

# Muhammad Sultan

## List of Publications by Year in descending order

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129  
papers

2,606  
citations

218677

26  
h-index

233421

45  
g-index

133  
all docs

133  
docs citations

133  
times ranked

1520  
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Water desalination by silica supported ionic liquid: Adsorption kinetics and system modeling. <i>Energy</i> , 2022, 239, 122069.	8.8	10
3	Experimental study on solar distillation system for oil extraction from eucalyptus plant leaves. <i>Thermal Science</i> , 2022, 26, 3897-3909.	1.1	1
4	Evaluating Evaporative Cooling Assisted Solid Desiccant Dehumidification System for Agricultural Storage Application. <i>Sustainability</i> , 2022, 14, 1479.	3.2	6
5	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
6	Quality Evaluation of Lemon Cordial Stored at Different Times with Microwave Heating (Pasteurization). <i>Sustainability</i> , 2022, 14, 1953.	3.2	7
7	Desiccant Dehumidification Cooling System for Poultry Houses in Multan (Pakistan). <i>Green Energy and Technology</i> , 2022, , 19-42.	0.6	4
8	Conceptualization of Bioreactor Landfill Approach for Sustainable Waste Management in Karachi, Pakistan. <i>Sustainability</i> , 2022, 14, 3364.	3.2	7
9	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
10	Potential Investigation of Membrane Energy Recovery Ventilators for the Management of Building Air-Conditioning Loads. <i>Energies</i> , 2022, 15, 2139.	3.1	4
11	Recent developments in adsorption heat pumps for heating applications. <i>Advances in Mechanical Engineering</i> , 2022, 14, 168781322210894.	1.6	3
12	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
13	Evaporative Cooling and Desiccant Dehumidification Air Conditioning Options for Livestock Thermal Comfort. <i>Green Energy and Technology</i> , 2022, , 43-63.	0.6	1
14	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
15	Maisotsenko-Cycle Assisted Desiccant Dehumidification System Configurations for Agricultural Product Storage. <i>Green Energy and Technology</i> , 2022, , 1-17.	0.6	0
16	Evaporative and Desiccant Air-Conditioning Systems for Wet Markets. <i>Green Energy and Technology</i> , 2022, , 101-121.	0.6	0
17	Scientific Irrigation Scheduling for Sustainable Production in Olive Groves. <i>Agriculture (Switzerland)</i> , 2022, 12, 564.	3.1	10
18	Investigating the Impact of Ultrasound, Microwave, and High-Pressure Processing of Milk on the Volatile Compounds and Sensory Properties of Cheddar Cheese. <i>Agriculture (Switzerland)</i> , 2022, 12, 577.	3.1	2

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19	Recent trends of carbon nanotubes and chitosan composites for hexavalent chromium removal from aqueous samples. <i>Separation Science and Technology</i> , 2022, , 177-207.	0.2	1
20	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
21	Algae Biomass Conversion Technologies. Impact of Meat Consumption on Health and Environmental Sustainability, 2022, , 524-546.	0.4	0
22	Physicochemical Investigation of Rainfall for Managed Aquifer Recharge in Punjab (Pakistan). <i>Water (Switzerland)</i> , 2022, 14, 2155.	2.7	6
23	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
24	A spatiotemporal indirect evaporative cooler enabled by transiently interceding water mist. <i>Energy</i> , 2021, 217, 119352.	8.8	38
25	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
26	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
27	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
28	Experiments on Energy-Efficient Evaporative Cooling Systems for Poultry Farm Application in Multan (Pakistan). <i>Sustainability</i> , 2021, 13, 2836.	3.2	19
29	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
30	Experimental Investigations of a Solar Water Treatment System for Remote Desert Areas of Pakistan. <i>Water (Switzerland)</i> , 2021, 13, 1070.	2.7	8
31	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
32	Functionalized Carbon Nanotubes (CNTs) for Water and Wastewater Treatment: Preparation to Application. <i>Sustainability</i> , 2021, 13, 5717.	3.2	66
33	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
34	Biogas Production Potential from Livestock Manure in Pakistan. <i>Sustainability</i> , 2021, 13, 6751.	3.2	29
35	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
36	Effect of In Vitro Digestion on the Antioxidant and Angiotensin-Converting Enzyme Inhibitory Potential of Buffalo Milk Processed Cheddar Cheese. <i>Foods</i> , 2021, 10, 1661.	4.3	2

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37	Artificial Intelligence for the Prediction of the Thermal Performance of Evaporative Cooling Systems. <i>Energies</i> , 2021, 14, 3946.	3.1	25
38	Investigation of Energy Consumption and Associated CO2 Emissions for Wheatâ€“Rice Crop Rotation Farming. <i>Energies</i> , 2021, 14, 5094.	3.1	9
39	Investigation of particles deposition in a square duct using optimized roughness elements for a sustainable environment. <i>Advances in Mechanical Engineering</i> , 2021, 13, 168781402110490.	1.6	0
40	Thermal Analysis and Energy Efficiency Improvements in Tunnel Kiln for Sustainable Environment. <i>Processes</i> , 2021, 9, 1629.	2.8	6
41	Effects of the COVID-19 Pandemic on Food Security and Agriculture in Iran: A Survey. <i>Sustainability</i> , 2021, 13, 10103.	3.2	22
42	Clean heating during winter season in Northern China: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 149, 111339.	16.4	72
43	Metal-organic frameworks in cooling and water desalination: Synthesis and application. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 149, 111362.	16.4	39
44	A review of recent advances in adsorption desalination technologies. <i>International Communications in Heat and Mass Transfer</i> , 2021, 128, 105594.	5.6	30
45	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
46	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
47	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
48	Updates on Evaporation and Condensation Methods for the Performance Improvement of Solar Stills. <i>Energies</i> , 2021, 14, 7050.	3.1	7
49	A novel ejectors integration with two-stages adsorption desalination: Away to scavenge the ambient energy. <i>Sustainable Energy Technologies and Assessments</i> , 2021, 48, 101658.	2.7	8
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	Determining the Factors Affecting the Boiling Heat Transfer Coefficient of Sintered Coated Porous Surfaces. <i>Sustainability</i> , 2021, 13, 12631.	3.2	18
52	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
53	An Introductory Study on The Performance Prediction of Membrane-Based Energy Recovery Ventilators. <i>Proceedings of International Exchange and Innovation Conference on Engineering &amp; Sciences, IEICES</i> , 2021, 7, 290-294.	0.1	0
54	Boiling Heat Transfer Evaluation in Nanoporous Surface Coatings. <i>Nanomaterials</i> , 2021, 11, 3383.	4.1	17

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55	Solid desiccant dehumidification-based air-conditioning system for agricultural storage application: Theory and experiments. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2020, 234, 534-547.	1.4	24
56	Experimental evaluation of desiccant dehumidification and air-conditioning system for energy-efficient storage of dried fruits. Building Services Engineering Research and Technology, 2020, 41, 454-465.	1.8	16
57	Recent updates on the adsorption capacities of adsorbent-adsorbate pairs for heat transformation applications. Renewable and Sustainable Energy Reviews, 2020, 119, 109630.	16.4	68
58	Comprehensive review on dehumidification strategies for agricultural greenhouse applications. Applied Thermal Engineering, 2020, 181, 115979.	6.0	55
59	IoT-Based Sensor Data Fusion for Determining Optimality Degrees of Microclimate Parameters in Commercial Greenhouse Production of Tomato. Sensors, 2020, 20, 6474.	3.8	21
60	Investigating Applicability of Evaporative Cooling Systems for Thermal Comfort of Poultry Birds in Pakistan. Applied Sciences (Switzerland), 2020, 10, 4445.	2.5	22
61	Steady-State Investigation of Carbon-Based Adsorbent-Adsorbate Pairs for Heat Transformation Application. Sustainability, 2020, 12, 7040.	3.2	6
62	Effect of 1-Methyl Cyclopropane and Modified Atmosphere Packaging on the Storage of Okra (Abelmoschus esculentus L.): Theory and Experiments. Sustainability, 2020, 12, 7547.	3.2	6
63	Investigating Solid and Liquid Desiccant Dehumidification Options for Room Air-Conditioning and Drying Applications. Sustainability, 2020, 12, 10582.	3.2	11
64	Experimental Investigation of Desiccant Dehumidification Cooling System for Climatic Conditions of Multan (Pakistan). Energies, 2020, 13, 5530.	3.1	16
65	Thermodynamic investigation of R744 and R134a based refrigeration cycle. , 2020, , .		0
66	Investigating the System Behaviors of a 10 kW Organic Rankine Cycle (ORC) Prototype Using Plunger Pump and Centrifugal Pump. Energies, 2020, 13, 1141.	3.1	7
67	Study on Desiccant and Evaporative Cooling Systems for Livestock Thermal Comfort: Theory and Experiments. Energies, 2020, 13, 2675.	3.1	17
68	Evaporative Cooling Options for Building Air-Conditioning: A Comprehensive Study for Climatic Conditions of Multan (Pakistan). Energies, 2020, 13, 3061.	3.1	19
69	Delineation of regional groundwater vulnerability using DRASTIC model for agricultural application in Pakistan. Arabian Journal of Geosciences, 2020, 13, 1.	1.3	21
70	Model-based evaluation of greenhouse microclimate using IoT-Sensor data fusion for energy efficient crop production. Journal of Cleaner Production, 2020, 263, 121303.	9.3	61
71	Investigation of Input and Output Energy for Wheat Production: A Comprehensive Study for Tehsil Mailsi (Pakistan). Sustainability, 2020, 12, 6884.	3.2	13
72	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

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73	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
74	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
75	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
76	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
77	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
78	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
79	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
80	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
81	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
82	Significance of Temperature and Humidity Control for Agricultural Products Storage: Overview of Conventional and Advanced Options. International Journal of Food Engineering, 2019, 15, .	1.5	27
83	Performance evaluation of silica-gel based desiccant dehumidification unit for air-conditioning applications. , 2019, , .		1
84	Input Selection of Wavelet-Coupled Neural Network Models for Rainfall-Runoff Modelling. Water Resources Management, 2019, 33, 955-973.	3.9	21
85	Effect of relative humidity on thermal conductivity of zeolite-based adsorbents: Theory and experiments. Applied Thermal Engineering, 2019, 150, 11-18.	6.0	14
86	Encapsulated green magnetic nanoparticles for the removal of toxic Pb <sup>2+</sup> and Cd <sup>2+</sup> from water: Development, characterization and application. Journal of Environmental Management, 2019, 234, 273-289.	7.8	51
87	Overview of microbes based fabricated biogenic nanoparticles for water and wastewater treatment. Journal of Environmental Management, 2019, 230, 128-150.	7.8	81
88	Removal of Crystal Violet and Eriochrome Black T Dyes from Aqueous Solutions by Magnetic Nanoparticles Biosynthesized from Leaf Extract of Fraxinus Chinensis Roxb. Polish Journal of Environmental Studies, 2019, 28, 2027-2040.	1.2	9
89	Wastewater Evaluation for Multan, Pakistan: Characterization and Agricultural Reuse. Polish Journal of Environmental Studies, 2019, 28, 2159-2174.	1.2	13
90	Investigation of energy-efficient solid desiccant system for wheat drying. International Journal of Agricultural and Biological Engineering, 2019, 12, 221-228.	0.6	12

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91	Impacts of fuel feeding methods on the thermal and emission performance of modern coal burning stoves. International Journal of Agricultural and Biological Engineering, 2019, 12, 160-167.	0.6	7
92	Study on Water-Vapor Adsorption onto Polymer and Carbon Based Adsorbents for Air-Conditioning Applications. Evergreen, 2019, 6, 215-224.	0.5	4
93	An overview of heavy metal removal from wastewater using magnetotactic bacteria. Journal of Chemical Technology and Biotechnology, 2018, 93, 2817-2832.	3.2	34
94	Optimization of adsorption isotherm types for desiccant air-conditioning applications. Renewable Energy, 2018, 121, 441-450.	8.9	104
95	Performance evaluation of hydrophilic organic polymer sorbents for desiccant air-conditioning applications. Adsorption Science and Technology, 2018, 36, 311-326.	3.2	40
96	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
97	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
98	Steady-state Investigation of Adsorption Cooling System using Water as Refrigerant. , 2018, , .		0
99	Groundwater Vulnerability Mapping in Faisalabad District Using GIS Based Drastic Model. MATEC Web of Conferences, 2018, 246, 01001.	0.2	8
100	Study on Desiccant Air-Conditioning System for Livestock Application in Pakistan. , 2018, , .		3
101	Green Synthesis of Phytogetic Magnetic Nanoparticles and Their Applications in the Adsorptive Removal of Crystal Violet from Aqueous Solution. Arabian Journal for Science and Engineering, 2018, 43, 6245-6259.	3.0	53
102	Adsorption of Difluoromethane (HFC-32) onto phenol resin based adsorbent: Theory and experiments. International Journal of Heat and Mass Transfer, 2018, 127, 348-356.	4.8	22
103	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
104	DEVELOPMENT OF GROUNDWATER FLOW MODEL (MODFLOW) TO SIMULATE THE ESCALATING GROUNDWATER PUMPING IN THE PUNJAB, PAKISTAN. Pakistan Journal of Agricultural Sciences, 2018, 55, 635-644.	0.2	9
105	Steady-state Investigation of Desiccant Drying System for Agricultural Applications. Evergreen, 2018, 5, 33-42.	0.5	1
106	Phytogetic magnetic nanoparticles for wastewater treatment: a review. RSC Advances, 2017, 7, 40158-40178.	3.6	93
107	Investigation of Maisotsenko Cycle (M-cycle) Air-Conditioning System for Multan(Pakistan). , 2017, , .		1
108	Regional Groundwater Quality Management through Hydrogeological Modeling in LCC, West Faisalabad, Pakistan. Journal of Chemistry, 2017, 2017, 1-16.	1.9	17



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109	Energy-Efficient Air-Conditioning Systems for Nonhuman Applications. , 2017, , .		15
110	Performance Evaluation of Trickling Filter-Based Wastewater Treatment System Utilizing Cotton Sticks as Filter Media. Polish Journal of Environmental Studies, 2017, 26, 1955-1962.	1.2	15
111	Identification and Elucidation of the Designing and Operational Issues of Trickling Filter Systems for Wastewater Treatment. Polish Journal of Environmental Studies, 2017, 26, 2431-2444.	1.2	23
112	Alternative Air-Conditioning Options for Developing Countries. European Journal of Engineering Research and Science, 2017, 2, 76.	0.3	5
113	Overview of the Maisotsenko cycle “ A way towards dew point evaporative cooling. Renewable and Sustainable Energy Reviews, 2016, 66, 537-555.	16.4	160
114	Water vapor sorption kinetics of polymer based sorbents: Theory and experiments. Applied Thermal Engineering, 2016, 106, 192-202.	6.0	66
115	Steady-state investigation of water vapor adsorption for thermally driven adsorption based greenhouse air-conditioning system. Renewable Energy, 2016, 86, 785-795.	8.9	63
116	Experimental Study on Maize Cob Trickling Filter-Based Wastewater Treatment System: Design, Development, and Performance Evaluation. Polish Journal of Environmental Studies, 2016, 25, 2265-2273.	1.2	16
117	Desiccant Air-Conditioning System for Storage of Fruits and Vegetables : Pakistan Preview. Evergreen, 2016, 3, 12-17.	0.5	12
118	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
119	Insights of water vapor sorption onto polymer based sorbents. Adsorption, 2015, 21, 205-215.	3.0	45
120	An overview of solid desiccant dehumidification and air conditioning systems. Renewable and Sustainable Energy Reviews, 2015, 46, 16-29.	16.4	196
121	Steady-state Analysis on Thermally Driven Adsorption Air-conditioning System for Agricultural Greenhouses. Procedia Engineering, 2015, 118, 185-192.	1.2	15
122	Experimental Study on Carbon Based Adsorbents for Greenhouse Dehumidification. Evergreen, 2014, 1, 5-11.	0.5	14
123	Investigation of Desiccant and Evaporative Cooling Systems for Animal Air-Conditioning. , 0, , .		6
124	Adsorption-Based Atmospheric Water Harvesting: Technology Fundamentals and Energy-Efficient Adsorbents. , 0, , .		3
125	Temperature and Humidity Control for the Next Generation Greenhouses: Overview of Desiccant and Evaporative Cooling Systems. , 0, , .		2
126	Greenhouse Automation Using Wireless Sensors and IoT Instruments Integrated with Artificial Intelligence. , 0, , .		8



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127	Advancements of Spraying Technology in Agriculture. , 0, , .		3
128	Towards the development of energy-efficient poultry air conditioning system. , 0, , .		0
129	An Overview of Soil Moisture and Salinity Sensors for Digital Agriculture Applications. , 0, , .		2