Peter H F Morshuis

List of Publications by Year
in descending order

159 papers	4,040 citations	147566 31 h-index	143772 57 g-index
162 all docs	162 docs citations	162 times ranked	1782 citing authors

#	Article	IF	Citations
1	Partial discharges at dc voltage: their mechanism, detection and analysis. IEEE Transactions on Dielectrics and Electrical Insulation, 2005, 12, 328-340.	1.8	262
2	Degradation of solid dielectrics due to internal partial discharge: some thoughts on progress made and where to go now. IEEE Transactions on Dielectrics and Electrical Insulation, 2005, 12, 905-913.	1.8	226
3	Polymeric HVDC Cable Design and Space Charge Accumulation. Part 1: Insulation/Semicon Interface. IEEE Electrical Insulation Magazine, 2007, 23, 11-19.	1.1	190
4	HVDC Cable Design and Space Charge Accumulation. Part 3: Effect of Temperature Gradient [Feature article]. IEEE Electrical Insulation Magazine, 2008, 24, 5-14.	1.1	160
5	Feature article - Polymeric HVDC cable design and space charge accumulation. Part 2: insulation interfaces. IEEE Electrical Insulation Magazine, 2008, 24, 14-24.	1.1	148
6	Properties of Mineral Oil based Silica Nanofluids. IEEE Transactions on Dielectrics and Electrical Insulation, 2014, 21, 1100-1108.	1.8	142
7	Dielectric properties of XLPE/Sio2 nanocomposites based on CIGRE WG D1.24 cooperative test results. IEEE Transactions on Dielectrics and Electrical Insulation, 2011, 18, 1482-1517.	1.8	135
8	Electric fields in HVDC paper-insulated cables. IEEE Transactions on Dielectrics and Electrical Insulation, 1998, 5, 225-236.	1.8	112
9	Space charge measurements on impregnated paper: a review of the PEA method and a discussion of results. IEEE Electrical Insulation Magazine, 1997, 13, 26-35.	1.1	106
10	Space charge phenomenology in polymeric insulating materials. IEEE Transactions on Dielectrics and Electrical Insulation, 2005, 12, 754-767.	1.8	98
11	Demonstrating a threshold for trapped space charge accumulation in solid dielectrics under dc field. IEEE Transactions on Dielectrics and Electrical Insulation, 2005, 12, 612-620.	1.8	90
12	Anomalous behaviour of the dielectric spectroscopy response of nanocomposites. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 107-117.	1.8	90
13	Assessment of dielectric degradation by ultrawide-band PD detection. IEEE Transactions on Dielectrics and Electrical Insulation, 1995, 2, 744-760.	1.8	86
14	Characterization of epoxy microcomposite and nanocomposite materials for power engineering applications. IEEE Electrical Insulation Magazine, 2012, 28, 38-51.	1.1	86
15	Modelling of the thermal conductivity in polymer nanocomposites and the impact of the interface between filler and matrix. Journal Physics D: Applied Physics, 2011, 44, 395401.	1.3	83
16	A protocol for space charge measurements in full-size HVDC extruded cables. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 21-34.	1.8	79
17	Transition from streamer to Townsend mechanisms in dielectric voids. Journal Physics D: Applied Physics, 1990, 23, 1562-1568.	1.3	77
18	Space charge measurements on multi-dielectrics by means of the pulsed electroacoustic method. IEEE Transactions on Dielectrics and Electrical Insulation, 2006, 13, 272-281.	1.8	75

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19	PD Recurrence in Cavities at Different Energizing Methods. IEEE Transactions on Instrumentation and Measurement, 2004, 53, 251-258.	2.4	68
20	An Approach to Insulation Condition Monitoring and Life Assessment in Emerging Electrical Environments. IEEE Transactions on Power Delivery, 2019, 34, 1357-1364.	2.9	67
21	Partial discharge analysis of gas insulated systems at high voltage AC and DC. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 218-228.	1.8	61
22	Partial discharge. Part XXIV: The analysis of PD in HVDC equipment. IEEE Electrical Insulation Magazine, 1997, 13, 6-16.	1.1	53
23	Modeling the thermal conductivity of polymeric composites based on experimental observations. IEEE Transactions on Dielectrics and Electrical Insulation, 2014, 21, 412-423.	1.8	52
24	Thermal conductivity of polymeric composites: A review. , 2013, , .		49
25	Enhancing the thermal and electrical performance of epoxy microcomposites with the addition of nanofillers. IEEE Electrical Insulation Magazine, 2015, 31, 32-42.	1.1	49
26	Application of statistical methods for making maintenance decisions within power utilities. IEEE Electrical Insulation Magazine, 2006, 22, 24-35.	1.1	43
27	Stress conditions in HVDC equipment and routes to in service failure. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 81-91.	1.8	43
28	The electrical breakdown strength of pre-stretched elastomers, with and without sample volume conservation. Smart Materials and Structures, 2015, 24, 055009.	1.8	43
29	Next generation polymeric high voltage direct current cablesâ€"A quantum leap needed?. IEEE Electrical Insulation Magazine, 2018, 34, 24-31.	1.1	43
30	Partial discharge behavior of mineral oil based nanofluids. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 2747-2753.	1.8	42
31	Automized Recognition of Partial Discharges in Cavities. Japanese Journal of Applied Physics, 1990, 29, 1329-1335.	0.8	37
32	Partial discharge mechanisms in voids related to dielectric degradation. IET Science, Measurement and Technology, 1995, 142, 62-68.	0.7	37
33	AC breakdown voltage and viscosity of mineral oil based SiO<inf>2</inf> nanofluids. , 2012, , .		35
34	Proposal of the polymer chain alignment model. , 2011, , .		34
35	Comparison of charge estimation methods in partial discharge cable measurements. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 657-664.	1.8	33
36	Criteria influencing the selection and design of HV and UHV DC cables in new network applications. High Voltage, 2018, 3, 90-95.	2.7	33

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37	Thermal conductivity of nano-filled epoxy systems. , 2009, , .		31
38	Dielectric properties and space charge behavior of MgO-epoxy nanocomposites. , 2010, , .		31
39	Short term DC breakdown strength in epoxy based BN nano- and microcomposites. , 2010, , .		31
40	Thermal behaviour of epoxy resin filled with high thermal conductivity nanopowders. , 2009, , .		30
41	Epoxy-hBN nanocomposites: A study on space charge behavior and effects upon material. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 1718-1725.	1.8	29
42	Ageing and reliability of electrical insulation: the risk of hybrid AC/DC grids. High Voltage, 2020, 5, 620-627.	2.7	29
43	Dielectric Interfaces in DC Constructions: Space Charge and Polarization Phenomena. , 2007, , .		28
44	Localization techniques of partial discharges at cable ends in off-line single-sided partial discharge cable measurements. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 428-434.	1.8	26
45	Why residual life estimation and maintenance strategies for electrical insulation systems have to rely upon condition monitoring. IEEE Transactions on Dielectrics and Electrical Insulation, 2016, 23, 1375-1385.	1.8	25
46	The role of particle distribution in the dielectric response of epoxyâ€“boron nitride nanocomposites. Journal of Materials Science, 2015, 50, 1175-1186.	1.7	23
47	A unified model for the permittivity and thermal conductivity of epoxy based composites. Journal Physics D: Applied Physics, 2014, 47, 415502.	1.3	22
48	The effect of different types of inclusions on PE cable life. IEEE Transactions on Electrical Insulation, 1988, 23, 1051-1055.	0.8	20
49	Space charge behavior of magnesium oxide filled epoxy nanocomposites at different temperatures and electric field strengths. , 2011, , .		20
50	The electrical breakdown of thin dielectric elastomers: thermal effects. Proceedings of SPIE, 2014, , .	0.8	20
51	Nanodielectrics: A panacea for solving all electrical insulation problems?. , 2010, , .		18
52	Preparation and dielectric properties of epoxy - BN and epoxy - AlN nanocomposites. , 2009, , .		17
53	Synthesis and dielectric properties of epoxy based nanocomposites. , 2009, , .		17
54	The effect of surface treatment of silica nanoparticles on the breakdown strength of mineral oil. , 2014, , .		17

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55	Space Charge Measurement Equipment for Full-Scale HVDC Cables Using Electrically Insulating Polymeric Acoustic Coupler. IEEE Transactions on Dielectrics and Electrical Insulation, 2022, 29, 1053-1061.	1.8	17
56	Electrical conductivity, dielectric response and space charge dynamics of an electroactive polymer with and without nanofiller reinforcement. Smart Materials and Structures, 2015, 24, 075019.	1.8	16
57	Calculation and Measurement of Space Charge in MV-size Extruded Cables Systems under Load Conditions. , 2007, , .		15
58	Space Charge Behavior in Epoxyâ€Based Dielectrics: Progress and Perspective. Advanced Electronic Materials, 2022, 8, .	2.6	15
59	Partial discharges in 3-core belted power cables. IEEE Transactions on Electrical Insulation, 1989, 24, 591-598.	0.8	14
60	Space charge and electric field characteristics of polymeric-type MV-size DC cable joint models. , 0, , .		14
61	The Effect of Temperature Gradient on Space Charge and Electric Field Distribution of HVDC Cable Models. , 2006, , .		14
62	HVDC insulation and diagnostics. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 4-6.	1.8	14
63	Partial discharge detection using oscillating voltage at different frequencies. , 0, , .		13
64	Effect of filler size on complex permittivity and thermal conductivity of epoxy-based composites filled with BN particles. , 2010, , .		13
65	The role of supply frequency in the evaluation of partial discharge inception voltage in XLPE-embedded cavities. , 2012, , .		13
66	Optical detection of surface discharges. IEEE Transactions on Electrical Insulation, 1988, 23, 447-449.	0.8	11
67	Thermal and electrical behaviour of epoxy-based microcomposites filled with Al<inf>2</inf>O<inf>3</inf> and SiO<inf>2</inf> particles. , 2010, , .		10
68	Space charge accumulation in polymeric DC mini-cables. , 2013, , .		10
69	Computer simulation of space charge distribution in an XLPE-EPR sandwich. , 0, , .		9
70	Life prediction of a full-scale transformer winding insulation through statistical analysis of AC voltage endurance test data. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 460-471.	1.8	9
71	Interfaces: To be avoided or to be treasured? What do we think we know?. , 2013, , .		9
72	A novel method of wind energy generation-the electrostatic wind energy converter. IEEE Electrical Insulation Magazine, 2014, 30, 8-20.	1.1	9

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73	Evaluation of space charge accumulation processes in small size polymeric cable models. , 2012, , .		8
74	Evaluating the effect of particle distribution and dispersion on the dielectric response of boron nitride - epoxy nanocomposites. , 2014, , .		8
75	Influence of ambient temperature on the failure behavior of cable joints. , 2007, , .		7
76	Statistical analysis of subcomponent failures in power transformers. , 2011, , .		7
77	Defects and interfaces at DC voltage. , 2011, , .		7
78	AC breakdown voltage and viscosity of mineral oil based fullerene nanofluids. , 2013, , .		7
79	How different fillers affect the thermal conductivity of epoxy composites. , 2014, , .		7
80	Measuring and modeling the thermal conductivity of epoxy - Boron nitride nanocomposites. , 2014, , .		7
81	AC breakdown strength of epoxy-boron nitride nanocomposites: Trend & reproducibility. , 2015, , .		7
82	Detection of water trees in medium voltage XLPE cables by return voltage measurements. , 0, , .		6
83	The effect of temperature on space charge accumulated at chemical and physical interfaces of HVDC polymeric insulation systems. , 2007, , .		6
84	Aging of oil-impregnated transformer insulation studied through partial discharge analysis. , 2010, , .		6
85	Impact of postcuring and water absorption on the dielectric response of epoxy-based composites filled with MgO nanoparticles. , 2011, , .		6
86	Three-phase lewis-nielsen model for the thermal conductivity of polymer nanocomposites. , 2011, , .		6
87	Challenges of using electroactive polymers in large scale wave energy converters. , 2012, , .		6
88	Time-to-breakdown and breakdown voltage for oil-impregnated insulation subjected to thermal aging. , 2012, , .		6
89	Life curves for new and thermally aged oil-impregnated paper insulation. , 2013, , .		6
90	DC breakdown strength of epoxy-boron nitride nanocomposites: Trend and reproducibility. , 2015, , .		6

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91	The influence of interfaces and water uptake on the dielectric response of epoxy-cubic boron nitride composites. Journal of Materials Science, 2015, 50, 3929-3941.	1.7	6
92	Mechanisms of surface charge accumulation in SF6. Archiv Fuer Elektrotechnik, 1994, 77, 151-155.	0.1	5
93	Identification of partial discharge defects in transformer oil. , 0, , .		5
94	Optimizing trading capabilities and reliability of power transmission networks. Electrical Insulation, IEEE International Symposium on, 2008, , .	0.0	5
95	Effects of inorganic nanofillers and combinations of them on the complex permittivity of epoxy-based composites. , 2010, , .		5
96	Short term DC breakdown and complex permittivity of Al<inf>2</inf>O<inf>3</inf>- and MgO-epoxy nanocomposites. , 2010, , .		5
97	A study of electrical tree partial discharges in nanocomposite epoxy. , 2012, , .		5
98	Modeling of the permittivity of epoxy nanocomposites. , 2013, , .		5
99	Influence of manufacturing on dielectric performance of nanocomposites. , 2013, , .		5
100	The effect of nanosilica on the DC breakdown strength of epoxy based nanocomposites. , 2014, , .		5
101	Life-data analysis for condition assessment of high-voltage assets. IEEE Electrical Insulation Magazine, 2015, 31, 33-43.	1.1	5
102	Characterization of XLPE MV-size DC Cables by Means of Space Charge Measurements. , 2006, , .		4
103	Converting wind energy to electrical energy using charged droplets in an electric field. , 2007, , .		4
104	Dielectric behavior of syntactic foams at low temperatures and frequencies. , 2007, , .		4
105	Permittivity in Epoxy based Syntactic Foam Nanocomposites. , 2008, , .		4
106	Dielectric response and thermal conductivity of epoxy resin filled with nanoalumina particles of different size in α, γ and δ phase. , 2010, , .		4
107	DC conduction in epoxy based nano- and mesocomposites. , 2010, , .		4
108	Thermal conductivity of fullerene and TiO<inf>2</inf> nanofluids. , 2013, , .		4

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109	Developing an experimental method for a cavity PD based life model. , 2013, , .		4
110	DC breakdown investigation on polyurethane elastomeric films with and without deposited electrodes. , 2013, , .		4
111	A Smart Grid approach to condition based maintenance of renewable energy assets. , 2014, , .		4
112	Partial discharge analysis and monitoring in HVDC gas insulated substations. , 2014, , .		4
113	Precautionary remarks regarding synthesis of nanocomposites. , 2014, , .		4
114	Partial discharge recognition of insulation defects in HVDC GIS and a calibration approach. , 2015, , .		4
115	Effect of water absorption on dielectric spectrum of nanocomposites. , 2016, , .		4
116	The calibration of a capacitive probe for surface charge measurements. Archiv Fuer Elektrotechnik, 1990, 73, 337-341.	0.1	3
117	The Use of Cable System Models for the Assessment of Space Charge Behaviour in Full-size DC Cable Systems. , 2006, , .		3
118	The Investigation of the Permittivity of Syntactic Foam under varying Humidity. , 2008, , .		3
119	Electrical properties calculation of HVDC bushing. , 2010, , .		3
120	Life prediction for epoxy resin insulated transformer windings through accelerated aging tests. , 2010, , .		3
121	Experimental investigation on dielectric spectroscopy of insulating paper and oil. , 2010, , .		3
122	Modelling the thermal conductivity of epoxy nanocomposites with low filler concentrations. , 2013, , .		3
123	The influence of thin dielectric coatings on LI and AC breakdown strength in SF6 and dry air. , 2013, , .		3
124	Inaccuracies in the dielectric permittivity due to thickness variation. , 2014, , .		3
125	Modeling the dielectric response of epoxy based nanocomposites. , 2014, , .		3
126	Analysis of the arcing process in on-load tap changers by measuring the acoustic signature. , 2014, , .		3

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127	Space charge analysis of modified and unmodified XLPE model-cables under different electric fields and temperatures. , 2015, , .		3
128	Breakdown strength and electrical conductivity of epoxy-cubic boron nitride composites. , 2015, , .		3
129	Impact of particle distribution on the electrical conductivity of epoxy nanocomposites. , 2015, , .		3
130	Short-term and long-term breakdown analysis of electroactive polymer with and without nanofillers. Polymer Testing, 2017, 59, 136-141.	2.3	3
131	Technical reports-a new cable phenomenon. IEEE Electrical Insulation Magazine, 1988, 4, 56-58.	1.1	2
132	A new concept for medium-voltage cables: improved voltage life of belt-type cables. IEEE Transactions on Electrical Insulation, 1989, 24, 1063-1070.	0.8	2
133	The scientific career of Frederik Hendrik Kreuger. IEEE Transactions on Dielectrics and Electrical Insulation, 1995, 2, 711-716.	1.8	2
134	Failure analysis of in service failed resin cable joints by means of a statistical approach. , 2006, , .		2
135	Statistical analysis of in service failed epoxy resin bushings in a 50 kV switchgear assembly. , 2006, , .		2
136	Optimising electrode design and positioning for EHDA produced particles in a EWICON. , 2007, , .		2
137	Application of statistical tools for assessing service availability of high voltage power cables. , 2008, , .		2
138	IEEE DEIS and Smart Grid: How to fit in. , 2010, , .		2
139	Dielectric frequency response of epoxy-based composites with various silica filler sizes. , 2010, , .		2
140	Reliability estimation for populations with limited and heavily censored failure information. , 2013, , .		2
141	Evaluation of apparent trap-controlled mobility and trap depth in polymeric HVDC mini-cables. , 2013, , .		2
142	Negative LI breakdown behavior of electrodes with thin dielectric coatings in dry air at high pressure. , 2014, , .		2
143	A new advanced Sensor for corrosive sulphur detection and monitoring. , 2014, , .		2
144	An investigation into the dynamics of partial discharge propagation in mineral oil based nanofluids. , 2014, , .		2

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145	Experimental investigation on the role of corrosive sulphur on the development of partial discharges in power transformers. , 2014, , .		2
146	Effect of electric field strength and exposure time on epoxy and high density polyethylene measured by positron annihilation lifetime. Journal of Radioanalytical and Nuclear Chemistry, 1996, 211, 77-83.	0.7	1
147	Service Availability Assessment of Mass-insulated Power Cables by Means of Statistical Analysis. Electrical Insulation, IEEE International Symposium on, 2008, , .	0.0	1
148	The complex permittivity of epoxy based nanocomposites with alumina and magnesium oxide fillers at very low temperatures. , 2011, , .		1
149	Influence of environmental and operational conditions on breakdown voltage of oil in switchgear. , 2012, , .		1
150	Breakdown characteristics of thermally degradated oil-impregnated insulation. , 2012, , .		1
151	Life prediction for transformer winding insulated with epoxy resin and thickness-reduced paper through voltage endurance tests. , 2012, , .		1
152	Monitoring HV transformer conditions: The strength of combining various diagnostic property observations. , 2015, , .		1
153	Chapter 8 Electrical Properties of Polymer Nanocomposites. , 2016, , 218-242.		1
154	Controlled and efficient electrohydrodynamic spraying of water in an electrostatic wind energy converter (EWICON). , 2008, , .		0
155	Influence of thick epoxy nanocomposite coatings on lightning impulse breakdown behavior in air. , 2014, , .		0
156	Statistical analysis of non-homogeneous life-data of 50 kV tap changers for residual life assessment purposes. , 2014, , .		0
157	Charge estimation methods in partial discharge cable tests. , 2015, , .		0
158	A development of space charge measurement device for model cable. , 2016, , .		0
159	Report on DEIS summer school, june 2015 a breakthrough in nanodielectrics: PhD student revolution?. IEEE Electrical Insulation Magazine, 2016, 32, 50-51.	1.1	0