

Timothy Gordon Walmsley

List of Publications by Year in descending order

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89
papers

3,839
citations

147726

31
h-index

133188

59
g-index

111
all docs

111
docs citations

111
times ranked

3495
citing authors

#	ARTICLE	IF	CITATIONS
1	Total Site Hydrogen Integration with fresh hydrogen of multiple quality and waste hydrogen recovery in refineries. International Journal of Hydrogen Energy, 2022, 47, 12159-12178.	3.8	12
2	Post COVID-19 ENERGY sustainability and carbon emissions neutrality. Energy, 2022, 241, 122801.	4.5	57
3	Energy digital twin technology for industrial energy management: Classification, challenges and future. Renewable and Sustainable Energy Reviews, 2022, 161, 112407.	8.2	98
4	Integrated Waste Management System to Reduce Environmental Footprints. , 2022, , .		0
5	Maximising the valorisation of organic waste locally available via carbon-to-nitrogen ratio Supply Composite Curve shifting. Journal of Cleaner Production, 2022, , 132389.	4.6	0
6	Industrial Energy Retrofit Planning Using Automated Retrofit Targeting. Process Integration and Optimization for Sustainability, 2021, 5, 75-98.	1.4	3
7	Spatial-temporal potential exposure risk analytics and urban sustainability impacts related to COVID-19 mitigation: A perspective from car mobility behaviour. Journal of Cleaner Production, 2021, 279, 123673.	4.6	85
8	Integrated regional waste management to minimise the environmental footprints in circular economy transition. Resources, Conservation and Recycling, 2021, 168, 105292.	5.3	44
9	Large-scale heat pumps: Uptake and performance modelling of market-available devices. Renewable and Sustainable Energy Reviews, 2021, 137, 110646.	8.2	30
10	Urban and industrial symbiosis for circular economy: Total EcoSite Integration. Journal of Environmental Management, 2021, 279, 111829.	3.8	43
11	Impacts of COVID-19 on energy demand and consumption: Challenges, lessons and emerging opportunities. Applied Energy, 2021, 285, 116441.	5.1	339
12	Trade-offs between the recovery, exergy demand and economy in the recycling of multiple resources. Resources, Conservation and Recycling, 2021, 167, 105428.	5.3	22
13	Stagnation and Solar Fraction Analysis on Solar Thermal Integration in Southeast Asia. Process Integration and Optimization for Sustainability, 2021, 5, 257-268.	1.4	1
14	Editorial: Innovative Technology and System Integration for Gaseous Biofuels Production. Frontiers in Energy Research, 2021, 9, .	1.2	0
15	Extended water-energy nexus contribution to environmentally-related sustainable development goals. Renewable and Sustainable Energy Reviews, 2021, 150, 111485.	8.2	75
16	Biomass integration for energy recovery and efficient use of resources: Tomsk Region. Energy, 2021, 235, 121378.	4.5	12
17	Heat Pump Bridge Analysis Using the Modified Energy Transfer Diagram. Energies, 2021, 14, 137.	1.6	8
18	A Self-Learning Architecture for Digital Twins with Self-Protection. , 2021, , .		2

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19	Optimisation and process design tools for cleaner production. Journal of Cleaner Production, 2020, 247, 119181.	4.6	42
20	Heat transfer enhancement, intensification and optimisation in heat exchanger network retrofit and operation. Renewable and Sustainable Energy Reviews, 2020, 120, 109644.	8.2	78
21	Implementing Circular Economy in municipal solid waste treatment system using P-graph. Science of the Total Environment, 2020, 701, 134652.	3.9	66
22	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
23	Large-scale heat pumps: Applications, performance, economic feasibility and industrial integration. Renewable and Sustainable Energy Reviews, 2020, 133, 110219.	8.2	73
24	Emission-cost nexus optimisation and performance analysis of downstream oil supply chains. Journal of Cleaner Production, 2020, 266, 121831.	4.6	25
25	Emerging Tools for Energy System Design Increasing Economic and Environmental Sustainability. Energies, 2020, 13, 4062.	1.6	14
26	Sequential Thermal and Power Integration for Locally Integrated Energy Sector. IOP Conference Series: Materials Science and Engineering, 2020, 778, 012106.	0.3	0
27	A Kraft Mill-Integrated Hydrothermal Liquefaction Process for Liquid Fuel Co-Production. Processes, 2020, 8, 1216.	1.3	7
28	Total Site Heat and Power Integration for Locally Integrated Energy Sectors. Energy, 2020, 204, 117959.	4.5	26
29	A system analysis tool for sustainable biomass utilisation considering the Emissions-Cost Nexus. Energy Conversion and Management, 2020, 210, 112701.	4.4	24
30	Time-Dependent Integration of Solar Thermal Technology in Industrial Processes. Sustainability, 2020, 12, 2322.	1.6	14
31	Critical Analysis of Process Integration Options for Joule-Cycle and Conventional Heat Pumps. Energies, 2020, 13, 635.	1.6	13
32	Minimising the present and future plastic waste, energy and environmental footprints related to COVID-19. Renewable and Sustainable Energy Reviews, 2020, 127, 109883.	8.2	634
33	Energy integration and optimisation for sustainable total site, process and equipment design. Energy, 2019, 186, 115896.	4.5	1
34	Internet of Things for Green Cities Transformation: Benefits and Challenges. , 2019, , .		1
35	A heat- and mass-integrated design of hydrothermal liquefaction process co-located with a Kraft pulp mill. Energy, 2019, 189, 116235.	4.5	6
36	Minimising energy consumption and environmental burden of freight transport using a novel graphical decision-making tool. Renewable and Sustainable Energy Reviews, 2019, 114, 109335.	8.2	21

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37	Optimization of Cooling Utility System with Continuous Self-Learning Performance Models. <i>Energies</i> , 2019, 12, 1926.	1.6	10
38	System efficient integration of standby control and heat pump storage systems in manufacturing processes. <i>Energy</i> , 2019, 181, 395-406.	4.5	9
39	Cross-disciplinary approaches towards smart, resilient and sustainable circular economy. <i>Journal of Cleaner Production</i> , 2019, 232, 1482-1491.	4.6	89
40	Insightful heat exchanger network retrofit design using Monte Carlo simulation. <i>Energy</i> , 2019, 181, 1129-1141.	4.5	18
41	Circular Integration of processes, industries, and economies. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 107, 507-515.	8.2	95
42	Circular economy and engineering concepts for technology and policy development. <i>Clean Technologies and Environmental Policy</i> , 2019, 21, 479-480.	2.1	3
43	Design of Robust Total Site Heat Recovery Loops via Monte Carlo Simulation. <i>Energies</i> , 2019, 12, 930.	1.6	3
44	Emission Pinch Analysis for Regional Transportation Planning: Stagewise Approach. , 2019, , .		3
45	VISUALISATION OF LARGE-SCALE HEAT EXCHANGER NETWORKS TO SUPPORT ENERGY RETROFIT. , 2019, , .		0
46	Combined Pinch and exergy numerical analysis for low temperature heat exchanger network. <i>Energy</i> , 2018, 153, 100-112.	4.5	23
47	Evaluation of Effective Microorganisms on home scale organic waste composting. <i>Journal of Environmental Management</i> , 2018, 216, 41-48.	3.8	93
48	Process and utility systems integration and optimisation for ultra-low energy milk powder production. <i>Energy</i> , 2018, 146, 67-81.	4.5	21
49	Enabling low-carbon emissions for sustainable development in Asia and beyond. <i>Journal of Cleaner Production</i> , 2018, 176, 726-735.	4.6	65
50	Hybrid heating system for increased energy efficiency and flexible control of low temperature heat. <i>Energy Efficiency</i> , 2018, 11, 1117-1133.	1.3	5
51	Spatial targeting evaluation of energy and environmental performance of waste-to-energy processing. <i>Frontiers of Chemical Science and Engineering</i> , 2018, 12, 731-744.	2.3	8
52	Energy Ratio analysis and accounting for renewable and non-renewable electricity generation: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2018, 98, 328-345.	8.2	30
53	New directions in the implementation of Pinch Methodology (PM). <i>Renewable and Sustainable Energy Reviews</i> , 2018, 98, 439-468.	8.2	222
54	Automated retrofit targeting of heat exchanger networks. <i>Frontiers of Chemical Science and Engineering</i> , 2018, 12, 630-642.	2.3	21

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55	Total Site Utility Systems Structural Design Considering Electricity Price Fluctuations. Computer Aided Chemical Engineering, 2018, 44, 1159-1164.	0.3	3
56	Increasing energy efficiency of milk product batch sterilisation. Energy, 2018, 164, 995-1010.	4.5	15
57	A review on air emissions assessment: Transportation. Journal of Cleaner Production, 2018, 194, 673-684.	4.6	266
58	A novel Heat Exchanger Network Bridge Retrofit method using the Modified Energy Transfer Diagram. Energy, 2018, 155, 190-204.	4.5	32
59	Frontiers in process development, integration and intensification for circular life cycles and reduced emissions. Journal of Cleaner Production, 2018, 201, 178-191.	4.6	23
60	Total Site Utility Systems Structural Design Considering Environmental Impacts. Computer Aided Chemical Engineering, 2018, 43, 1305-1310.	0.3	2
61	Numerical Representation for Heat Exchanger Networks Binding Topology and Thermodynamics. Computer Aided Chemical Engineering, 2018, 43, 1457-1462.	0.3	4
62	Utility Exchanger Network synthesis for Total Site Heat Integration. Energy, 2018, 153, 1000-1015.	4.5	15
63	Hydrothermal liquefaction of Radiata Pine with Kraft black liquor for integrated biofuel production. Journal of Cleaner Production, 2018, 199, 737-750.	4.6	34
64	Linking greenhouse gas emissions footprint and energy return on investment in electricity generation planning. Journal of Cleaner Production, 2018, 200, 911-921.	4.6	16
65	Optimal energy supply structures for industrial food processing sites in different countries considering energy transitions. Energy, 2018, 146, 112-123.	4.5	24
66	A Unified Total Site Heat Integration targeting method for isothermal and non-isothermal utilities. Energy, 2017, 119, 10-25.	4.5	37
67	Total Site Heat Integration: Utility selection and optimisation using cost and exergy derivative analysis. Energy, 2017, 141, 949-963.	4.5	19
68	Total site mass, heat and power integration using process integration and process graph. Journal of Cleaner Production, 2017, 167, 32-43.	4.6	35
69	Energy Return on energy and carbon investment of wind energy farms: A case study of New Zealand. Journal of Cleaner Production, 2017, 167, 885-895.	4.6	36
70	Economic assessment system towards sustainable composting quality in the developing countries. Clean Technologies and Environmental Policy, 2016, 18, 2479-2491.	2.1	28
71	Integrating district cooling systems in Locally Integrated Energy Sectors through Total Site Heat Integration. Applied Energy, 2016, 184, 1350-1363.	5.1	46
72	Heat Transfer Enhancement for site level indirect heat recovery systems using nanofluids as the intermediate fluid. Applied Thermal Engineering, 2016, 105, 923-930.	3.0	7

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73	Appropriate placement of vapour recompression in ultra-low energy industrial milk evaporation systems using Pinch Analysis. <i>Energy</i> , 2016, 116, 1269-1281.	4.5	40
74	A Total Site Heat Integration design method for integrated evaporation systems including vapour recompression. <i>Journal of Cleaner Production</i> , 2016, 136, 111-118.	4.6	17
75	Integration of new processes and geothermal heat into a wood processing cluster. <i>Clean Technologies and Environmental Policy</i> , 2016, 18, 2077-2085.	2.1	5
76	Thermo-economic optimisation of industrial milk spray dryer exhaust to inlet air heat recovery. <i>Energy</i> , 2015, 90, 95-104.	4.5	35
77	Carbon Emissions Pinch Analysis for emissions reductions in the New Zealand transport sector through to 2050. <i>Energy</i> , 2015, 92, 569-576.	4.5	71
78	Achieving 33% renewable electricity generation by 2020 in California. <i>Energy</i> , 2015, 92, 260-269.	4.5	45
79	Integration options for solar thermal with low temperature industrial heat recovery loops. <i>Energy</i> , 2015, 90, 113-121.	4.5	35
80	Analysis of skim milk powder deposition on stainless steel tubes in cross-flow. <i>Applied Thermal Engineering</i> , 2015, 75, 941-949.	3.0	6
81	Minimising carbon emissions and energy expended for electricity generation in New Zealand through to 2050. <i>Applied Energy</i> , 2014, 135, 656-665.	5.1	70
82	A derivative based method for cost optimal area allocation in heat exchanger networks. <i>Applied Thermal Engineering</i> , 2014, 70, 1084-1096.	3.0	5
83	Integration of industrial solar and gaseous waste heat into heat recovery loops using constant and variable temperature storage. <i>Energy</i> , 2014, 75, 53-67.	4.5	52
84	An experimentally validated criterion for skim milk powder deposition on stainless steel surfaces. <i>Journal of Food Engineering</i> , 2014, 127, 111-119.	2.7	10
85	Improving energy recovery in milk powder production through soft data optimisation. <i>Applied Thermal Engineering</i> , 2013, 61, 80-87.	3.0	29
86	Fouling and pressure drop analysis of milk powder deposition on the front of parallel fins. <i>Advanced Powder Technology</i> , 2013, 24, 780-785.	2.0	12
87	Methods for improving heat exchanger area distribution and storage temperature selection in heat recovery loops. <i>Energy</i> , 2013, 55, 15-22.	4.5	22
88	Application of Heat Recovery Loops to Semi-continuous Processes for Process Integration. , 2013, , 594-629.		1
89	Numerical Performance Comparison of Different Tube Cross-Sections for Heat Recovery From Particle-Laden Exhaust Gas Streams. <i>Procedia Engineering</i> , 2012, 42, 1351-1364.	1.2	9