

Francisco de Leon

List of Publications by Year in descending order

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141
papers

3,998
citations

109321

35
h-index

149698

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145
all docs

145
docs citations

145
times ranked

2731
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental Determination of the ZIP Coefficients for Modern Residential, Commercial, and Industrial Loads. IEEE Transactions on Power Delivery, 2014, 29, 1372-1381.	4.3	287
2	Complete transformer model for electromagnetic transients. IEEE Transactions on Power Delivery, 1994, 9, 231-239.	4.3	221
3	Analysis of Voltage Profile Problems Due to the Penetration of Distributed Generation in Low-Voltage Secondary Distribution Networks. IEEE Transactions on Power Delivery, 2012, 27, 2020-2028.	4.3	157
4	Optimal Distributed Voltage Regulation for Secondary Networks With DGs. IEEE Transactions on Smart Grid, 2012, 3, 959-967.	9.0	130
5	Field-Validated Load Model for the Analysis of CVR in Distribution Secondary Networks: Energy Conservation. IEEE Transactions on Power Delivery, 2013, 28, 2428-2436.	4.3	116
6	Time domain modeling of eddy current effects for transformer transients. IEEE Transactions on Power Delivery, 1993, 8, 271-280.	4.3	113
7	Effects of Backfilling on Cable Ampacity Analyzed With the Finite Element Method. IEEE Transactions on Power Delivery, 2008, 23, 537-543.	4.3	103
8	Reduced order model for transformer transients. IEEE Transactions on Power Delivery, 1992, 7, 361-369.	4.3	79
9	Efficient calculation of elementary parameters of transformers. IEEE Transactions on Power Delivery, 1992, 7, 376-383.	4.3	76
10	Comparing the T and π Equivalent Circuits for the Calculation of Transformer Inrush Currents. IEEE Transactions on Power Delivery, 2012, 27, 2390-2398.	4.3	71
11	Determination of the Optimal Switching Frequency for Distribution System Reconfiguration. IEEE Transactions on Power Delivery, 2017, 32, 2060-2069.	4.3	67
12	Review of Wildfire Management Techniques—Part I: Causes, Prevention, Detection, Suppression, and Data Analytics. IEEE Transactions on Power Delivery, 2020, 35, 430-439.	4.3	67
13	Duality Derived Transformer Models for Low-Frequency Electromagnetic Transients—Part I: Topological Models. IEEE Transactions on Power Delivery, 2016, 31, 2410-2419.	4.3	65
14	A simple representation of dynamic hysteresis losses in power transformers. IEEE Transactions on Power Delivery, 1995, 10, 315-321.	4.3	64
15	Combined Effect of CVR and DG Penetration in the Voltage Profile of Low-Voltage Secondary Distribution Networks. IEEE Transactions on Power Delivery, 2016, 31, 286-293.	4.3	63
16	Dual Three-Winding Transformer Equivalent Circuit Matching Leakage Measurements. IEEE Transactions on Power Delivery, 2009, 24, 160-168.	4.3	56
17	Leakage Inductance Design of Toroidal Transformers by Sector Winding. IEEE Transactions on Power Electronics, 2014, 29, 473-480.	7.9	54
18	A Robust Multiphase Power Flow for General Distribution Networks. IEEE Transactions on Power Systems, 2010, 25, 760-768.	6.5	52

#	ARTICLE	IF	CITATIONS
19	Dual Reversible Transformer Model for the Calculation of Low-Frequency Transients. IEEE Transactions on Power Delivery, 2013, 28, 2509-2517.	4.3	51
20	On the Transient Behavior of Large-Scale Distribution Networks During Automatic Feeder Reconfiguration. IEEE Transactions on Smart Grid, 2012, 3, 887-896.	9.0	50
21	Computation of electromagnetic transients using dual or multiple time steps. IEEE Transactions on Power Systems, 1993, 8, 1274-1281.	6.5	49
22	Thermal Analysis of Power Cables in Free Air: Evaluation and Improvement of the IEC Standard Ampacity Calculations. IEEE Transactions on Power Delivery, 2014, 29, 2306-2314.	4.3	49
23	Selection of copper against aluminium windings for distribution transformers. IET Electric Power Applications, 2010, 4, 474.	1.8	47
24	Mitigation of Inrush Currents in Network Transformers by Reducing the Residual Flux With an Ultra-Low-Frequency Power Source. IEEE Transactions on Power Delivery, 2011, 26, 1563-1570.	4.3	47
25	Mitigation of Geomagnetically Induced Currents by Neutral Switching. IEEE Transactions on Power Delivery, 2015, 30, 1999-2006.	4.3	45
26	Ladder-Type Soil Model for Dynamic Thermal Rating of Underground Power Cables. IEEE Power and Energy Technology Systems Journal, 2014, 1, 21-30.	2.8	43
27	Controlling Non-Synchronous Microgrids for Load Balancing of Radial Distribution Systems. IEEE Transactions on Smart Grid, 2017, 8, 2608-2616.	9.0	43
28	Reduction of Stray Loss in Power Transformers Using Horizontal Magnetic Wall Shunts. IEEE Transactions on Magnetics, 2017, 53, 1-7.	2.1	43
29	Unbalanced Multiphase Load-Flow Using a Positive-Sequence Load-Flow Program. IEEE Transactions on Power Systems, 2008, 23, 469-476.	6.5	41
30	Detailed modeling of eddy current effects for transformer transients. IEEE Transactions on Power Delivery, 1994, 9, 1143-1150.	4.3	40
31	Dynamic Demand Response Using Customer Coupons Considering Multiple Load Aggregators to Simultaneously Achieve Efficiency and Fairness. IEEE Transactions on Smart Grid, 2018, 9, 3112-3121.	9.0	40
32	Design Formulas for the Leakage Inductance of Toroidal Distribution Transformers. IEEE Transactions on Power Delivery, 2011, 26, 2197-2204.	4.3	39
33	Conceptual Modeling Framework to Integrate Resilient and Interdependent Infrastructure in Extreme Weather. Journal of Infrastructure Systems, 2017, 23, .	1.8	39
34	Accurate and Efficient Computation of the Inductance Matrix of Transformer Windings for the Simulation of Very Fast Transients. IEEE Transactions on Power Delivery, 2011, 26, 1423-1431.	4.3	38
35	Equivalent Circuit for the Leakage Inductance of Multiwinding Transformers: Unification of Terminal and Duality Models. IEEE Transactions on Power Delivery, 2012, 27, 353-361.	4.3	38
36	Three-Phase Time-Domain Simulation of Very Large Distribution Networks. IEEE Transactions on Power Delivery, 2012, 27, 677-687.	4.3	38

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37	Evaluation of DC Links on Dense-Load Urban Distribution Networks. IEEE Transactions on Power Delivery, 2016, 31, 1317-1326.	4.3	35
38	Quasi-Newton power flow using partial Jacobian updates. IEEE Transactions on Power Systems, 2001, 16, 332-339.	6.5	34
39	Heat-Transfer Model for Toroidal Transformers. IEEE Transactions on Power Delivery, 2012, 27, 813-820.	4.3	34
40	Duality-Derived Transformer Models for Low-Frequency Electromagnetic Transientsâ€”Part II: Complementary Modeling Guidelines. IEEE Transactions on Power Delivery, 2016, 31, 2420-2430.	4.3	32
41	An Online Data-Driven Technique for the Detection of Transformer Winding Deformations. IEEE Transactions on Power Delivery, 2018, 33, 600-609.	4.3	31
42	AC Power Theory From Poynting Theorem: Accurate Identification of Instantaneous Power Components in Nonlinear-Switched Circuits. IEEE Transactions on Power Delivery, 2010, 25, 2104-2112.	4.3	29
43	Tools for Analysis and Design of Distributed Resourcesâ€”Part II: Tools for Planning, Analysis and Design of Distribution Networks With Distributed Resources. IEEE Transactions on Power Delivery, 2011, 26, 1653-1662.	4.3	29
44	Impulse-Response Analysis of Toroidal Core Distribution Transformers for Dielectric Design. IEEE Transactions on Power Delivery, 2011, 26, 1231-1238.	4.3	29
45	Thermal Analysis of Cables in Unfilled Troughs: Investigation of the IEC Standard and a Methodical Approach for Cable Rating. IEEE Transactions on Power Delivery, 2012, 27, 1423-1431.	4.3	28
46	Iterative solvers in the Newton power flow problem: preconditioners, inexact solutions, and partial Jacobian updates. IET Generation, Transmission and Distribution, 2002, 149, 479.	1.1	27
47	Elimination of Residual Flux in Transformers by the Application of an Alternating Polarity DC Voltage Source. IEEE Transactions on Power Delivery, 2015, 30, 1727-1734.	4.3	27
48	Review of Wildfire Management Techniquesâ€”Part II: Urgent Call for Investment in Research and Development of Preventative Solutions. IEEE Transactions on Power Delivery, 2020, 35, 440-450.	4.3	26
49	Analysis of Energy Savings of CVR Including Refrigeration Loads in Distribution Systems. IEEE Transactions on Power Delivery, 2018, 33, 158-168.	4.3	26
50	Major factors affecting cable ampacity. , 2006, , .		25
51	Accurate Measurement of the Air-Core Inductance of Iron-Core Transformers With a Non-Ideal Low-Power Rectifier. IEEE Transactions on Power Delivery, 2014, 29, 294-296.	4.3	25
52	Enhanced Analytical Method for the Calculation of the Maximum Inrush Currents of Single-Phase Power Transformers. IEEE Transactions on Power Delivery, 2015, 30, 2590-2599.	4.3	25
53	Design of a wireless charging system with a phaseâ€”controlled inverter under varying parameters. IET Power Electronics, 2016, 9, 2461-2470.	2.1	24
54	Transformer Leakage Flux Models for Electromagnetic Transients: Critical Review and Validation of a New Model. IEEE Transactions on Power Delivery, 2014, 29, 2180-2188.	4.3	23

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55	Experimentally Validated Reversible Single-Phase Multiwinding Transformer Model for the Accurate Calculation of Low-Frequency Transients. IEEE Transactions on Power Delivery, 2015, 30, 193-201.	4.3	23
56	Enhanced Thermal Model of Power Cables Installed in Ducts for Ampacity Calculations. IEEE Transactions on Power Delivery, 2018, 33, 2404-2411.	4.3	23
57	A Comparative Study on π and T Equivalent Models for the Analysis of Transformer Ferroresonance. IEEE Transactions on Power Delivery, 2013, 28, 526-528.	4.3	22
58	Introducing Mutual Heating Effects in the Ladder-Type Soil Model for the Dynamic Thermal Rating of Underground Cables. IEEE Transactions on Power Delivery, 2015, 30, 1958-1964.	4.3	22
59	2D finite-element determination of tank wall losses in pad-mounted transformers. Electric Power Systems Research, 2004, 71, 179-185.	3.6	21
60	Improved Insert Geometry for Reducing Tank-Wall Losses in Pad-Mounted Transformers. IEEE Transactions on Power Delivery, 2004, 19, 1120-1126.	4.3	21
61	Benefits of a Nonsynchronous Microgrid on Dense-Load LV Secondary Networks. IEEE Transactions on Power Delivery, 2016, 31, 1076-1084.	4.3	21
62	Retrofitting the BCTRAN Transformer Model With Nonlinear Magnetizing Branches for the Accurate Study of Low-Frequency Deep Saturating Transients. IEEE Transactions on Power Delivery, 2018, 33, 2344-2353.	4.3	21
63	Looping Radial Distribution Systems Using Superconducting Fault Current Limiters: Feasibility and Economic Analysis. IEEE Transactions on Power Systems, 2018, 33, 2486-2495.	6.5	21
64	Centralized Unbalanced Dispatch of Smart Distribution DC Microgrid Systems. IEEE Transactions on Smart Grid, 2018, 9, 2852-2861.	9.0	21
65	Mitigation of Half-Cycle Saturation of Adjacent Transformers During HVDC Monopolar Operation—Part II: Detecting Zero-Sequence Fault Currents. IEEE Transactions on Power Delivery, 2020, 35, 16-24.	4.3	20
66	Energy and Economic Impacts of the Application of CVR in Heavily Meshed Secondary Distribution Networks. IEEE Transactions on Power Delivery, 2014, 29, 1692-1700.	4.3	19
67	Duality-Synthesized Circuit for Eddy Current Effects in Transformer Windings. IEEE Transactions on Power Delivery, 2013, 28, 1063-1072.	4.3	18
68	Estimation of Design Parameters of Single-Phase Distribution Transformers From Terminal Measurements. IEEE Transactions on Power Delivery, 2017, 32, 2031-2039.	4.3	18
69	Duality-Based Transformer Model Including Eddy Current Effects in the Windings. IEEE Transactions on Power Delivery, 2015, 30, 2312-2320.	4.3	17
70	Smart load management of distribution-class toroidal transformers using a dynamic thermal model. IET Generation, Transmission and Distribution, 2018, 12, 142-149.	2.5	17
71	Physical time domain representation of powers in linear and nonlinear electrical circuits. IEEE Transactions on Power Delivery, 1999, 14, 1240-1249.	4.3	16
72	Discussion of "Instantaneous Reactive Power p-q Theory and Power Properties of Three-Phase Systems". IEEE Transactions on Power Delivery, 2008, 23, 1693-1694.	4.3	16

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73	Calculation of cable thermal rating considering non-isothermal earth surface. IET Generation, Transmission and Distribution, 2014, 8, 1354-1361.	2.5	16
74	Mitigation of Half-Cycle Saturation of Adjacent Transformers During HVDC Monopolar Operation—Part I: Mitigation Principle and Device Design. IEEE Transactions on Power Delivery, 2019, 34, 2232-2239.	4.3	16
75	Quantitative Evaluation of DER Smart Inverters for the Mitigation of FIDVR in Distribution Systems. IEEE Transactions on Power Delivery, 2020, 35, 420-429.	4.3	16
76	AC Power Theory From Poynting Theorem: Identification of the Power Components of Magnetic Saturating and Hysteretic Circuits. IEEE Transactions on Power Delivery, 2012, 27, 1548-1556.	4.3	15
77	Adaptive soil model for real-time thermal rating of underground power cables. IET Science, Measurement and Technology, 2015, 9, 654-660.	1.6	15
78	Lissajous Curve Methods for the Identification of Nonlinear Circuits: Calculation of a Physical Consistent Reactive Power. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 2874-2885.	5.4	15
79	Eliminating Subsynchronous Oscillations With an Induction Machine Damping Unit (IMDU). IEEE Transactions on Power Systems, 2011, 26, 225-232.	6.5	14
80	Effects of Conductor Counter-Transposition on the Positive-Sequence Impedance and Losses of Cross-Bonded Cables. IEEE Transactions on Power Delivery, 2011, 26, 2060-2063.	4.3	14
81	Long Duration Overvoltages due to Current Backfeeding in Secondary Networks. IEEE Transactions on Power Delivery, 2013, 28, 2500-2508.	4.3	14
82	Real-Time Transient Stability Assessment Using Dynamic Equivalents and Nonlinear Observers. IEEE Transactions on Power Systems, 2020, 35, 2981-2992.	6.5	14
83	Validated Transient Heat-Transfer Model for Underground Transformer in Rectangular Vault. IEEE Transactions on Power Delivery, 2013, 28, 1770-1778.	4.3	13
84	Investigation of Transformer-Based Solutions for the Reduction of Inrush and Phase-Hop Currents. IEEE Transactions on Power Electronics, 2016, 31, 3506-3516.	7.9	13
85	Parameter Estimation of Three-Phase Transformer Models for Low-Frequency Transient Studies From Terminal Measurements. IEEE Transactions on Magnetics, 2017, 53, 1-8.	2.1	13
86	A practical approach to power factor definitions: transmission losses, reactive power compensation, and machine utilization. , 2006, , .		12
87	Time Series Power Flow Framework for the Analysis of FIDVR Using Linear Regression. IEEE Transactions on Power Delivery, 2018, 33, 2946-2955.	4.3	12
88	Damping power system oscillations by unidirectional control of alternative power generation plants. , 0, , .		11
89	Discussion of "Generalized Theory of Instantaneous Reactive Quantity for Multiphase Power System" IEEE Transactions on Power Delivery, 2006, 21, 540-541.	4.3	11
90	Development of Data Translators for Interfacing Power-Flow Programs With EMTP-Type Programs: Challenges and Lessons Learned. IEEE Transactions on Power Delivery, 2013, 28, 1192-1201.	4.3	11

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91	Analysis, Modeling, and Simulation of the Phase-Hop Condition in Transformers: The Largest Inrush Currents. IEEE Transactions on Power Delivery, 2014, 29, 1918-1926.	4.3	11
92	A Reconfigurable Auto-Loop Microgrid. IEEE Transactions on Power Delivery, 2015, 30, 1644-1645.	4.3	11
93	Separation of core losses in distribution transformers using experimental methods. Canadian Journal of Electrical and Computer Engineering, 2010, 35, 33-39.	2.0	10
94	Experimental Parameter Determination and Laboratory Verification of the Inverse Hysteresis Model for Single-Phase Toroidal Transformers. IEEE Transactions on Magnetics, 2016, 52, 1-9.	2.1	10
95	Determination of Instantaneous Powers From a Novel Time-Domain Parameter Identification Method of Non-Linear Single-Phase Circuits. IEEE Transactions on Power Delivery, 2022, 37, 3608-3619.	4.3	10
96	Multiphase resonant inverters for bidirectional wireless power transfer. , 2014, , .		9
97	Multiphase resonant inverters with common resonant circuit. , 2014, , .		9
98	Two-Zone Geological Soil Moisture Migration Model for Cable Thermal Rating. IEEE Transactions on Power Delivery, 2018, 33, 3196-3204.	4.3	9
99	A Self-Organizing Multi-Agent System for Distributed Voltage Regulation. IEEE Transactions on Smart Grid, 2021, 12, 4102-4112.	9.0	9
100	Energy minimization for catenary-free mass transit systems using Particle Swarm Optimization. , 2012, , .		8
101	Parametric Study of Losses in Cross-Bonded Cables: Conductors Transposed Versus Conductors Nontransposed. IEEE Transactions on Power Delivery, 2013, 28, 2273-2281.	4.3	8
102	Reduction of Inrush Currents in Toroidal Transformers by Sector Winding Design. IEEE Transactions on Power Electronics, 2016, , 1-1.	7.9	8
103	Thermal Analysis of Power Cables Installed in Solid Bottom Trays Using an Equivalent Circuit. IEEE Transactions on Power Delivery, 2017, 32, 2130-2139.	4.3	8
104	New Method to Measure Deep-Saturated Magnetizing Inductances for Dual Reversible Models of Single-Phase Two-Winding Transformers. IEEE Transactions on Power Delivery, 2021, 36, 488-491.	4.3	8
105	Computation of the dielectric stresses produced by PWM type waveforms on medium voltage transformer windings. , 2011, , .		7
106	Closed-Form Analysis of Squirrel-Cage Induction Motors With Anisotropic Modeling of Stator and Rotor. IEEE Transactions on Energy Conversion, 2012, 27, 553-560.	5.2	7
107	Experimental Evaluation of Available Computational Methods for Eddy Current and Hysteresis Losses for Cables Installed in Steel Pipes. IEEE Transactions on Power Delivery, 2018, 33, 1777-1786.	4.3	7
108	Improvement of a Method to Compute the Inductance Matrix of Multilayer Transformer Windings for Very Fast Transients. IEEE Transactions on Power Delivery, 2013, 28, 1245-1246.	4.3	6

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109	Equivalent circuit for the thermal analysis of cables in non-vented vertical risers. IET Science, Measurement and Technology, 2015, 9, 606-614.	1.6	6
110	Optimal Power Dispatch Under Load Uncertainty Using a Stochastic Approximation Method. IEEE Transactions on Power Systems, 2016, 31, 4495-4503.	6.5	6
111	Prioritizing the Restoration of Network Transformers Using Distribution System Loading and Reliability Indices. IEEE Transactions on Power Delivery, 2017, 32, 1236-1243.	4.3	6
112	Discussion of "Transformer Modeling for Low- and Mid-Frequency Transients - A Review". IEEE Transactions on Power Delivery, 2008, 23, 1696-1697.	4.3	5
113	Simulation tools for analysis of distribution systems with distributed resources. Present and future trends. , 2010, , .		5
114	Design of a multi-agent system for distributed voltage regulation. , 2017, , .		5
115	Introduction to the Special Issue on Advances in Condition Monitoring and Assessment of Power Equipment. IEEE Transactions on Power Delivery, 2019, 34, 1219-1220.	4.3	5
116	Generalized Circuit Model for Eddy Current Effects in Multi-Winding Transformers. IEEE Transactions on Power Delivery, 2019, 34, 638-650.	4.3	5
117	Experimentally Validated Method to Measure the λ & Characteristics of Asymmetric Three-Phase Transformers. IEEE Transactions on Magnetics, 2019, 55, 1-9.	2.1	5
118	Assessment of errors introduced by common assumptions made in power system studies. , 2011, , .		4
119	Improved Computation of Core Inductance for Fast Transient Analysis of Transformers. IEEE Transactions on Power Delivery, 2014, 29, 2034-2036.	4.3	4
120	Magnetic field distribution in a WPT system for electric vehicle charging. , 2016, , .		4
121	Optimal design of resonant coupled multi-receiver wireless power transfer systems. , 2017, , .		4
122	Experimental Study of Magnetic Effects of Steel Tanks on Three-Phase Transformer Transients. IEEE Transactions on Power Delivery, 2020, 35, 665-673.	4.3	4
123	Discussion of "An evaluation of some alternative methods of power resolution in a large industrial plant". IEEE Transactions on Power Delivery, 2003, 18, 658-659.	4.3	3
124	A time sequence load-flow method for steady-state analysis in heavily meshed distribution network with DG. , 2013, , .		3
125	Design algorithm of a uniform magnetic field transmitter intended for the wireless charging of electric vehicles. , 2014, , .		3
126	Analysis and design of efficient IPT wireless charging systems for electric vehicle. , 2017, , .		3

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127	Closed-Form Determination of the Impedance Locus Plot of Fault Current Limiters: A Rigorous Approach With Graphical Representation. IEEE Transactions on Power Delivery, 2018, 33, 2710-2717.	4.3	3
128	Investment Deferral of Feeder Upgrades Revealed by System-Wide Unbalanced Dynamic Rating: Harvesting the Hidden Capacity of Distribution Systems Discovered by Thermal Map Technology. IEEE Transactions on Power Delivery, 2021, 36, 1594-1602.	4.3	3
129	Improvement of the Standard Ampacity Calculations for Power Cables Installed in Trefoil Formations in Ventilated Tunnels. IEEE Transactions on Power Delivery, 2022, 37, 627-637.	4.3	3
130	Discussion of "A new preconditioned conjugate gradient power flow". IEEE Transactions on Power Systems, 2003, 18, 1601.	6.5	2
131	Discussion of "A Wide-Band Lumped Circuit Model of Eddy Current Losses in a Coil With a Coaxial Insulation System and a Stranded Conductor". IEEE Transactions on Power Delivery, 2004, 19, 902-902.	4.3	2
132	Transformer leakage flux models for electromagnetic transients: Critical review and validation of a new model. , 2014, , .		2
133	Supplementary damping controller of grid connected dc micro-grids based on Q-learning. , 2016, , .		2
134	Discussion of "Accurate modeling of core-type distribution transformers for electromagnetic transient studies". IEEE Transactions on Power Delivery, 2003, 18, 640.	4.3	1
135	Edge position detection of on-line vehicles with segmental wireless power supply. , 2014, , .		1
136	Load Estimation of Complex Power Networks from Transformer Measurements and Forecasted Loads. Complexity, 2020, 2020, 1-14.	1.6	1
137	Discussion of "proposed standards for frequency conversion factors of transformer performance parameters". IEEE Transactions on Power Delivery, 2003, 18, 1599-1600.	4.3	0
138	Improved insert geometry for reducing tank wall. , 0, , .		0
139	Eliminating sub-synchronous oscillations with an induction machine damping unit (IMDU). , 2011, , .		0
140	Estimation of Design Parameters of Single-Phase Distribution Transformers from Terminal Measurements. , 2018, , .		0
141	Closed-Form Determination of the Impedance Locus Plot of Fault Current Limiters: Asymmetrical Faults. IEEE Transactions on Power Delivery, 2020, 35, 754-762.	4.3	0