthesis. Computers and Chemical Engineering, 2015, 82, 144-171.	2.0	92
11	Green biomass to biogas â€“ A study on anaerobic digestion of residue grass. Journal of Cleaner Production, 2019, 213, 700-709.	4.6	84
12	New developments and capabilities in prosynâ€"An automated topology and parameter process synthesizer. Computers and Chemical Engineering, 1994, 18, 1097-1114.	2.0	83
13	A rigorous disjunctive optimization model for simultaneous flowsheet optimization and heat integration. Computers and Chemical Engineering, 1998, 22, S157-S164.	2.0	76
14	Simultaneous synthesis of process water and heat exchanger networks. Energy, 2013, 57, 236-250.	4.5	74
15	Significance of environmental footprints for evaluating sustainability and security of development. Clean Technologies and Environmental Policy, 2015, 17, 2125-2141.	2.1	74
16	Multi-objective optimisation for generating sustainable solutions considering total effects on the environment. Applied Energy, 2013, 101, 67-80.	5.1	73
17	Prosynâ€"an MINLP process synthesizer. Computers and Chemical Engineering, 1990, 14, 1363-1378.	2.0	72
18	Mixed-integer nonlinear programming techniques for process systems engineering. Computers and Chemical Engineering, 1995, 19, 189-204.	2.0	69

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19	Energy, water and process technologies integration for the simultaneous production of ethanol and food from the entire corn plant. Computers and Chemical Engineering, 2011, 35, 1547-1557.	2.0	69
20	Carbon and nitrogen trade-offs in biomass energy production. Clean Technologies and Environmental Policy, 2012, 14, 389-397.	2.1	68
21	Simultaneous synthesis of distillation sequences in overall process schemes using an improved minlp approach. Computers and Chemical Engineering, 1996, 20, 1425-1440.	2.0	63
22	Simultaneous MINLP synthesis of heat exchanger networks comprising different exchanger types. Computers and Chemical Engineering, 2002, 26, 599-615.	2.0	63
23	Optimal design for heat-integrated water-using and wastewater treatment networks. Applied Energy, 2014, 135, 791-808.	5.1	62
24	MINLP retrofit of heat exchanger networks comprising different exchanger types. Computers and Chemical Engineering, 2004, 28, 235-251.	2.0	61
25	Model-size reduction techniques for large-scale biomass production and supply networks. Energy, 2011, 36, 4599-4608.	4.5	61
26	Methodology for maximising the use of renewables with variable availability. Energy, 2012, 44, 29-37.	4.5	56
27	Optimal synthesis of heat exchanger networks for multi-period operations involving single and multiple utilities. Chemical Engineering Science, 2015, 127, 175-188.	1.9	55
28	Approaches for retrofitting heat exchanger networks within processes and Total Sites. Journal of Cleaner Production, 2019, 211, 884-894.	4.6	51
29	Selection of the Economic Objective Function for the Optimization of Process Flow Sheets. Industrial & Engineering Chemistry Research, 2006, 45, 4222-4232.	1.8	50
30	Challenges in sustainable integrated process synthesis and the capabilities of an MINLP process synthesizer MipSyn. Computers and Chemical Engineering, 2010, 34, 1831-1848.	2.0	50
31	Simultaneous optimization of heat-integrated water networks involving process-to-process streams for heat integration. Applied Thermal Engineering, 2014, 62, 302-317.	3.0	46
32	Integration of thermodynamic insights and MINLP optimization for the synthesis, design and analysis of process flowsheets. Computers and Chemical Engineering, 2001, 25, 73-83.	2.0	45
33	Heat integration of reactorsâ€”I. Criteria for the placement of reactors into process flowsheet. Chemical Engineering Science, 1988, 43, 593-608.	1.9	44
34	Designing a Total Site for an entire lifetime under fluctuating utility prices. Computers and Chemical Engineering, 2015, 72, 159-182.	2.0	43
35	Objective dimensionality reduction method within multi-objective optimisation considering total footprints. Journal of Cleaner Production, 2014, 71, 75-86.	4.6	42
36	Maximizing the sustainability net present value of renewable energy supply networks. Chemical Engineering Research and Design, 2018, 131, 245-265.	2.7	42

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37	Recent developments towards enhancing process safety: Inherent safety and cognitive engineering. Computers and Chemical Engineering, 2019, 128, 364-383.	2.0	42
38	Overview of environmental footprints. , 2015, , 131-193.		41
39	Software tools overview: process integration, modelling and optimisation for energy saving and pollution reduction. Asia-Pacific Journal of Chemical Engineering, 2011, 6, 696-712.	0.8	40
40	Optimising entire lifetime economy of heat exchanger networks. Energy, 2013, 57, 222-235.	4.5	40
41	A strategy for MINLP synthesis of flexible and operable processes. Computers and Chemical Engineering, 2004, 28, 1105-1119.	2.0	39
42	An alternative strategy for global optimization of heat exchanger networks. Applied Thermal Engineering, 2012, 43, 75-90.	3.0	39
43	A methodology for the synthesis of heat exchanger networks having large numbers of uncertain parameters. Energy, 2015, 92, 373-382.	4.5	39
44	Mixed-Integer Nonlinear Programming: A Survey of Algorithms and Applications. The IMA Volumes in Mathematics and Its Applications, 1997, , 73-100.	0.5	38
45	Two-step mathematical programming synthesis of pinched and threshold heat-integrated water networks. Journal of Cleaner Production, 2014, 77, 116-139.	4.6	37
46	Simultaneous optimization of water and energy within integrated water networks. Applied Thermal Engineering, 2014, 70, 1097-1122.	3.0	36
47	Advanced multimedia engineering education in energy, process integration and optimisation. Applied Energy, 2013, 101, 33-40.	5.1	35
48	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.	2.1	35
49	Estimation of solid solubilities in supercritical carbon dioxide: Pengâ€“Robinson adjustable binary parameters in the near critical region. Fluid Phase Equilibria, 2002, 203, 111-132.	1.4	34
50	Heat integration between processes: Integrated structure and MINLP model. Computers and Chemical Engineering, 2005, 29, 1699-1711.	2.0	34
51	Minimisation of a heat exchanger networks' cost over its lifetime. Energy, 2012, 45, 264-276.	4.5	34
52	Syntheses of sustainable supply networks with a new composite criterion â€“ Sustainability profit. Computers and Chemical Engineering, 2017, 102, 139-155.	2.0	34
53	Two-step MILP/MINLP approach for the synthesis of large-scale HENs. Chemical Engineering Science, 2019, 197, 432-448.	1.9	34
54	Recent advances in green energy and product productions, environmentally friendly, healthier and safer technologies and processes, CO2 capturing, storage and recycling, and sustainability assessment in decision-making. Clean Technologies and Environmental Policy, 2015, 17, 1119-1126.	2.1	33

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55	Fairly Linear Mixed Integer Nonlinear Programming Model for the Synthesis of Mass Exchange Networks. Industrial & Engineering Chemistry Research, 2006, 45, 236-244.	1.8	32
56	Safety Analysis Embedded in Heat Exchanger Network Synthesis. Computers and Chemical Engineering, 2017, 107, 357-380.	2.0	31
57	Multilevel-hierarchical MINLP synthesis of process flowsheets. Computers and Chemical Engineering, 1997, 21, S421-S426.	2.0	30
58	An integrated strategy for the hierarchical multilevel MINLP synthesis of overall process flowsheets using the combined synthesis/analysis approach. Computers and Chemical Engineering, 2004, 28, 693-706.	2.0	29
59	Integration of solar thermal energy into processes with heat demand. Clean Technologies and Environmental Policy, 2012, 14, 453-463.	2.1	29
60	Industrial Process Water Treatment and Reuse: A Framework for Synthesis and Design. Industrial & Engineering Chemistry Research, 2014, 53, 5160-5171.	1.8	29
61	Two-step hybrid approach for the synthesis of multi-period heat exchanger networks with detailed exchanger design. Applied Thermal Engineering, 2016, 105, 807-821.	3.0	29
62	Mixed-Integer Nonlinear Programming Problem Process Synthesis under Uncertainty by Reduced Dimensional Stochastic Optimization. Industrial & Engineering Chemistry Research, 1999, 38, 2680-2698.	1.8	28
63	Retrofit of complex and energy intensive processes II: stepwise simultaneous superstructural approach. Computers and Chemical Engineering, 2000, 24, 125-138.	2.0	28
64	Sustainable synthesis of biogas processes using a novel concept of eco-profit. Computers and Chemical Engineering, 2012, 42, 87-100.	2.0	28
65	Synthesis of heat exchanger networks using mathematical programming and heuristics in a two-step optimisation procedure with detailed exchanger design. Chemical Engineering Science, 2016, 144, 372-385.	1.9	28
66	Synthesis of sustainable production systems using an upgraded concept of sustainability profit and circularity. Journal of Cleaner Production, 2018, 201, 1138-1154.	4.6	28
67	Cost targeting for HEN through simultaneous optimization approach: a unified pinch technology and mathematical programming design of large HEN. Computers and Chemical Engineering, 1997, 21, 833-853.	2.0	26
68	The MINLP optimization approach to structural synthesis. Part I: A general view on simultaneous topology and parameter optimization. International Journal for Numerical Methods in Engineering, 1998, 43, 263-292.	1.5	26
69	Identification of critical points for the design and synthesis of flexible processes. Computers and Chemical Engineering, 2008, 32, 1603-1624.	2.0	24
70	Simultaneous optimisation and heat integration of evaporation systems including mechanical vapour recompression and background process. Energy, 2018, 158, 1160-1191.	4.5	24
71	Synthesis of biogas supply networks using various biomass and manure types. Computers and Chemical Engineering, 2019, 122, 129-151.	2.0	23
72	The importance of proper economic criteria and process modeling for single- and multi-objective optimizations. Computers and Chemical Engineering, 2015, 83, 35-47.	2.0	22

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73	Synthesis of mass exchanger networks in a two-step hybrid optimization strategy. Chemical Engineering Science, 2018, 178, 118-135.	1.9	22
74	A Computational Approach for the Modeling/Decomposition Strategy in the MINLP Optimization of Process Flowsheets with Implicit Models. Industrial & Engineering Chemistry Research, 1996, 35, 2065-2070.	1.8	21
75	Efficient Multilevel MINLP Strategies for Solving Large Combinatorial Problems in Engineering. Optimization and Engineering, 2003, 4, 97-151.	1.3	21
76	Optimization of cultivation conditions in spin tubes for Chinese hamster ovary cells producing erythropoietin and the comparison of glycosylation patterns in different cultivation vessels. Biotechnology Progress, 2010, 26, 653-663.	1.3	21
77	MINLP synthesis and modified attainable region analysis of reactor networks in overall process schemes using more compact reactor superstructure. Computers and Chemical Engineering, 2000, 24, 1403-1408.	2.0	20
78	Simultaneous synthesis of non-isothermal water networks integrated with process streams. Energy, 2017, 141, 2587-2612.	4.5	20
79	Synthesis of reactor networks in overall process flowsheets within the multilevel MINLP approach. Computers and Chemical Engineering, 2001, 25, 765-774.	2.0	19
80	Dealing with High-Dimensionality of Criteria in Multiobjective Optimization of Biomass Energy Supply Network. Industrial & Engineering Chemistry Research, 2013, 52, 7223-7239.	1.8	19
81	Integrating renewables into multi-period heat exchanger network synthesis considering economics and environmental impact. Computers and Chemical Engineering, 2017, 99, 51-65.	2.0	19
82	Achieving energy self-sufficiency by integrating renewables into companies' supply networks. Energy, 2013, 55, 46-57.	4.5	18
83	Synthesis of single and interplant non-isothermal water networks. Journal of Environmental Management, 2017, 203, 1095-1117.	3.8	18
84	MINLP synthesis of reactor networks in overall process schemes based on a concept of time-dependent economic regions. Computers and Chemical Engineering, 2007, 31, 657-676.	2.0	17
85	Conceptual MINLP approach to the development of a CO2 supply chain network â€“ Simultaneous consideration of capture and utilization process flowsheets. Journal of Cleaner Production, 2021, 314, 128008.	4.6	17
86	The MINLP optimization approach to structural synthesis. Part III: synthesis of roller and sliding hydraulic steel gate structures. International Journal for Numerical Methods in Engineering, 1998, 43, 329-364.	1.5	16
87	Heat integration of reactorsâ€”II. Total flowsheet integration. Chemical Engineering Science, 1989, 44, 2667-2682.	1.9	15
88	The MINLP optimization approach to structural synthesis. Part II: Simultaneous topology, parameter and standard dimension optimization by the use of the linked two-phase MINLP strategy. International Journal for Numerical Methods in Engineering, 1998, 43, 293-328.	1.5	15
89	Multi-objective synthesis of a company's supply network by accounting for several environmental footprints. Chemical Engineering Research and Design, 2014, 92, 456-466.	2.7	15
90	Optimization of bioethanol and sugar supply chain network: a South African case study. Clean Technologies and Environmental Policy, 2018, 20, 925-948.	2.1	15

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91	Multi-objective multi-period synthesis of energy efficient processes under variable environmental taxes. Energy, 2019, 189, 116182.	4.5	15
92	Integrated design for direct and indirect solar thermal utilization in low temperature industrial operations. Energy, 2019, 182, 381-396.	4.5	15
93	Simultaneous Optimization Model for Multicomponent Separation. Computers and Chemical Engineering, 1994, 18, S125-S129.	2.0	14
94	Simultaneous MINLP synthesis of heat and power integrated heat exchanger networks. Computers and Chemical Engineering, 1999, 23, S143-S147.	2.0	14
95	Suitable Modeling for Process Flow Sheet Optimization Using the Correct Economic Criterion. Industrial & Engineering Chemistry Research, 2011, 50, 3356-3370.	1.8	14
96	Simultaneous heat integration and the synthesis of biogas processes from animal waste. Asia-Pacific Journal of Chemical Engineering, 2011, 6, 734-749.	0.8	14
97	Sensitivity analyses for scenario reduction in flexible flow sheet design with a large number of uncertain parameters. AICHE Journal, 2013, 59, 2862-2871.	1.8	14
98	Optimization of biogas supply networks considering multiple objectives and auction trading prices of electricity. BMC Chemical Engineering, 2020, 2, .	3.4	14
99	Simultaneous optimisation of large-scale problems of heat-integrated water networks. Energy, 2021, 235, 121354.	4.5	14
100	Comparison of different MINLP methods applied on certain chemical engineering problems. Computers and Chemical Engineering, 1996, 20, S333-S338.	2.0	13
101	The two-level strategy for MINLP synthesis of process flowsheets under uncertainty. Computers and Chemical Engineering, 2000, 24, 195-201.	2.0	13
102	An improved algorithm for synthesis of heat exchanger network with a large number of uncertain parameters. Energy, 2021, 233, 121199.	4.5	13
103	Synthesis of environmentally-benign energy self-sufficient processes under uncertainty. Journal of Cleaner Production, 2015, 88, 90-104.	4.6	12
104	Process synthesis with simultaneous consideration of inherent safety-inherent risk footprint. Frontiers of Chemical Science and Engineering, 2018, 12, 745-762.	2.3	12
105	State of the art methods for combined water and energy systems optimisation in Kraft pulp mills. Optimization and Engineering, 2021, 22, 1831-1852.	1.3	12
106	Carbon Emissions Constrained Energy Planning for Aluminum Products. Energies, 2020, 13, 2753.	1.6	11
107	Maximizing the power output and net present value of organic Rankine cycle: Application to aluminium industry. Energy, 2022, 239, 122620.	4.5	11
108	Mathematical Programming Approach to Total Site Heat Integration. Computer Aided Chemical Engineering, 2014, 33, 1795-1800.	0.3	10

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109	Large-Scale Biorefinery Supply Network â€“ Case Study of the European Union. Computer Aided Chemical Engineering, 2014, 33, 319-324.	0.3	10
110	Synthesis of European Union Biorefinery Supply Networks Considering Sustainability Objectives. Processes, 2020, 8, 1588.	1.3	10
111	Energy, Water and Process Technologies Integration for the Simultaneous Production of Ethanol and Food from the entire Corn Plant. Computer Aided Chemical Engineering, 2011, , 2004-2008.	0.3	9
112	Multilevel strategies for the retrofit of largeâ€scale industrial water system: A brewery case study. AICHE Journal, 2012, 58, 884-898.	1.8	9
113	Synthesis of flexible supply networks under uncertainty applied to biogas production. Computers and Chemical Engineering, 2019, 129, 106503.	2.0	9
114	Translation of variables and implementation of efficient logicâ€based techniques in the MINLP process synthesizer MIPSYN. AICHE Journal, 2009, 55, 2896-2913.	1.8	8
115	P-Graph Synthesis of Open-Structure Biomass Networks. Industrial & Engineering Chemistry Research, 2012, , 120913135234005.	1.8	8
116	Multi-period Synthesis of a Biorefinery's Supply Networks. Computer Aided Chemical Engineering, 2013, 32, 73-78.	0.3	8
117	Process systems engineering as an integral part of global systems engineering by virtue of its energy â€” environmental nexus. Current Opinion in Chemical Engineering, 2012, 1, 231-237.	3.8	7
118	Simultaneous synthesis of a biogas process and heat exchanger network. Applied Thermal Engineering, 2012, 43, 91-100.	3.0	7
119	Nitrogen- and Climate Impact-based Metrics in Biomass Supply Chains. Computer Aided Chemical Engineering, 2014, , 483-488.	0.3	7
120	The Importance of using Discounted Cash Flow Methodology in Techno-economic Analyses of Energy and Chemical Production Plants. Journal of Sustainable Development of Energy, Water and Environment Systems, 2017, 5, 163-176.	0.9	7
121	Sustainable LCA-based MIP Synthesis of Biogas Processes. Computer Aided Chemical Engineering, 2011, 29, 1999-2003.	0.3	6
122	Achieving profitably, operationally, and environmentally compromise flowâ€sheet designs by a singleâ€criterion optimization. AICHE Journal, 2012, 58, 2131-2141.	1.8	6
123	Recent Developments in Advanced Process Integration: Learning the Lessons from Industrial Implementations. Applied Mechanics and Materials, 0, 625, 454-457.	0.2	6
124	Synthesis of Supply Networks over Multiple Time Frames: A Case Study of Electricity Production from Biogas. Computer Aided Chemical Engineering, 2017, , 1447-1452.	0.3	6
125	Correlations among Footprints within Biomass Energy Supply-Chains. Computer Aided Chemical Engineering, 2012, 31, 1397-1401.	0.3	5
126	Handling implicit model formulations in MINLP optimization. Computers and Chemical Engineering, 1997, 21, S499-S504.	2.0	4

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127	Simultaneous MINLP synthesis of heat exchanger networks comprising different exchanger types. Computer Aided Chemical Engineering, 2001, , 1095-1100.	0.3	4
128	MINLP Synthesis of Reactive Distillation Using a Disjunctive, Hybrid Model. Computer Aided Chemical Engineering, 2009, , 543-548.	0.3	4
129	Synthesis of Water, Wastewater Treatment, and Heat-Exchanger Networks. Computer Aided Chemical Engineering, 2014, 33, 1843-1848.	0.3	4
130	Data Reconciliation for Energy System Flowsheets. Computer Aided Chemical Engineering, 2016, 38, 2277-2282.	0.3	4
131	Numerical Representation for Heat Exchanger Networks Binding Topology and Thermodynamics. Computer Aided Chemical Engineering, 2018, 43, 1457-1462.	0.3	4
132	Synthesis of Heat Pump Enhanced Solar Thermal for Low and Medium Temperature Operations. Computer Aided Chemical Engineering, 2020, 48, 979-984.	0.3	4
133	Recovery of N-Butanol from a Complex Five-Component Reactive Azeotropic Mixture. Processes, 2022, 10, 364.	1.3	4
134	MINLP Retrofit of Heat Exchanger Networks Comprising Different Exchanger Types. Computer Aided Chemical Engineering, 2002, , 349-354.	0.3	3
135	The role of computer-aided chemical engineering education within the European Bologna three-cycle study system. , 2011, , .		3
136	Design of flexible process flow sheets with a large number of uncertain parameters. Computer Aided Chemical Engineering, 2011, , 407-411.	0.3	3
137	Accessing Direct and Indirect Effects within a LCA Based Multiobjective Synthesis of Bioproducts Supply Chains. Computer Aided Chemical Engineering, 2012, , 1065-1069.	0.3	3
138	Suitable Process Modelling for Proper Multi-Objective Optimization of Process Flow Sheets. Computer Aided Chemical Engineering, 2014, 33, 1387-1392.	0.3	3
139	Synthesis of Mass Exchange Networks Using Mathematical Programming and Detailed Cost functions. Computer Aided Chemical Engineering, 2016, 38, 1875-1880.	0.3	3
140	Alternative mixed-integer reformulation of Generalized Disjunctive Programs. Computer Aided Chemical Engineering, 2018, , 549-554.	0.3	3
141	Towards the synthesis of modular process intensification systems with safety and operability considerations - application to heat exchanger network. Computer Aided Chemical Engineering, 2018, 43, 705-710.	0.3	3
142	Simultaneous optimisation of heat and power integration of evaporationâ€“crystallisation systems: a case study of distiller waste from Solvay process. Optimization and Engineering, 2021, 22, 1853-1895.	1.3	3
143	The Influence of Variable CO2 Emission Tax Rate on Flexible Chemical Process Synthesis. Processes, 2021, 9, 1720.	1.3	3
144	Macro- and Micro-economic Perspectives regarding the Syntheses of Sustainable Bio-Fuels Supply Networks. Computer Aided Chemical Engineering, 2016, , 2253-2258.	0.3	3

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145	Synthesis of Heat-Integrated Water Networks Using a Modified Heat Exchanger Network Superstructure. Energies, 2022, 15, 3158.	1.6	3
146	Prosyn â€" An automated topology and parameter process synthesizer. Computers and Chemical Engineering, 1993, 17, S87-S94.	2.0	2
147	Identification of vertex and nonvertex critical points for large-scale approximate stochastic optimization. Computer Aided Chemical Engineering, 2005, , 91-96.	0.3	2
148	The Development of an Advanced Systems Synthesis Environment: Integration of MI(NL)P Methods and Tools for Sustainable Applications. Computer Aided Chemical Engineering, 2009, 26, 25-35.	0.3	2
149	Optimisation of heat exchanger networks involving isothermal and non-isothermal mixing by global and local solvers. Computer Aided Chemical Engineering, 2016, 38, 2289-2294.	0.3	2
150	Towards Outcomes-Based Education of Computer-Aided Chemical Engineering. Computer Aided Chemical Engineering, 2016, , 2367-2372.	0.3	2
151	MILP synthesis of separation processes for waste oil-in-water emulsions treatment. Frontiers of Chemical Science and Engineering, 2016, 10, 120-130.	2.3	2
152	Enhanced Procedure for Simultaneous Synthesis of an entire Total Site. Computer Aided Chemical Engineering, 2017, , 427-432.	0.3	2
153	Process Synthesis and Simultaneous Heat and Electricity Integration to Reduce Consumption of Primary Energy Sources. Computer Aided Chemical Engineering, 2020, 48, 901-906.	0.3	2
154	SUSTAINABLE SYNTHESIS AND OPTIMIZATION OF ENGINEERING SYSTEMS. WIT Transactions on the Built Environment, 2018, , .	0.0	2
155	Integration of thermodynamic insights and MINLP optimization for the synthesis, design and analysis of process flowsheets. Computers and Chemical Engineering, 1999, 23, S23-S26.	2.0	1
156	An approximate novel method for the stochastic optimization and MINLP synthesis of chemical processes under uncertainty. Computer Aided Chemical Engineering, 2003, 15, 298-303.	0.3	1
157	A-priori identification of critical points for the design and synthesis of flexible process schemes. Computer Aided Chemical Engineering, 2006, 21, 503-508.	0.3	1
158	Implementation of efficient logic-based techniques in the MINLP process synthesizer MIPSYN. Computer Aided Chemical Engineering, 2006, 21, 233-238.	0.3	1
159	PRES 2014: Dedicated to technologies for sustainable energy and product production. Clean Technologies and Environmental Policy, 2015, 17, 1117-1118.	2.1	1
160	A Comparison of Data Reconciliation Tools for Modelling Heat Recovery. Computer Aided Chemical Engineering, 2019, 46, 1123-1128.	0.3	1
161	Synthesis of Solar Heat Network for Preheating of Industrial Process Streams. Computer Aided Chemical Engineering, 2019, 46, 535-540.	0.3	1
162	MINLP Synthesis of Flexible Process Flow Sheets under Variable Carbon Tax Rates. Computer Aided Chemical Engineering, 2020, 48, 955-960.	0.3	1

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163	Enhancing operability during early stage of process synthesis considering flexibility and inherent safety simultaneously. Computer Aided Chemical Engineering, 2021, , 2089-2094.	0.3	1
164	On Robustness of Mixed-Integer reformulations of Generalized Disjunctive Programs. Computer Aided Chemical Engineering, 2019, 46, 1117-1122.	0.3	1
165	Preliminary analysis of systems for integrating solar thermal energy into processes with heat demand. Computer Aided Chemical Engineering, 2015, , 2459-2464.	0.3	1
166	Stochastic Multi-Objective Process Optimization by using the Composite Objective Function. Computer Aided Chemical Engineering, 2017, 40, 601-606.	0.3	1
167	The MINLP Approach to Topology, Shape and Discrete Sizing Optimization of Trusses. Applied Sciences (Switzerland), 2022, 12, 1459.	1.3	1
168	A methodology for the approximate stochastic synthesis of flexible chemical processes. Computer Aided Chemical Engineering, 2007, 24, 413-418.	0.3	0
169	An MINLP reconstruction of networks for the collection, recycling, treatment and disposal of municipal solid waste. Computer Aided Chemical Engineering, 2007, 24, 1319-1324.	0.3	0
170	Improving efficiency when solving process synthesis problems through translation of variables. Computer Aided Chemical Engineering, 2009, 26, 585-590.	0.3	0
171	Optimization of Cultivation Conditions in Spin Tubes for CHO Cells Producing Erythropoietin. Computer Aided Chemical Engineering, 2010, , 235-240.	0.3	0
172	Multilevel strategies for the retrofit of a large industrial water system. Computer Aided Chemical Engineering, 2011, 29, 1165-1169.	0.3	0
173	Process Integration: HEN Synthesis, Exergy Opportunities. Green Energy and Technology, 2011, , 201-225.	0.4	0
174	Chemical engineering education in European higher education. Qscience Proceedings, 2015, , .	0.0	0
175	Recent Developments towards Enhancing Process Safety: Inherent Safety and Cognitive Engineering. Computer Aided Chemical Engineering, 2018, , 97-99.	0.3	0
176	Systematic tool for sustainable synthesis and design of flexible processes and supply chains under uncertainty. Computer Aided Chemical Engineering, 2018, 43, 863-868.	0.3	0
177	Global Optimization of Bilinear Programs by Elementary Functions Substitutions. Computer Aided Chemical Engineering, 2020, 48, 1969-1974.	0.3	0
178	Virtualization of Pressure Control Demonstration Unit â€“ A Step Towards Virtual Laboratory. Computer Aided Chemical Engineering, 2021, 50, 2051-2056.	0.3	0
179	Synthesis of the EU Supply Networks for the Gradual Transition to 100 % Renewable Energy Production. Computer Aided Chemical Engineering, 2021, , 1573-1579.	0.3	0
180	Relative Optimality Index for Evaluation of the Approximate Methods for Synthesis of Flexible Processes under Uncertainty. Computer Aided Chemical Engineering, 2019, , 1105-1110.	0.3	0

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181	Transportation Model for Carbon-Constrained Electricity Planning: An Application to the Aluminium Industry. , 0, , .		0
182	Comparative Life Cycle Assessment of Alternative Packaging Materials for Beverages. , 0, , .		0
183	Enhanced Inherent Safety Assessment during Heat Exchanger Network Synthesis. , 0, , .		0
184	Topology Optimization of Steel-lined Rock Caverns for Underground Storage of Chemical Energy. , 0, , .		0
185	Techno-Economic Optimization of a Low-Temperature Organic Rankine System Driven by Multiple Heat Sources. Frontiers in Sustainability, 0, 3, .	1.3	0