

# Norhafiz Azis

## List of Publications by Year in descending order

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Version: 2024-02-01

136  
papers

1,362  
citations

393982

19  
h-index

476904

29  
g-index

138  
all docs

138  
docs citations

138  
times ranked

947  
citing authors

#	ARTICLE	IF	CITATIONS
1	Automated positioning dual-axis solar tracking system with precision elevation and azimuth angle control. Energy, 2017, 124, 160-170.	4.5	98
2	Lightning protection on photovoltaic systems: A review on current and recommended practices. Renewable and Sustainable Energy Reviews, 2018, 82, 1611-1619.	8.2	55
3	Evolution of transformer health index in the form of mathematical equation. Renewable and Sustainable Energy Reviews, 2017, 76, 687-700.	8.2	54
4	Suitability of Palm Based Oil as Dielectric Insulating Fluid in Transformers. Journal of Electrical Engineering and Technology, 2014, 9, 662-669.	1.2	53
5	Lightning Surge Analysis on a Large Scale Grid-Connected Solar Photovoltaic System. Energies, 2017, 10, 2149.	1.6	40
6	Investigation of the Dielectric and Thermal Properties of Non-Edible Cottonseed Oil by Infusing h-BN Nanoparticles. IEEE Access, 2020, 8, 76204-76217.	2.6	37
7	Investigation on the electrical properties of palm oil and coconut oil based $TiO_2$ nanofluids. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 3432-3442.	1.8	35
8	Ageing assessment of transformer paper insulation through post mortem analysis. IEEE Transactions on Dielectrics and Electrical Insulation, 2014, 21, 845-853.	1.8	31
9	The effect of temperature on a mono-crystalline solar PV panel. , 2015, , .		31
10	Development of Graphene Oxide-Based Nonedible Cottonseed Nanofluids for Power Transformers. Materials, 2020, 13, 2569.	1.3	31
11	Development of palm-based neopentyl glycol diester as dielectric fluid and its thermal aging performance. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 2051-2058.	1.8	30
12	Effect of molecular structure on oxidative degradation of ester based transformer oil. Tribology International, 2019, 140, 105852.	3.0	29
13	An Enhanced Adaptive Perturb and Observe Technique for Efficient Maximum Power Point Tracking Under Partial Shading Conditions. Applied Sciences (Switzerland), 2020, 10, 3912.	1.3	29
14	Estimation of Transformers Health Index Based on the Markov Chain. Energies, 2017, 10, 1824.	1.6	28
15	Pre-breakdown streamer propagation and breakdown characteristics of refined bleached and deodorized palm oil under lightning impulse voltage. IEEE Transactions on Dielectrics and Electrical Insulation, 2018, 25, 1614-1620.	1.8	27
16	Investigation of the Effect of Sonication Time on Dispersion Stability, Dielectric Properties, and Heat Transfer of Graphene Based Green Nanofluids. IEEE Access, 2021, 9, 50607-50623.	2.6	27
17	A Case Study on 500 kV Line Performance Related to Lightning in Malaysia. IEEE Transactions on Power Delivery, 2018, 33, 2180-2186.	2.9	22
18	Transformers Health Index Assessment Based on Neural-Fuzzy Network. Energies, 2018, 11, 710.	1.6	22

#	ARTICLE	IF	CITATIONS
19	Performance analysis of thermoelectric generator implemented on non-uniform heat distribution of photovoltaic module. <i>Energy Reports</i> , 2021, 7, 2379-2387.	2.5	21
20	A study on the dielectric properties of Palm Oil and Coconut Oil. , 2014, , .		19
21	On the effect of lightning on a solar photovoltaic system. , 2016, , .		19
22	The effect of polarity on the lightning breakdown voltages of palm oil and coconut oil under a non-uniform field for transformers application. <i>Industrial Crops and Products</i> , 2016, 89, 250-256.	2.5	19
23	Operational condition assessment of in-service distribution transformers. , 2012, , .		18
24	Impact of Fe <sub>3</sub> O <sub>4</sub> , CuO and Al <sub>2</sub> O <sub>3</sub> on the AC Breakdown Voltage of Palm Oil and Coconut Oil in the Presence of CTAB. <i>Energies</i> , 2019, 12, 1605.	1.6	18
25	The Effect of Interfacial Zone Due to Nanoparticle-Surfactant Interaction on Dielectric Properties of Vegetable Oil Based Nanofluids. <i>IEEE Access</i> , 2021, 9, 107033-107045.	2.6	18
26	A Simplified Top-Oil Temperature Model for Transformers Based on the Pathway of Energy Transfer Concept and the Thermal-Electrical Analogy. <i>Energies</i> , 2017, 10, 1843.	1.6	17
27	Evaluation on the Lightning Breakdown Voltages of Palm Oil and Coconut Oil under Non-Uniform Field at Small Gap Distances. <i>Journal of Electrical Engineering and Technology</i> , 2016, 11, 184-191.	1.2	17
28	Lightning Breakdown Voltage Evaluation of Palm Oil and Coconut Oil as Transformer Oil under Quasi-Uniform Field Conditions. <i>Energies</i> , 2018, 11, 2676.	1.6	16
29	Ageing Study of Palm Oil and Coconut Oil in the Presence of Insulation Paper for Transformers Application. <i>Materials</i> , 2018, 11, 532.	1.3	16
30	Effects of Molecular Structure on the Physical, Chemical, and Electrical Properties of Ester-Based Transformer Insulating Liquids. <i>JAOCs, Journal of the American Oil Chemists' Society</i> , 2019, 96, 607-616.	0.8	16
31	Investigation on the Dielectric, Physical and Chemical Properties of Palm Oil and Coconut Oil under Open Thermal Ageing Condition. <i>Journal of Electrical Engineering and Technology</i> , 2016, 11, 690-698.	1.2	16
32	Unmanned Aerial Vehicle Quadcopter: A Review. <i>Journal of Computational and Theoretical Nanoscience</i> , 2017, 14, 5663-5675.	0.4	14
33	Effects of palm-based trimethylolpropane ester/mineral oil blending on dielectric properties and oxidative stability of transformer insulating liquid. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2019, 26, 1771-1778.	1.8	14
34	Nanoparticles Application in High Voltage Insulation Systems. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2021, 28, 1380-1399.	1.8	14
35	New perturb and observe algorithm based on trapezoidal rule: Uniform and partial shading conditions. <i>Energy Conversion and Management</i> , 2022, 264, 115738.	4.4	13
36	Investigation on the AC breakdown voltage of RBDPO Olein. , 2014, , .		11

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37	Modelling of lightning current in the case of striking to a tall structure. , 2014, , .		11
38	Considering the effects of a RTV coating to improve electrical insulation against lightning. , 2016, , .		11
39	Ageing effect of vegetable oils impregnated paper in transformer application. , 2017, , .		10
40	Conceptual design of hybrid photovoltaic-thermoelectric generator (PV/TEG) for Automated Greenhouse system. , 2017, , .		10
41	Investigation of the Effect of Winding Clamping Structure on Frequency Response Signature of 11 kV Distribution Transformer. <i>Energies</i> , 2018, 11, 2307.	1.6	10
42	A Novel Hybrid Approach for Maximizing the Extracted Photovoltaic Power under Complex Partial Shading Conditions. <i>Sustainability</i> , 2020, 12, 5786.	1.6	10
43	Dissolved gas analysis (DGA) of vegetable oils under electrical stress. , 2017, , .		9
44	Application of Markov Model to Estimate Individual Condition Parameters for Transformers. <i>Energies</i> , 2018, 11, 2114.	1.6	9
45	Experimental Study on the Partial Discharge Characteristics of Palm Oil and Coconut Oil Based Al <sub>2</sub> O <sub>3</sub> Nanofluids in the Presence of Sodium Dodecyl Sulfate. <i>Nanomaterials</i> , 2021, 11, 786.	1.9	9
46	Application of Statistical Distribution Models to Predict Health Index for Condition-Based Management of Transformers. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 2728.	1.3	9
47	Modeling frequency response of transformer winding to investigate the influence of RLC. <i>Indonesian Journal of Electrical Engineering and Computer Science</i> , 2019, 14, 219.	0.7	9
48	Effect of temperature on a poly-crystalline solar panel in large scale solar plants in Malaysia. , 2015, , .		8
49	Design and Development of Three Levels Universal Electric Vehicle Charger Based on Integration of VOC and SPWM Techniques. <i>Journal of Computational and Theoretical Nanoscience</i> , 2017, 14, 4674-4685.	0.4	8
50	Efficient Charging Pad for Unmanned Aerial Vehicle Based on Direct Contact. , 2018, , .		8
51	Effect of Pre-Determined Maintenance Repair Rates on the Health Index State Distribution and Performance Condition Curve Based on the Markov Prediction Model for Sustainable Transformers Asset Management Strategies. <i>Sustainability</i> , 2018, 10, 3399.	1.6	8
52	Effects of RTV coating on the electrical performance of polymer insulator under lightning impulse voltage condition. <i>PLoS ONE</i> , 2017, 12, e0187892.	1.1	8
53	Palm-Based Neopentyl Glycol Diester: A Potential Green Insulating Oil. <i>Protein and Peptide Letters</i> , 2018, 25, 171-179.	0.4	8
54	Examination on the lightning breakdown strength of biodegradable oil under quasi-uniform field. , 2014, , .		7

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55	Influence of Electrode Geometry on the Lightning Impulse Breakdown Voltage of Palm Oil. , 2018, , .		7
56	Effect of RTV Coating Material on Electric Field Distribution and Voltage Profiles on Polymer Insulator under Lightning Impulse. , 2018, , .		7
57	A Maintenance Cost Study of Transformers Based on Markov Model Utilizing Frequency of Transition Approach. Energies, 2018, 11, 2006.	1.6	7
58	Extraction of winding parameters for 33/11 kV, 30 MVA transformer based on finite element method for frequency response modelling. PLoS ONE, 2020, 15, e0236409.	1.1	7
59	Effect of surfactants on the lightning breakdown voltage of palm oil and coconut oil based Al <sub>2</sub> O <sub>3</sub> nanofluids. Nanotechnology, 2020, 31, 425708.	1.3	7
60	Phase to phase fault detection of 3-phase induction motor using FRA technique. International Journal of Power Electronics and Drive Systems, 2020, 11, 1241.	0.5	7
61	Dissolved gas analysis of transformers based on rough set and fuzzy logic methods. , 2015, , .		6
62	Effect of Particles on the AC Breakdown Voltage of Palm Oil and Coconut Oil. Applied Mechanics and Materials, 0, 793, 70-74.	0.2	6
63	Analysis on magnetic flux density and core loss for hexagonal and butt-lap core joint transformers. , 2016, , .		6
64	A new approach of core structure model for 3-phase distribution transformer. International Transactions on Electrical Energy Systems, 2018, 28, e2572.	1.2	6
65	Photovoltaic Panel Temperature and Heat Distribution Analysis for Thermoelectric Generator Application. , 2018, , .		6
66	On the Effect of Surge Protection Devices (SPDs) Placement for Grid-connected Solar PV Farm. , 2018, , .		6
67	Physiochemical and Electrical Properties of Refined, Bleached and Deodorized Palm Oil under High Temperature Ageing for Application in Transformers. Energies, 2018, 11, 1583.	1.6	6
68	Experience and long term performance of 132kV overhead lines gapless-type surge arrester. , 2014, , .		5
69	A study on the AC breakdown voltages of as-received palm oil and coconut oil under presence of TiO <sub>2</sub> . , 2015, , .		5
70	A Study on the Lightning Impulse Breakdown Voltages of Palm Oil and Coconut Oil by Different Methods. Applied Mechanics and Materials, 0, 793, 9-13.	0.2	5
71	Investigation on AC breakdown of vegetable oils with insulated electrodes. , 2017, , .		5
72	Estimation of Transformers Health Index Based On Condition Parameter Factor and Hidden Markov Model. , 2018, , .		5

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73	Lightning study and experience on the first 500kV transmission line arrester in Malaysia. , 2014, , .		4
74	Steady state performance of improvised ufer grounding practice. , 2014, , .		4
75	Considering the effects of a cross-arm on a contaminated polymer insulator at different angles. , 2015, , .		4
76	Effect of the grounding system on the lightning current profile along a tall structure. IET Science, Measurement and Technology, 2015, 9, 717-727.	0.9	4
77	Characteristics of fulgurite-like structures under HV conditions: Effects on electrical earthing systems. , 2016, , .		4
78	Quadcopter sensing system for risky area. , 2017, , .		4
79	Effects of different types of surfactants on AC breakdown voltage of refined, bleached and deodorized palm oil based CuO nanofluids. , 2018, , .		4
80	Lightning Surge on the DC and AC Side of Solar PV System. , 2019, , .		4
81	Investigation on the Resonant Oscillations in an 11 kV Distribution Transformer under Standard and Chopped Lightning Impulse Overvoltages with Different Shield Placement Configurations. Energies, 2019, 12, 1466.	1.6	4
82	FRA Indicator Limit for Faulty Winding Assessment in Rotating Machine. , 2021, , .		4
83	Adaptive ANN based differential protective relay for reliable power transformer protection operation during energisation. IAES International Journal of Artificial Intelligence, 2019, 8, 307.	0.6	4
84	Frequency response analysis technique for induction motor short circuit faults detection. International Journal of Power Electronics and Drive Systems, 2020, 11, 1653.	0.5	4
85	Examining acceptable Dissolved Gas Analysis level of in-service transformers. , 2012, , .		3
86	Investigation on the lightning breakdown voltage of Palm Oil and Coconut Oil under non-uniform field. , 2014, , .		3
87	New technique for decreasing of total harmonic distortion of three-phases bridge rectifier by using the method of harmonic injection. , 2016, , .		3
88	On the performance of a polycrystalline PV panel under different impulse voltages and temperatures. , 2016, , .		3
89	High Efficiency Portable Solar Generator utilizing Optimum Solar Panel Orientation. , 2018, , .		3
90	Temperature distribution analysis of monocrystalline photovoltaic panel for Photovoltaic-Thermoelectric generator (PV-TEG) hybrid application. Indonesian Journal of Electrical Engineering and Computer Science, 2020, 17, 858.	0.7	3

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91	Composite Trapezoidal Rule-based maximum power point tracking algorithm for photovoltaic systems under complex shading conditions. , 2020, , .		3
92	Effect of soil resistivity on the lightning current along tall towers. , 2014, , .		2
93	Effect of the grounding system arrangement on the lightning current along tall structures. , 2014, , .		2
94	A Study on the Dielectric Properties of RBDPO Olein under Low Temperature Thermal Ageing. Applied Mechanics and Materials, 0, 793, 14-18.	0.2	2
95	Investigation on self energized automated multi levels car parking system. , 2015, , .		2
96	New Optimization Technique to Design the Core of Three-Phase Transformer. , 2019, , .		2
97	Investigation on the Effect of Moisture on AC Breakdown Voltage of Refined, Bleached, and Deodorized Palm Oil. , 2019, , .		2
98	Investigation of Kenaf Paper in the Presence of PVA for Transformers Application. Materials, 2020, 13, 5002.	1.3	2
99	Pre-Breakdown Streamer Propagation and Positive Lightning Breakdown Characteristics of Palm Oil Impregnated Aged Pressboard. IEEE Access, 2020, 8, 58836-58844.	2.6	2
100	Statistical Analysis of AC Dielectric Strength for Palm Oil under the Influence of Moisture. Pertanika Journal of Science and Technology, 2021, 29, .	0.3	2
101	Investigation on the Relationship between Failure Rates and Health Index of Distribution Transformer Population. , 2021, , .		2
102	Investigation on Partial Discharge Localization in Oil Based on Time of Arrival Method. , 2021, , .		2
103	Design and Experimental Results of Universal Electric Vehicle Charger Using DSP. Telkomnika (Telecommunication Computing Electronics and Control), 2018, 16, 1435.	0.6	2
104	PV system sizing to cover the Electricity shortage in a Residential quarter in Iraq. , 2020, , .		2
105	Continuous monitoring on 132kV line in reducing flashovers due to lightning. , 2014, , .		1
106	Pattern investigation for landfill of methane gas concentration measurement. , 2016, , .		1
107	Variations in return stroke velocity and its effect on the return stroke current along lightning channel. , 2016, , .		1
108	Investigation on the Effect of Beating on the Physical and Mechanical Properties of Untreated Kenaf Based Insulation Paper. , 2018, , .		1

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109	Dissolved Gas Analysis (DGA) of natural ester oils under arcing faults. Journal of Fundamental and Applied Sciences, 2018, 9, 105.	0.2	1
110	Comparative Analysis of ACSR and ACCC Conductors on Corona Effect for Lightning Surge Studies. , 2019, , .		1
111	Structural Design of Cartesian Vacuum System for Loose Fruit Collector (LFC) Machine. , 2019, , .		1
112	Microcontroller Based DC Energy Logger for Off-Grid PV System Application. , 2019, , .		1
113	Charging Platform of Chess-Pad Configuration for Unmanned Aerial Vehicle (UAV). Applied Sciences (Switzerland), 2020, 10, 8365.	1.3	1
114	Prediction of a Transformer's Loading and Ambient Temperature based on SARIMA Approach for Hot-Spot Temperature and Loss-Of-Life Analyses. , 2021, , .		1
115	Investigation of the impact of a standard lightning impulse on the structure of an 11/0.415 kV distribution transformer. Electric Power Systems Research, 2022, 202, 107588.	2.1	1
116	Examination on the physical properties of untreated kenaf insulation paper at different beating degrees. Indonesian Journal of Electrical Engineering and Computer Science, 2020, 17, 759.	0.7	1
117	The Behaviour of Three Phase Three-Leg 11kV Transformer Core Type Design Under Sinusoidal and Non-Sinusoidal Operating Conditions for Different Core Materials. International Journal of Simulation: Systems, Science and Technology, 0, , .	0.0	1
118	Improvement in energy conversion for unmanned aerial vehicle charging pad. Indonesian Journal of Electrical Engineering and Computer Science, 2020, 17, 767.	0.7	1
119	Optimal Placement of PMU for Complete Observability of Power System Considering Zero Injection and Islanding Condition. , 2020, , .		1
120	Numerical Modelling for Natural Oil Convection of Non-Guided Winding Cooling Arrangement. CFD Letters, 2020, 12, 54-67.	0.4	1
121	Failure Rate Estimation for Transformer Population based on Health Index through Markov Model Approach. Pertanika Journal of Science and Technology, 2021, 29, , .	0.3	1
122	Partial Discharge Localization in Oil through Acoustic Emission Technique Utilizing Fuzzy Logic. IEEE Transactions on Dielectrics and Electrical Insulation, 2022, , 1-1.	1.8	1
123	Consideration of Lightning Current along a Tall Structure in the Presence of Horizontal Arrangement Grounding. Applied Mechanics and Materials, 2015, 793, 34-38.	0.2	0
124	Assessment on the AC breakdown voltages of liquid insulation system. , 2015, , .		0
125	Effect of soil resistivity on magnetic field in the case of lightning strike to a tall structure. , 2016, , .		0
126	Investigation on the Transient Voltage in a 11 kV Transformer Under Lightning Surges. , 2018, , .		0



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127	Prototype analyses of automated dropper system for electric power generation. , 2018, , .		0
128	Loose Fruit Recognition System With Implementation Of SURF Feature Extraction Method. , 2019, , .		0
129	Bioelectricity Harvesting at Aquaponics System: Current and Future Challenges. , 2021, , .		0
130	Development of integrated loose fruit collector machine for oil palm plantations. Bulletin of Electrical Engineering and Informatics, 2020, 9, .	0.6	0
131	Hybrid Systems for Robotic Navigations. Journal of Advanced Research in Dynamical and Control Systems, 2019, 11, 167-173.	0.3	0
132	Effect of shield placement for transient voltage mitigation due to switching surges in a 33/11 kV transformer windings. PLoS ONE, 2020, 15, e0240368.	1.1	0
133	The Influence of the Partial Discharge Physical Processes Parameter on Partial Discharge Magnitude of Spherical Cavity. , 2022, , .		0
134	Axial and Radial Force Distributions Computation in Disc-Type Winding Under Switching Surge. , 2022, , .		0
135	Classification of Fault and Stray Gassing in Transformer by Using Duval Pentagon and Machine Learning Algorithms. Arabian Journal for Science and Engineering, 2022, 47, 14355-14364.	1.7	0
136	Development of Stand-Alone DC Energy Datalogger for Off- Grid PV System Application Based on Microcontroller. Pertanika Journal of Science and Technology, 2022, 30, 185-199.	0.3	0