

Tabbi Wilberforce Awotwe

List of Publications by Year in descending order

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Version: 2024-02-01

100
papers

8,317
citations

43973

48
h-index

62479

80
g-index

100
all docs

100
docs citations

100
times ranked

5005
citing authors

#	ARTICLE	IF	CITATIONS
1	Application of graphene in energy storage device – A review. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 135, 110026.	8.2	452
2	Advances in stationary and portable fuel cell applications. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 16509-16522.	3.8	413
3	Fuel cell application in the automotive industry and future perspective. <i>Energy</i> , 2021, 214, 118955.	4.5	377
4	Environmental impacts of solar energy systems: A review. <i>Science of the Total Environment</i> , 2021, 754, 141989.	3.9	373
5	Critical review of energy storage systems. <i>Energy</i> , 2021, 214, 118987.	4.5	359
6	Developments of electric cars and fuel cell hydrogen electric cars. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 25695-25734.	3.8	337
7	Comprehensive investigation on hydrogen and fuel cell technology in the aviation and aerospace sectors. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 106, 31-40.	8.2	325
8	Progress in carbon capture technologies. <i>Science of the Total Environment</i> , 2021, 761, 143203.	3.9	300
9	Energy efficiency improvements by investigating the water flooding management on proton exchange membrane fuel cell (PEMFC). <i>Energy</i> , 2019, 179, 246-267.	4.5	293
10	Environmental aspects of fuel cells: A review. <i>Science of the Total Environment</i> , 2021, 752, 141803.	3.9	287
11	Outlook of carbon capture technology and challenges. <i>Science of the Total Environment</i> , 2019, 657, 56-72.	3.9	281
12	A critical review on environmental impacts of renewable energy systems and mitigation strategies: Wind, hydro, biomass and geothermal. <i>Science of the Total Environment</i> , 2021, 766, 144505.	3.9	252
13	Environmental impact of desalination technologies: A review. <i>Science of the Total Environment</i> , 2020, 748, 141528.	3.9	235
14	Assessment of the pre-combustion carbon capture contribution into sustainable development goals SDGs using novel indicators. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 153, 111710.	8.2	207
15	Fuel cell membranes – Pros and cons. <i>Energy</i> , 2019, 172, 155-172.	4.5	163
16	A comprehensive study of the effect of bipolar plate (BP) geometry design on the performance of proton exchange membrane (PEM) fuel cells. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 111, 236-260.	8.2	156
17	Geothermal based hybrid energy systems, toward eco-friendly energy approaches. <i>Renewable Energy</i> , 2020, 147, 2003-2012.	4.3	142
18	Compressed air energy storage systems: Components and operating parameters – A review. <i>Journal of Energy Storage</i> , 2021, 34, 102000.	3.9	138

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19	Overview of ocean power technology. <i>Energy</i> , 2019, 175, 165-181.	4.5	118
20	Material degradation of components in polymer electrolyte membrane (PEM) electrolytic cell and mitigation mechanisms: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 111, 1-14.	8.2	109
21	Development of Bi-polar plate design of PEM fuel cell using CFD techniques. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 25663-25685.	3.8	107
22	Biogas role in achievement of the sustainable development goals: Evaluation, Challenges, and Guidelines. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2022, 131, 104207.	2.7	107
23	Recent progress of graphene based nanomaterials in bioelectrochemical systems. <i>Science of the Total Environment</i> , 2020, 749, 141225.	3.9	105
24	Prospects and challenges of concentrated solar photovoltaics and enhanced geothermal energy technologies. <i>Science of the Total Environment</i> , 2019, 659, 851-861.	3.9	101
25	Critical Review of Flywheel Energy Storage System. <i>Energies</i> , 2021, 14, 2159.	1.6	94
26	Application of nanofluids for enhanced waste heat recovery: A review. <i>Nano Energy</i> , 2021, 84, 105871.	8.2	93
27	Fuel cells for carbon capture applications. <i>Science of the Total Environment</i> , 2021, 769, 144243.	3.9	92
28	Transition metal carbides and nitrides as oxygen reduction reaction catalyst or catalyst support in proton exchange membrane fuel cells (PEMFCs). <i>International Journal of Hydrogen Energy</i> , 2021, 46, 23529-23547.	3.8	88
29	Large scale application of carbon capture to process industries – A review. <i>Journal of Cleaner Production</i> , 2022, 362, 132300.	4.6	84
30	Thermophysical properties of graphene-based nanofluids. <i>International Journal of Thermofluids</i> , 2021, 10, 100073.	4.0	81
31	Technical evaluation of proton exchange membrane (PEM) fuel cell performance – A review of the effects of bipolar plates coating. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 113, 109286.	8.2	80
32	Prospects of Fuel Cell Combined Heat and Power Systems. <i>Energies</i> , 2020, 13, 4104.	1.6	79
33	A review of grout materials in geothermal energy applications. <i>International Journal of Thermofluids</i> , 2021, 10, 100070.	4.0	78
34	Modelling and simulation of Proton Exchange Membrane fuel cell with serpentine bipolar plate using MATLAB. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 25639-25662.	3.8	76
35	Battery energy storage systems and SWOT (strengths, weakness, opportunities, and threats) analysis of batteries in power transmission. <i>Energy</i> , 2022, 254, 123987.	4.5	74
36	Evaluating the Effect of Metal Bipolar Plate Coating on the Performance of Proton Exchange Membrane Fuel Cells. <i>Energies</i> , 2018, 11, 3203.	1.6	71

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37	Technical and Commercial Challenges of Proton-Exchange Membrane (PEM) Fuel Cells. <i>Energies</i> , 2021, 14, 144.	1.6	71
38	Effects of COVID-19 on the environment: An overview on air, water, wastewater, and solid waste. <i>Journal of Environmental Management</i> , 2021, 292, 112694.	3.8	69
39	Numerical modelling and CFD simulation of a polymer electrolyte membrane (PEM) fuel cell flow channel using an open pore cellular foam material. <i>Science of the Total Environment</i> , 2019, 678, 728-740.	3.9	67
40	Selection of proton exchange membrane fuel cell for transportation. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 30625-30640.	3.8	67
41	Selection Guidelines for Wind Energy Technologies. <i>Energies</i> , 2021, 14, 3244.	1.6	65
42	Value added products from wastewater using bioelectrochemical systems: Current trends and perspectives. <i>Journal of Water Process Engineering</i> , 2021, 39, 101737.	2.6	59
43	Geometrical effect coupled with nanofluid on heat transfer enhancement in heat exchangers. <i>International Journal of Thermofluids</i> , 2021, 10, 100072.	4.0	59
44	Metal-Air Batteries—A Review. <i>Energies</i> , 2021, 14, 7373.	1.6	59
45	Review of the regulations and techniques to eliminate toxic emissions from diesel engine cars. <i>Science of the Total Environment</i> , 2020, 748, 141249.	3.9	53
46	Intensification of heat exchanger performance utilizing nanofluids. <i>International Journal of Thermofluids</i> , 2021, 10, 100071.	4.0	53
47	Effect of humidification of reactive gases on the performance of a proton exchange membrane fuel cell. <i>Science of the Total Environment</i> , 2019, 688, 1016-1035.	3.9	52
48	Environmental impacts of nanofluids: A review. <i>Science of the Total Environment</i> , 2021, 763, 144202.	3.9	51
49	Building-integrated photovoltaic/thermal (BIPVT) systems: Applications and challenges. <i>Sustainable Energy Technologies and Assessments</i> , 2021, 45, 101151.	1.7	48
50	A review on zero energy buildings — Pros and cons. <i>Energy and Built Environment</i> , 2023, 4, 25-38.	2.9	46
51	Battery thermal management systems based on nanofluids for electric vehicles. <i>Journal of Energy Storage</i> , 2022, 50, 104385.	3.9	45
52	Graphitic carbon nitride/carbon brush composite as a novel anode for yeast-based microbial fuel cells. <i>Energy</i> , 2021, 221, 119849.	4.5	44
53	Progress in plant-based bioelectrochemical systems and their connection with sustainable development goals. <i>Carbon Resources Conversion</i> , 2021, 4, 169-183.	3.2	42
54	Review of operating condition, design parameters and material properties for proton exchange membrane fuel cells. <i>International Journal of Energy Research</i> , 2021, 45, 1227-1245.	2.2	41

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55	Role of carbon-based nanomaterials in improving the performance of microbial fuel cells. <i>Energy</i> , 2022, 240, 122478.	4.5	40
56	Proton exchange membrane fuel cell performance prediction using artificial neural network. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 6037-6050.	3.8	39
57	State-of-the-Art Technologies for Building-Integrated Photovoltaic Systems. <i>Buildings</i> , 2021, 11, 383.	1.4	39
58	Mathematical model of a proton-exchange membrane (PEM) fuel cell. <i>International Journal of Thermofluids</i> , 2021, 11, 100110.	4.0	37
59	A Review on Failure Modes of Wind Turbine Components. <i>Energies</i> , 2021, 14, 5241.	1.6	36
60	Impact of COVID-19 on the Renewable Energy Sector and Mitigation Strategies. <i>Chemical Engineering and Technology</i> , 2022, 45, 558-571.	0.9	33
61	Performance Prediction of Proton Exchange Membrane Fuel Cells (PEMFC) Using Adaptive Neuro Inference System (ANFIS). <i>Sustainability</i> , 2020, 12, 4952.	1.6	31
62	A review of solar chimney for natural ventilation of residential and non-residential buildings. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 52, 102082.	1.7	27
63	Design of Experiment (DOE) Analysis of 5-Cell Stack Fuel Cell Using Three Bipolar Plate Geometry Designs. <i>Sustainability</i> , 2020, 12, 4488.	1.6	22
64	Multi-criteria decision making for different concentrated solar thermal power technologies. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 52, 102118.	1.7	21
65	A comparison on the dynamical performance of a proton exchange membrane fuel cell (PEMFC) with traditional serpentine and an open pore cellular foam material flow channel. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 5984-5998.	3.8	19
66	A composite of graphitic carbon nitride and Vulcan carbon as an effective catalyst support for Ni in direct urea fuel cells. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2020, 116, 160-168.	2.7	17
67	Augmenting performance of fuel cells using nanofluids. <i>Thermal Science and Engineering Progress</i> , 2021, 25, 101012.	1.3	17
68	Prospects of Thermoelectric Generators with Nanofluid. <i>Thermal Science and Engineering Progress</i> , 2022, 29, 101207.	1.3	17
69	Novel Trends in Proton Exchange Membrane Fuel Cells. <i>Energies</i> , 2022, 15, 4949.	1.6	17
70	PEMFC Poly-Generation Systems: Developments, Merits, and Challenges. <i>Sustainability</i> , 2021, 13, 11696.	1.6	16
71	Recent progress on Carbon-based nanomaterial for phase change materials: Prospects and challenges. <i>Thermal Science and Engineering Progress</i> , 2021, 23, 100920.	1.3	15
72	DeNOx removal techniques for automotive applications – A review. <i>Environmental Advances</i> , 2020, 2, 100021.	2.2	14

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73	Effect of Bipolar Plate Materials on Performance of Fuel Cells. , 2018, , .		12
74	Experimental and analytical study of open pore cellular foam material on the performance of proton exchange membrane electrolyzers. International Journal of Thermofluids, 2021, 9, 100068.	4.0	12
75	Optimization of Fuel Cell Performance Using Computational Fluid Dynamics. Membranes, 2021, 11, 146.	1.4	12
76	CFD modelling and simulation of drill cuttings transport efficiency in annular bends: Effect of particle size polydispersity. Journal of Petroleum Science and Engineering, 2022, 208, 109795.	2.1	11
77	Low temperature phase change materials for thermal energy storage: Current status and computational perspectives. Sustainable Energy Technologies and Assessments, 2022, 50, 101808.	1.7	11
78	Waste Heat Recovery Applications Incorporating Phase Change Materials. , 2022, , 513-521.		10
79	Finding best operational conditions of PEM fuel cell using adaptive neuro-fuzzy inference system and metaheuristics. Energy Reports, 2022, 8, 6181-6190.	2.5	10
80	Computational Fluid Dynamic simulation and modelling (CFX) of flow plate in PEM fuel cell using aluminum open cellular foam material. , 2017, , .		9
81	Effect of Bipolar Plate Material on Proton Exchange Membrane Fuel Cell Performance. Energies, 2022, 15, 1886.	1.6	9
82	Performance evaluation of an air breathing polymer electrolyte membrane (PEM) fuel cell in harsh environments " A case study under Saudi Arabia's ambient condition. International Journal of Hydrogen Energy, 2021, 46, 23463-23479.	3.8	6
83	Applications of Nanofluids in Cooling of Electronic Components. , 2022, , 310-318.		6
84	Materials for Fuel Cell Membranes. , 2022, , 267-272.		5
85	Optimisation of bipolar plate through computational fluid dynamic simulation and modelling using nickle open pore cellular foam material. Renewable Energy and Power Quality Journal, 2017, 1, 886-892.	0.2	5
86	Water Electrolysis Technology. , 2018, , .		4
87	Experimental Study of Operational Parameters on the Performance of PEMFCS in Dead end Mode. , 0, , .		4
88	Characterisation of Proton Exchange Membrane (PEMFC) Fuel Cell Through Design of Experiment (DOE). , 0, , .		4
89	Bio-Based Carbon Materials for Capacitive Deionization CDI Desalination Processes. , 2021, , .		3
90	Recent Progress of Metal-Organic Frameworks (MOFs) as Electrodes for Capacitive Deionization (CDI) Desalination. , 2022, , 566-577.		2

#	ARTICLE	IF	CITATIONS
91	Future Directions for Shape Memory Alloy Development. , 2022, , 231-242.		2
92	Piezoelectric Sensors. , 2022, , 65-71.		1
93	Graphene Based Materials for Supercapacitors and Fuel Cells. , 2021, , 399-399.		1
94	Advances in Electrolytes for Sodium-Sulfur Batteries. , 2021, , .		1
95	Carbon-Based Nanomaterial for Emerging Desalination Technologies: Electrodialysis and Capacitive Deionization. , 2021, , 411-411.		1
96	Introduction to Energy Storage Materials. , 2022, , 1-7.		1
97	Bipolar Plate Materials. , 2020, , 273-273.		0
98	Materials for a New Generation of Batteries. , 2021, , 59-59.		0
99	Progress of Biomaterials Applications in Supercapacitors. , 2021, , .		0
100	Classification of Energy Storage Materials. , 2022, , 8-14.		0