

Biswendu Chatterjee

List of Publications by Year in descending order

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98
papers

1,267
citations

361413

20
h-index

434195

31
g-index

98
all docs

98
docs citations

98
times ranked

799
citing authors

#	ARTICLE	IF	CITATIONS
1	A methodology for identification and localization of partial discharge sources using optical sensors. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 18-28.	2.9	70
2	A method for the localization of partial discharge sources using partial discharge pulse information from acoustic emissions. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 237-245.	2.9	67
3	Cross-wavelet transform as a new paradigm for feature extraction from noisy partial discharge pulses. IEEE Transactions on Dielectrics and Electrical Insulation, 2010, 17, 157-166.	2.9	65
4	Rough-Set-Based Feature Selection and Classification for Power Quality Sensing Device Employing Correlation Techniques. IEEE Sensors Journal, 2013, 13, 563-573.	4.7	51
5	An expert system approach for transformer insulation diagnosis combining conventional diagnostic tests and PDC, RVM data. IEEE Transactions on Dielectrics and Electrical Insulation, 2014, 21, 882-891.	2.9	46
6	Identification of single and multiple partial discharge sources by optical method using mathematical morphology aided sparse representation classifier. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 3703-3712.	2.9	43
7	Diagnosis of Power Quality Events Based on Detrended Fluctuation Analysis. IEEE Transactions on Industrial Electronics, 2018, 65, 7322-7331.	7.9	42
8	Rough-granular approach for impulse fault classification of transformers using cross-wavelet transform. IEEE Transactions on Dielectrics and Electrical Insulation, 2008, 15, 1297-1304.	2.9	41
9	Estimation of paper moisture content based on dielectric dissipation factor of oil-paper insulation under non-sinusoidal excitations. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 822-830.	2.9	37
10	An approach based on rough set theory for identification of single and multiple partial discharge source. International Journal of Electrical Power and Energy Systems, 2013, 46, 163-174.	5.5	34
11	Effect of temperature on frequency dependent dielectric parameters of oil-paper insulation under non-sinusoidal excitation. IEEE Transactions on Dielectrics and Electrical Insulation, 2014, 21, 653-661.	2.9	33
12	A Novel Leakage Current Index for the Field Monitoring of Overhead Insulators Under Harmonic Voltage. IEEE Transactions on Industrial Electronics, 2018, 65, 1568-1576.	7.9	33
13	Cross-Spectrum Analysis-Based Scheme for Multiple Power Quality Disturbance Sensing Device. IEEE Sensors Journal, 2015, 15, 3989-3997.	4.7	31
14	Autocorrelation aided rough set based contamination level prediction of high voltage insulator at different environmental condition. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 2883-2891.	2.9	30
15	Short Time Modified Hilbert Transform-Aided Sparse Representation for Sensing of Overhead Line Insulator Contamination. IEEE Sensors Journal, 2018, 18, 8125-8132.	4.7	30
16	Application of Cole-Cole model to transformer oil-paper insulation considering distributed dielectric relaxation. High Voltage, 2019, 4, 72-79.	4.7	30
17	Method for identifying ageing in epoxy-mica composite insulation used in rotational machines through modelling of dielectric relaxation. High Voltage, 2020, 5, 184-190.	4.7	24
18	Cross-spectrum analysis based methodology for discrimination and localization of partial discharge sources using acoustic sensors. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 3556-3565.	2.9	21

#	ARTICLE	IF	CITATIONS
19	Studies on the effects of moisture and ageing on charge de-trapping properties of oil-impregnated pressboard based on IRC measurement. High Voltage, 2019, 4, 151-157.	4.7	20
20	Estimation of Contamination Level of Overhead Insulators Based on Surface Leakage Current Employing Detrended Fluctuation Analysis. IEEE Transactions on Industrial Electronics, 2020, 67, 5729-5736.	7.9	20
21	Determination of optimized slope of triangular excitation for condition assessment of oil-paper insulation by frequency domain spectroscopy. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 1303-1312.	2.9	19
22	Studies of the effect of temperature on the charge trapping and de-trapping processes of polymeric insulators through depolarization current measurements. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 1896-1904.	2.9	18
23	Use of chirp excitations for frequency domain spectroscopy measurement of oil-paper insulation. IEEE Transactions on Dielectrics and Electrical Insulation, 2018, 25, 1103-1111.	2.9	18
24	Sensing surface contamination of Metal Oxide Surge Arrester through resistive leakage current signal analysis by Mathematical Morphology. IEEE Sensors Journal, 2020, , 1-1.	4.7	18
25	Hyperbolic Window S-Transform Aided Deep Neural Network Model-Based Power Quality Monitoring Framework in Electrical Power System. IEEE Sensors Journal, 2021, 21, 13695-13703.	4.7	18
26	A Transfer Learning Approach to Sense the Degree of Surface Pollution for Metal Oxide Surge Arrester Employing Infrared Thermal Imaging. IEEE Sensors Journal, 2021, 21, 16961-16968.	4.7	18
27	A Hybrid Filtering Scheme for Proper Denoising of Real-time Data in Dielectric Spectroscopy. IEEE Transactions on Dielectrics and Electrical Insulation, 2007, 14, 1323-1331.	2.9	16
28	Reducing frequency domain spectroscopy measurement time for condition monitoring of transformer oil-paper insulation using non-sinusoidal excitations. IET Science, Measurement and Technology, 2017, 11, 204-212.	1.6	16
29	S-Transform Aided Random Forest Based PD Location Detection Employing Signature of Optical Sensor. IEEE Transactions on Power Delivery, 2019, 34, 1261-1268.	4.3	16
30	Estimation of Conductivity at Reduced Time for Sensing Moisture Content of Oil-Paper Insulation. IEEE Sensors Journal, 2020, 20, 12999-13006.	4.7	16
31	A new approach for determination of moisture in paper insulation of in-situ power transformers by combining polarization-depolarization current and return voltage measurement results. IEEE Transactions on Dielectrics and Electrical Insulation, 2013, 20, 2325-2334.	2.9	15
32	Non-linear modeling of oil-paper insulation for condition assessment using non-sinusoidal excitation. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 2165-2175.	2.9	13
33	Sensing the Polarization and Depolarization Current of Solid Dielectrics Used in High-Voltage Applications. , 2019, 3, 1-4.		13
34	Condition assessment of outdoor porcelain insulator based on dielectric dissipation factor evaluated from non-linear equivalent circuit. IET Science, Measurement and Technology, 2016, 10, 866-873.	1.6	12
35	Study on charge de-trapping and dipolar relaxation properties of epoxy resin from discharging current measurements. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 3811-3820.	2.9	12
36	Condition monitoring of 11kV porcelain pin insulator extracting surface current from total leakage current. , 2017, , .		12

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37	Condition Monitoring of Overhead Polymeric Insulators Employing Hyperbolic Window Stockwell Transform of Surface Leakage Current Signals. IEEE Sensors Journal, 2021, 21, 10957-10964.	4.7	12
38	A method for unambiguous identification of on-field recorded insulator leakage current waveforms portraying electrical activity on the surface. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 2156-2164.	2.9	11
39	Effect of humidity on leakage current of a contaminated 11 kV Porcelain Pin Insulator. , 2017, , .		11
40	A Non-Linear Model for Sensing Moisture Content in Transformers at Reduced Time. IEEE Sensors Journal, 2019, 19, 4639-4646.	4.7	11
41	Sensing the Thermal Aging of Epoxy Alumina Nano-Composites Using Electric Modulus. IEEE Sensors Journal, 2021, 21, 12236-12244.	4.7	11
42	Condition monitoring of overhead line insulator by measuring surface leakage current. , 2014, , .		10
43	Estimation of dielectric dissipation factor of cellulosic parts in oil-paper insulation by frequency domain spectroscopy. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 2720-2729.	2.9	10
44	Investigations on charge trapping and de-trapping properties of polymeric insulators through discharge current measurements. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 583-591.	2.9	10
45	Time growing frequency sweep signal based insulation condition monitoring in frequency domain spectroscopy. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 1898-1906.	2.9	9
46	Study on the effect of moisture ingress into metal oxide surge arrester using leakage current analysis. , 2017, , .		9
47	Implementation of an Integrated, Portable Transformer Condition Monitoring Instrument in the Classroom and On-Site. IEEE Transactions on Education, 2010, 53, 484-489.	2.4	8
48	Cross Spectrum Aided Surface Condition Assessment of Metal Oxide Surge Arrester Employing Convolutional Neural Network. IEEE Transactions on Dielectrics and Electrical Insulation, 2021, 28, 2134-2143.	2.9	8
49	A Novel Approach to Estimate the Quantity of Ingressed Moisture Content Inside Metal Oxide Surge Arrester Using Dielectric Modulus Technique. IEEE Transactions on Dielectrics and Electrical Insulation, 2021, 28, 2178-2185.	2.9	8
50	Low-complexity leakage current acquisition system for transmission line insulators employing GSM voice channel. Electronics Letters, 2015, 51, 1538-1540.	1.0	7
51	Accelerating Moisture Content Sensing of Oil-Impregnated Paper Insulation Using Frequency Modulated Square Wave Excitations. , 2019, 3, 1-4.		7
52	Deep learning-based surface contamination severity prediction of metal oxide surge arrester in power system. IET Science, Measurement and Technology, 2021, 15, 376-384.	1.6	7
53	A method to accelerate FDS measurement using logarithmic chirp excitation voltage. , 2017, , .		6
54	Smartphone camera-based analysis of ELISA using artificial neural network. IET Computer Vision, 2018, 12, 826-833.	2.0	6

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55	A Modular Approach for Teaching Partial Discharge Phenomenon Through Experiment. IEEE Transactions on Education, 2011, 54, 410-415.	2.4	5
56	Identification of salt and salinity level of 11kV contaminated porcelain disc insulator using STD-MRA analysis of leakage current. , 2015, , .		5
57	Suitability of Alternate Fluids as Transformer Insulation - A Comprehensive Review. , 2020, , .		5
58	Investigations on the effect of ageing on charge de-trapping processes of epoxy-alumina nanocomposites based on isothermal relaxation current measurements. IET Nanodielectrics, 2020, 3, 116-123.	4.1	5
59	Cross Hilbert-Huang transform based feature extraction method for multiple PQ disturbance classification. , 2013, , .		4
60	An advanced technique for frequency domain spectroscopy of oil-paper insulation at reduced time using triangular excitation. , 2015, , .		4
61	Studies on the effects of temperature on XLPE cable insulation through Polarization and Depolarization Current (PDC). , 2019, , .		4
62	Mathematical Morphology aided Random Forest Classifier based High Voltage Porcelain Insulator Contamination level Classification. , 2020, , .		4
63	Real Life Experiences in the Construction of a Large Laboratory having High Quality Electromagnetic Shielding. , 2006, , .		3
64	An attempt to identify voltage related non-linearities of transformer insulation from dielectric response measurements. , 2011, , .		3
65	Remote condition monitoring of high voltage insulators employing GSM network. , 2013, , .		3
66	Localisation of single and multiple partial discharge sources based on sequence of arrival and levels of peak amplitude of acoustic emissions. , 2016, , .		3
67	A new method for the estimation of time difference of arrival for localization of partial discharge sources using acoustic detection technique. , 2016, , .		3
68	Cross Stockwell transform aided Random Forest based surface condition identification of Metal Oxide Surge Arrester employing Leakage current signal. , 2020, , .		3
69	Estimation of Moisture Content in XLPE Cable Insulation Using Electric Modulus. IEEE Transactions on Dielectrics and Electrical Insulation, 2022, 29, 1030-1037.	2.9	3
70	Experimental investigation on the EM signal attenuation characteristics of a single-layer metal shielded laboratory. , 2006, , .		2
71	Frequency domain dielectric spectroscopy using Triangular waveform. , 2012, , .		2
72	Design of micro-power semi-implantable hearing-aid with hydraulic amplification methodology and simultaneous resonance bandwidth control technique. , 2014, , .		2

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73	A low-complexity parametric modeling technique for insulator leakage current based on synchronous detection. , 2015, , .		2
74	Investigations on the effect of voltage harmonics on leakage current for condition monitoring in insulators. , 2016, , .		2
75	Investigation of charge trapping behavior of LDPE using de-trapping characteristics. , 2016, , .		2
76	Studies on the effects of Al ₂ O ₃ and TiO ₂ Nano materials on Conduction Properties of Mineral oil and Natural Ester based fluid. , 2018, , .		2
77	Ageing of DC conduction in thermally aged oilâ€impregnated pressboard. IET Science, Measurement and Technology, 2021, 15, 232-240.	1.6	2
78	Neural networkâ€based methodology to study effects of oil properties on induction period evaluated from response of oilâ€paper insulation employing mineral oil, ester, and mixture. IET Science, Measurement and Technology, 2019, 13, 606-613.	1.6	2
79	Fusion of Deep Features With Superpixel Based Local Handcrafted Features for Surface Condition Assessment of Metal Oxide Surge Arrester Using Infrared Thermal Images. , 2021, 5, 1-4.		2
80	Wavelet Network for Estimation of Non-Linear Functions in High Voltage Systems. , 2008, , .		1
81	Comparative study on the effect of temperature on frequency domain spectroscopy results under sinusoidal and triangular excitation. , 2012, , .		1
82	A novel methodology for on-site validation of RV measurement data. , 2012, , .		1
83	Remote monitoring of power frequency electrical signals employing GSM network. , 2014, , .		1
84	Microcontroller based remote updating system using voice channel of cellular network. , 2015, , .		1
85	Modeling of a piezoelectric transducer for application in space charge detection using pressure wave propagation method. , 2015, , .		1
86	Application of statistical interpretation technique for frequency response analysis and detection of axial displacement in transformer winding. , 2017, , .		1
87	Polarization and depolarization current analysis of thermally aged oil impregnated kraft paper. , 2017, , .		1
88	Identification of charge injection and conduction properties of epoxy resin from polarization current measurements. , 2017, , .		1
89	Conductivity Estimation for Reliable Assessment of Power Transformer Insulation at Reduced Time. , 2018, , .		1
90	Multisynchrosqueezing Transform Based Improved Time-Frequency Representation for Automated Contamination Severity Estimation of Overhead Line Insulator. IEEE Sensors Journal, 2022, 22, 12098-12106.	4.7	1

#	ARTICLE	IF	CITATIONS
91	Cross-wavelet transform based feature extraction for classification of noisy partial discharge signals. , 2008, , .		0
92	Development of an integrated detector unit for partial discharge data acquisition and analysis. , 2008, , .		0
93	Classification of Impulse Fault Patterns in Transformers Using Wavelet Network. , 2008, , .		0
94	Temperature and Frequency dependence of dielectric parameters of Oil-paper insulation under sinusoidal and square wave excitations. , 2013, , .		0
95	Simulation of pressure wave propagation method for space charge measurement in dielectrics. , 2015, , .		0
96	Space charge measurement in dielectrics using Pressure Wave Propagation method. , 2015, , .		0
97	An Experimental Study to Investigate the Condition of Metal Oxide Surge Arrester under Polluted Environment. , 2020, , .		0
98	Convolutional neural network and Bi-directional long short memory hybrid deep network aided infrared image classification framework for non-contact monitoring of overhead insulators. IET Signal Processing, 2022, 16, 722-732.	1.5	0