

Muhammad Sultan

List of Publications by Year in descending order

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129
papers

2,606
citations

218677

26
h-index

233421

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133
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133
docs citations

133
times ranked

1520
citing authors

#	ARTICLE	IF	CITATIONS
1	An overview of solid desiccant dehumidification and air conditioning systems. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 46, 16-29.	16.4	196
2	Overview of the Maisotsenko cycle “A way towards dew point evaporative cooling. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 66, 537-555.	16.4	160
3	Optimization of adsorption isotherm types for desiccant air-conditioning applications. <i>Renewable Energy</i> , 2018, 121, 441-450.	8.9	104
4	Agriculture-Food Supply Chain Management Based on Blockchain and IoT: A Narrative on Enterprise Blockchain Interoperability. <i>Agriculture (Switzerland)</i> , 2022, 12, 40.	3.1	99
5	Phytogenic magnetic nanoparticles for wastewater treatment: a review. <i>RSC Advances</i> , 2017, 7, 40158-40178.	3.6	93
6	Overview of microbes based fabricated biogenic nanoparticles for water and wastewater treatment. <i>Journal of Environmental Management</i> , 2019, 230, 128-150.	7.8	81
7	A review of recent advances in indirect evaporative cooling technology. <i>International Communications in Heat and Mass Transfer</i> , 2021, 122, 105140.	5.6	72
8	Clean heating during winter season in Northern China: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 149, 111339.	16.4	72
9	Recent updates on the adsorption capacities of adsorbent-adsorbate pairs for heat transformation applications. <i>Renewable and Sustainable Energy Reviews</i> , 2020, 119, 109630.	16.4	68
10	Water vapor sorption kinetics of polymer based sorbents: Theory and experiments. <i>Applied Thermal Engineering</i> , 2016, 106, 192-202.	6.0	66
11	Functionalized Carbon Nanotubes (CNTs) for Water and Wastewater Treatment: Preparation to Application. <i>Sustainability</i> , 2021, 13, 5717.	3.2	66
12	Steady-state investigation of water vapor adsorption for thermally driven adsorption based greenhouse air-conditioning system. <i>Renewable Energy</i> , 2016, 86, 785-795.	8.9	63
13	Model-based evaluation of greenhouse microclimate using IoT-Sensor data fusion for energy efficient crop production. <i>Journal of Cleaner Production</i> , 2020, 263, 121303.	9.3	61
14	Comprehensive review on dehumidification strategies for agricultural greenhouse applications. <i>Applied Thermal Engineering</i> , 2020, 181, 115979.	6.0	55
15	Green Synthesis of Phytogenic Magnetic Nanoparticles and Their Applications in the Adsorptive Removal of Crystal Violet from Aqueous Solution. <i>Arabian Journal for Science and Engineering</i> , 2018, 43, 6245-6259.	3.0	53
16	Encapsulated green magnetic nanoparticles for the removal of toxic Pb ²⁺ and Cd ²⁺ from water: Development, characterization and application. <i>Journal of Environmental Management</i> , 2019, 234, 273-289.	7.8	51
17	Adsorption-based atmospheric water harvesting: A review of adsorbents and systems. <i>International Communications in Heat and Mass Transfer</i> , 2022, 133, 105961.	5.6	47
18	Insights of water vapor sorption onto polymer based sorbents. <i>Adsorption</i> , 2015, 21, 205-215.	3.0	45

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19	Performance evaluation of hydrophilic organic polymer sorbents for desiccant air-conditioning applications. <i>Adsorption Science and Technology</i> , 2018, 36, 311-326.	3.2	40
20	Metal-organic frameworks in cooling and water desalination: Synthesis and application. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 149, 111362.	16.4	39
21	A spatiotemporal indirect evaporative cooler enabled by transiently interceding water mist. <i>Energy</i> , 2021, 217, 119352.	8.8	38
22	An overview of heavy metal removal from wastewater using magnetotactic bacteria. <i>Journal of Chemical Technology and Biotechnology</i> , 2018, 93, 2817-2832.	3.2	34
23	Recent progress on water vapor adsorption equilibrium by metal-organic frameworks for heat transformation applications. <i>International Communications in Heat and Mass Transfer</i> , 2021, 124, 105242.	5.6	33
24	A review of recent advances in adsorption desalination technologies. <i>International Communications in Heat and Mass Transfer</i> , 2021, 128, 105594.	5.6	30
25	Experimental investigation of evaporative cooling systems for agricultural storage and livestock air-conditioning in Pakistan. <i>Building Simulation</i> , 2021, 14, 617-631.	5.6	29
26	Biogas Production Potential from Livestock Manure in Pakistan. <i>Sustainability</i> , 2021, 13, 6751.	3.2	29
27	Significance of Temperature and Humidity Control for Agricultural Products Storage: Overview of Conventional and Advanced Options. <i>International Journal of Food Engineering</i> , 2019, 15, .	1.5	27
28	Artificial Intelligence for the Prediction of the Thermal Performance of Evaporative Cooling Systems. <i>Energies</i> , 2021, 14, 3946.	3.1	25
29	Solid desiccant dehumidification-based air-conditioning system for agricultural storage application: Theory and experiments. <i>Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy</i> , 2020, 234, 534-547.	1.4	24
30	Identification and Elucidation of the Designing and Operational Issues of Trickling Filter Systems for Wastewater Treatment. <i>Polish Journal of Environmental Studies</i> , 2017, 26, 2431-2444.	1.2	23
31	Adsorption of Difluoromethane (HFC-32) onto phenol resin based adsorbent: Theory and experiments. <i>International Journal of Heat and Mass Transfer</i> , 2018, 127, 348-356.	4.8	22
32	Investigating Applicability of Evaporative Cooling Systems for Thermal Comfort of Poultry Birds in Pakistan. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 4445.	2.5	22
33	Effects of the COVID-19 Pandemic on Food Security and Agriculture in Iran: A Survey. <i>Sustainability</i> , 2021, 13, 10103.	3.2	22
34	Input Selection of Wavelet-Coupled Neural Network Models for Rainfall-Runoff Modelling. <i>Water Resources Management</i> , 2019, 33, 955-973.	3.9	21
35	IoT-Based Sensor Data Fusion for Determining Optimality Degrees of Microclimate Parameters in Commercial Greenhouse Production of Tomato. <i>Sensors</i> , 2020, 20, 6474.	3.8	21
36	Delineation of regional groundwater vulnerability using DRASTIC model for agricultural application in Pakistan. <i>Arabian Journal of Geosciences</i> , 2020, 13, 1.	1.3	21

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37	Synthesis of Rice Husk-Derived Magnetic Biochar Through Liquefaction to Adsorb Anionic and Cationic Dyes from Aqueous Solutions. <i>Arabian Journal for Science and Engineering</i> , 2021, 46, 233-246.	3.0	20
38	Evaporative Cooling Options for Building Air-Conditioning: A Comprehensive Study for Climatic Conditions of Multan (Pakistan). <i>Energies</i> , 2020, 13, 3061.	3.1	19
39	Experiments on Energy-Efficient Evaporative Cooling Systems for Poultry Farm Application in Multan (Pakistan). <i>Sustainability</i> , 2021, 13, 2836.	3.2	19
40	An overview of solid and liquid materials for adsorption-based atmospheric water harvesting. <i>Advances in Mechanical Engineering</i> , 2022, 14, 168781322210827.	1.6	19
41	Determining the Factors Affecting the Boiling Heat Transfer Coefficient of Sintered Coated Porous Surfaces. <i>Sustainability</i> , 2021, 13, 12631.	3.2	18
42	Regional Groundwater Quality Management through Hydrogeological Modeling in LCC, West Faisalabad, Pakistan. <i>Journal of Chemistry</i> , 2017, 2017, 1-16.	1.9	17
43	Study on Desiccant and Evaporative Cooling Systems for Livestock Thermal Comfort: Theory and Experiments. <i>Energies</i> , 2020, 13, 2675.	3.1	17
44	Dynamic Evaluation of Desiccant Dehumidification Evaporative Cooling Options for Greenhouse Air-Conditioning Application in Multan (Pakistan). <i>Energies</i> , 2021, 14, 1097.	3.1	17
45	Boiling Heat Transfer Evaluation in Nanoporous Surface Coatings. <i>Nanomaterials</i> , 2021, 11, 3383.	4.1	17
46	Experimental evaluation of desiccant dehumidification and air-conditioning system for energy-efficient storage of dried fruits. <i>Building Services Engineering Research and Technology</i> , 2020, 41, 454-465.	1.8	16
47	Experimental Investigation of Desiccant Dehumidification Cooling System for Climatic Conditions of Multan (Pakistan). <i>Energies</i> , 2020, 13, 5530.	3.1	16
48	Experimental Study on Maize Cob Trickling Filter-Based Wastewater Treatment System: Design, Development, and Performance Evaluation. <i>Polish Journal of Environmental Studies</i> , 2016, 25, 2265-2273.	1.2	16
49	Potential evaluation of hybrid nanofluids for solar thermal energy harvesting: A review of recent advances. <i>Sustainable Energy Technologies and Assessments</i> , 2021, 48, 101651.	2.7	16
50	On the Classification of a Greenhouse Environment for a Rose Crop Based on AI-Based Surrogate Models. <i>Sustainability</i> , 2021, 13, 12166.	3.2	16
51	Steady-state Analysis on Thermally Driven Adsorption Air-conditioning System for Agricultural Greenhouses. <i>Procedia Engineering</i> , 2015, 118, 185-192.	1.2	15
52	Energy-Efficient Air-Conditioning Systems for Nonhuman Applications. , 2017, , .		15
53	Performance Evaluation of Trickling Filter-Based Wastewater Treatment System Utilizing Cotton Sticks as Filter Media. <i>Polish Journal of Environmental Studies</i> , 2017, 26, 1955-1962.	1.2	15
54	Effect of relative humidity on thermal conductivity of zeolite-based adsorbents: Theory and experiments. <i>Applied Thermal Engineering</i> , 2019, 150, 11-18.	6.0	14

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55	Experimental and normalized sensitivity based numerical analyses of a novel humidifier-assisted highly efficient indirect evaporative cooler. <i>International Communications in Heat and Mass Transfer</i> , 2021, 125, 105327.	5.6	14
56	Experimental Study on Carbon Based Adsorbents for Greenhouse Dehumidification. <i>Evergreen</i> , 2014, 1, 5-11.	0.5	14
57	Wastewater Evaluation for Multan, Pakistan: Characterization and Agricultural Reuse. <i>Polish Journal of Environmental Studies</i> , 2019, 28, 2159-2174.	1.2	13
58	Investigation of Input and Output Energy for Wheat Production: A Comprehensive Study for Tehsil Mailsi (Pakistan). <i>Sustainability</i> , 2020, 12, 6884.	3.2	13
59	Investigation of energy-efficient solid desiccant system for wheat drying. <i>International Journal of Agricultural and Biological Engineering</i> , 2019, 12, 221-228.	0.6	12
60	Desiccant Air-Conditioning System for Storage of Fruits and Vegetables : Pakistan Preview. <i>Evergreen</i> , 2016, 3, 12-17.	0.5	12
61	Investigating Solid and Liquid Desiccant Dehumidification Options for Room Air-Conditioning and Drying Applications. <i>Sustainability</i> , 2020, 12, 10582.	3.2	11
62	Experimental Investigation of Traction Power Transfer Indices of Farm-Tractors for Efficient Energy Utilization in Soil Tillage and Cultivation Operations. <i>Agronomy</i> , 2021, 11, 168.	3.0	11
63	Simulating Cotton Growth and Productivity Using AquaCrop Model under Deficit Irrigation in a Semi-Arid Climate. <i>Agriculture (Switzerland)</i> , 2022, 12, 242.	3.1	11
64	Effect of annealing on microstructures and mechanical properties of PA-12 lattice structures proceeded by multi jet fusion technology. <i>Additive Manufacturing</i> , 2021, 47, 102285.	3.0	10
65	Water desalination by silica supported ionic liquid: Adsorption kinetics and system modeling. <i>Energy</i> , 2022, 239, 122069.	8.8	10
66	Scientific Irrigation Scheduling for Sustainable Production in Olive Groves. <i>Agriculture (Switzerland)</i> , 2022, 12, 564.	3.1	10
67	Investigation of Energy Consumption and Associated CO2 Emissions for Wheat-Rice Crop Rotation Farming. <i>Energies</i> , 2021, 14, 5094.	3.1	9
68	Removal of Crystal Violet and Eriochrome Black T Dyes from Aqueous Solutions by Magnetic Nanoparticles Biosynthesized from Leaf Extract of <i>Fraxinus Chinensis</i> Roxb. <i>Polish Journal of Environmental Studies</i> , 2019, 28, 2027-2040.	1.2	9
69	DEVELOPMENT OF GROUNDWATER FLOW MODEL (MODFLOW) TO SIMULATE THE ESCALATING GROUNDWATER PUMPING IN THE PUNJAB, PAKISTAN. <i>Pakistan Journal of Agricultural Sciences</i> , 2018, 55, 635-644.	0.2	9
70	Groundwater Vulnerability Mapping in Faisalabad District Using GIS Based Drastic Model. <i>MATEC Web of Conferences</i> , 2018, 246, 01001.	0.2	8
71	Experimental Investigations of a Solar Water Treatment System for Remote Desert Areas of Pakistan. <i>Water (Switzerland)</i> , 2021, 13, 1070.	2.7	8
72	Greenhouse Automation Using Wireless Sensors and IoT Instruments Integrated with Artificial Intelligence. , 0, , .		8

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73	A novel ejectors integration with two-stages adsorption desalination: A way to scavenge the ambient energy. <i>Sustainable Energy Technologies and Assessments</i> , 2021, 48, 101658.	2.7	8
74	Investigating the System Behaviors of a 10 kW Organic Rankine Cycle (ORC) Prototype Using Plunger Pump and Centrifugal Pump. <i>Energies</i> , 2020, 13, 1141.	3.1	7
75	Impacts of fuel feeding methods on the thermal and emission performance of modern coal burning stoves. <i>International Journal of Agricultural and Biological Engineering</i> , 2019, 12, 160-167.	0.6	7
76	Updates on Evaporation and Condensation Methods for the Performance Improvement of Solar Stills. <i>Energies</i> , 2021, 14, 7050.	3.1	7
77	Quality Evaluation of Lemon Cordial Stored at Different Times with Microwave Heating (Pasteurization). <i>Sustainability</i> , 2022, 14, 1953.	3.2	7
78	Conceptualization of Bioreactor Landfill Approach for Sustainable Waste Management in Karachi, Pakistan. <i>Sustainability</i> , 2022, 14, 3364.	3.2	7
79	Steady-State Investigation of Carbon-Based Adsorbent-Adsorbate Pairs for Heat Transformation Application. <i>Sustainability</i> , 2020, 12, 7040.	3.2	6
80	Effect of 1-Methyl Cyclopropane and Modified Atmosphere Packaging on the Storage of Okra (<i>Abelmoschus esculentus</i> L.): Theory and Experiments. <i>Sustainability</i> , 2020, 12, 7547.	3.2	6
81	3-Dimensional membrane capsules: Synthesis modulations for the remediation of environmental pollutants – A critical review. <i>Critical Reviews in Environmental Science and Technology</i> , 2022, 52, 1092-1153.	12.8	6
82	Investigation of Desiccant and Evaporative Cooling Systems for Animal Air-Conditioning. , 0, , .		6
83	Free Discharge of Subsurface Drainage Effluent: An Alternate Design of the Surface Drain System in Pakistan. <i>Sustainability</i> , 2021, 13, 4080.	3.2	6
84	Thermal Analysis and Energy Efficiency Improvements in Tunnel Kiln for Sustainable Environment. <i>Processes</i> , 2021, 9, 1629.	2.8	6
85	Evaluating Evaporative Cooling Assisted Solid Desiccant Dehumidification System for Agricultural Storage Application. <i>Sustainability</i> , 2022, 14, 1479.	3.2	6
86	Physicochemical Investigation of Rainfall for Managed Aquifer Recharge in Punjab (Pakistan). <i>Water (Switzerland)</i> , 2022, 14, 2155.	2.7	6
87	Experimental and comparative study of Chinese commercial improved coal-fired cooking and space-heating stoves. <i>Environmental Science and Pollution Research</i> , 2021, 28, 58135-58141.	5.3	5
88	Alternative Air-Conditioning Options for Developing Countries. <i>European Journal of Engineering Research and Science</i> , 2017, 2, 76.	0.3	5
89	Solar-Hybrid Cold Energy Storage System Coupled with Cooling Pads Backup: A Step towards Decentralized Storage of Perishables. <i>Energies</i> , 2021, 14, 7633.	3.1	5
90	Impact of Cropping Pattern and Climatic Parameters in Lower Chenab Canal System – Case Study from Punjab Pakistan. <i>Agriculture (Switzerland)</i> , 2022, 12, 708.	3.1	5

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91	Study on Water-Vapor Adsorption onto Polymer and Carbon Based Adsorbents for Air-Conditioning Applications. Evergreen, 2019, 6, 215-224.	0.5	4
92	Desiccant Dehumidification Cooling System for Poultry Houses in Multan (Pakistan). Green Energy and Technology, 2022, , 19-42.	0.6	4
93	Potential Investigation of Membrane Energy Recovery Ventilators for the Management of Building Air-Conditioning Loads. Energies, 2022, 15, 2139.	3.1	4
94	Study on Desiccant Air-Conditioning System for Livestock Application in Pakistan. , 2018, , .		3
95	Adsorption-Based Atmospheric Water Harvesting: Technology Fundamentals and Energy-Efficient Adsorbents. , 0, , .		3
96	Advancements of Spraying Technology in Agriculture. , 0, , .		3
97	Investigating Hydrological Responses and Adaptive Operation of a Hydropower Station under a Climate Change Scenario. Polish Journal of Environmental Studies, 2018, 27, 2337-2348.	1.2	3
98	Recent developments in adsorption heat pumps for heating applications. Advances in Mechanical Engineering, 2022, 14, 168781322210894.	1.6	3
99	Temperature and Humidity Control for the Next Generation Greenhouses: Overview of Desiccant and Evaporative Cooling Systems. , 0, , .		2
100	Effect of In Vitro Digestion on the Antioxidant and Angiotensin-Converting Enzyme Inhibitory Potential of Buffalo Milk Processed Cheddar Cheese. Foods, 2021, 10, 1661.	4.3	2
101	Study on Zero Energy Evaporative Cooling Chamber for Agricultural Products Storage. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 104-109.	0.1	2
102	Investigating the Impact of Ultrasound, Microwave, and High-Pressure Processing of Milk on the Volatile Compounds and Sensory Properties of Cheddar Cheese. Agriculture (Switzerland), 2022, 12, 577.	3.1	2
103	An Overview of Soil Moisture and Salinity Sensors for Digital Agriculture Applications. , 0, , .		2
104	Investigation of Maisotsenko Cycle (M-cycle) Air-Conditioning System for Multan(Pakistan). , 2017, , .		1
105	Performance evaluation of silica-gel based desiccant dehumidification unit for air-conditioning applications. , 2019, , .		1
106	Lab-Scale Study of Desiccant Dehumidification System for Poultry Shed Air-Conditioning in Pakistan. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 85-91.	0.1	1
107	Investigation of Direct and Indirect Evaporative Cooling Options for Greenhouse Air Conditioning in Multan (Pakistan). Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 110-115.	0.1	1
108	Spatiotemporal Investigation of Atmospheric Water Harvesting Potential Using Response Surface Methodology for Multan (Pakistan) and Fukuoka (Japan). Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 128-133.	0.1	1

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109	Steady-state Investigation of Desiccant Drying System for Agricultural Applications. Evergreen, 2018, 5, 33-42.	0.5	1
110	Experimental study on solar distillation system for oil extraction from eucalyptus plant leaves. Thermal Science, 2022, 26, 3897-3909.	1.1	1
111	Evaporative Cooling and Desiccant Dehumidification Air Conditioning Options for Livestock Thermal Comfort. Green Energy and Technology, 2022, , 43-63.	0.6	1
112	Recent trends of carbon nanotubes and chitosan composites for hexavalent chromium removal from aqueous samples. Separation Science and Technology, 2022, , 177-207.	0.2	1
113	Investigation of carbon based adsorbents for the development of thermally-driven adsorption cooling systems. IOP Conference Series: Materials Science and Engineering, 2018, 414, 012004.	0.6	0
114	Thermodynamic investigation of M-cycle assisted open-cycle desiccant air conditioning systems. IOP Conference Series: Materials Science and Engineering, 2018, 414, 012002.	0.6	0
115	Steady-state Investigation of Adsorption Cooling System using Water as Refrigerant. , 2018, , .		0
116	Thermodynamic investigation of R744 and R134a based refrigeration cycle. , 2020, , .		0
117	Towards the development of energy-efficient poultry air conditioning system. , 0, , .		0
118	Investigation of particles deposition in a square duct using optimized roughness elements for a sustainable environment. Advances in Mechanical Engineering, 2021, 13, 168781402110490.	1.6	0
119	Experimental Investigation of Solid Desiccant Air-Conditioning System for Agriculture based Applications. The Proceedings of the National Symposium on Power and Energy Systems, 2016, 2016.21, C114.	0.0	0
120	Study on an Evaporative Cooling Vest for Farm Workers. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 116-121.	0.1	0
121	Study on Desiccant Dehumidification System Using Experiments and Steady-State Model. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 92-97.	0.1	0
122	Investigating Applicability of Heat-Driven Desiccant Dehumidification System for Shelf Life Improvement of Fruits and Vegetables. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 79-84.	0.1	0
123	Investigating energy efficient air-conditioning options for agricultural and livestock applications. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 21-22.	0.1	0
124	Evaporative Cooling Systems for Thermal Comfort of Foreign Cattle Breeds: THI Evaluation and System Feasibility. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 98-103.	0.1	0
125	Study on Solid Desiccant-Based Air-Conditioning for Wet-Markets. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2020, 6, 122-127.	0.1	0
126	An Introductory Study on The Performance Prediction of Membrane-Based Energy Recovery Ventilators. Proceedings of International Exchange and Innovation Conference on Engineering & Sciences, IEICES, 2021, 7, 290-294.	0.1	0

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127	Maisotsenko-Cycle Assisted Desiccant Dehumidification System Configurations for Agricultural Product Storage. Green Energy and Technology, 2022, , 1-17.	0.6	0
128	Evaporative and Desiccant Air-Conditioning Systems for Wet Markets. Green Energy and Technology, 2022, , 101-121.	0.6	0
129	Algae Biomass Conversion Technologies. Impact of Meat Consumption on Health and Environmental Sustainability, 2022, , 524-546.	0.4	0