Nagarajan Raghavan

List of Publications by Year
in descending order

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217	3,371	201385	214527
papers	citations	27 h-index	47 g-index

222	222	222	3252
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Bayesian inference-based decision of fatigue life model for metal additive manufacturing considering effects of build orientation and post-processing. International Journal of Fatigue, 2022, 155, 106535.	2.8	10
2	Crystallographic Anisotropy Dependence of Interfacial Sliding Phenomenon in a Cu(16)/Nb(16) ARB (Accumulated Rolling Bonding) Nanolaminate. Nanomaterials, 2022, 12, 308.	1.9	3
3	Investigating Companyâ€™s Technical Development Directions Based on Internal Knowledge Inheritance and Inventor Capabilities: The Case of Samsung Electronics. Sustainability, 2022, 14, 3117.	1.6	0
4	Modeling Impact Mechanics of 3D Helicoidally Architected Polymer Composites Enabled by Additive Manufacturing for Lightweight Silicon Photovoltaics Technology. Polymers, 2022, 14, 1228.	2.0	2
5	Global Optimization of Surface Warpage for Inverse Design of Ultra-Thin Electronic Packages Using Tensor Train Decomposition. IEEE Access, 2022, 10, 48589-48602.	2.6	1
6	Remaining Useful Life Prediction of Lithium-Ion Batteries Using Neural Networks with Adaptive Bayesian Learning. Sensors, 2022, 22, 3803.	2.1	8
7	Hierarchical main path analysis to identify decompositional multi-knowledge trajectories. Journal of Knowledge Management, 2021, 25, 454-476.	3.2	14
8	Uncertainty quantification of percolating electrical conductance for wavy carbon nanotube-filled polymer nanocomposites using Bayesian inference. Carbon, 2021, 172, 308-323.	5.4	16
9	Function score-based technological trend analysis. Technovation, 2021, 101, 102199.	4.2	12
10	Analysis and Simulation of Interface Quality and Defect Induced Variability in MgO Spin-Transfer Torque Magnetic RAMs. IEEE Electron Device Letters, 2021, 42, 34-37.	2.2	4
11	Identifying Service Opportunities Based on Outcome-Driven Innovation Framework and Deep Learning: A Case Study of Hotel Service. Sustainability, 2021, 13, 391.	1.6	7
12	Interface-mediated plasticity and fracture in nanoscale Cu/Nb multilayers as revealed by in situ clamped microbeam bending. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 803, 140705.	2.6	8
13	Developmental Trajectories in Blockchain Technology Using Patent-Based Knowledge Network Analysis. IEEE Access, 2021, 9, 44704-44717.	2.6	7
14	Role of temperature, MTJ size and pulse-width on STT-MRAM bit-error rate and backhopping. Solid-State Electronics, 2021, 183, 108032.	0.8	3
15	Comparison of Global Optimization Algorithms for Inverse Design of Substrate Metal Density for Low Warpage Design in Ultra-Thin Packages. , 2021, , .		1
16	Online Prognosis of Bimodal Crack Evolution for Fatigue Life Prediction of Composite Laminates Using Particle Filters. Applied Sciences (Switzerland), 2021, 11, 6046.	1.3	9
17	Berkovich nanoindentation study of 16Ânm Cu/Nb ARB nanolaminate: Effect of anisotropy on the surface pileup. MRS Advances, 2021, 6, 495-499.	0.5	3
18	Multistate Diagnosis and Prognosis of Lubricating Oil Degradation Using Sticky Hierarchical Dirichlet Processâ€“Hidden Markov Model Framework. Applied Sciences (Switzerland), 2021, 11, 6603.	1.3	2

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19	Dielectric Breakdown in Single-Crystal Hexagonal Boron Nitride. ACS Applied Electronic Materials, 2021, 3, 3547-3554.	2.0	28
20	Impact-Resistant and Tough 3D Helicoidally Architected Polymer Composites Enabling Next-Generation Lightweight Silicon Photovoltaics Module Design and Technology. Polymers, 2021, 13, 3315.	2.0	4
21	Hybrid Particle Filter Trained Neural Network for Prognosis of Lithium-Ion Batteries. IEEE Access, 2021, 9, 135132-135143.	2.6	8
22	Inverse Design for Low Warpage Ultra-Thin Packages Using Constrained Particle Swarm Optimization. IEEE Access, 2021, 9, 64043-64053.	2.6	2
23	A Gaussian Mixture Model Clustering Ensemble Regressor for Semiconductor Manufacturing Final Test Yield Prediction. IEEE Access, 2021, 9, 22253-22263.	2.6	14
24	Semiconductor Manufacturing Final Test Yield Optimization and Wafer Acceptance Test Parameter Inverse Design Using Multi-Objective Optimization Algorithms. IEEE Access, 2021, 9, 137655-137666.	2.6	4
25	Standards for the Characterization of Endurance in Resistive Switching Devices. ACS Nano, 2021, 15, 17214-17231.	7.3	128
26	Predicting Lumen Degradation of Light Emitting Diodes Using Hybrid Particle Filter Trained Neural Networks. IEEE Access, 2021, 9, 167292-167304.	2.6	2
27	Computational Failure Analysis of In-Memory RRAM Architecture for Pattern Classification CNN Circuits. IEEE Access, 2021, 9, 168093-168106.	2.6	3
28	Bias Suppression Framework for Detrending Mean of Multi-Output Gaussian Process Regression in LED Remaining Storage Life Prognosis. IEEE Access, 2021, 9, 166639-166657.	2.6	2
29	Condition Based Maintenance Policy for Crankcase Lubricating Oil in Diesel Locomotives. , 2021, , .		0
30	Reliability-based robust design optimization of polymer nanocomposites to enhance percolated electrical conductivity considering correlated input variables using multivariate distributions. Polymer, 2020, 186, 122060.	1.8	10
31	Helicoidally Arranged Polyacrylonitrile Fiber-Reinforced Strong and Impact-Resistant Thin Polyvinyl Alcohol Film Enabled by Electrospinning-Based Additive Manufacturing. Polymers, 2020, 12, 2376.	2.0	15
32	Learning the Stress-Strain Relationships of Ultra-Thin Package Materials using a Bayesian Approach. , 2020, , .		5
33	Lubricating Oil Remaining Useful Life Prediction Using Multi-Output Gaussian Process Regression. IEEE Access, 2020, 8, 128897-128907.	2.6	14
34	Localized Probing of Dielectric Breakdown in Multilayer Hexagonal Boron Nitride. ACS Applied Materials & Interfaces, 2020, 12, 55000-55010.	4.0	11
35	AI-Assisted Package Design for Improved Warpage Control of Ultra-Thin Packages. , 2020, , .		4
36	Reliability and Breakdown Study of Erase Gate Oxide in Split-Gate Non-Volatile Memory Device. , 2020, , .		0

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37	Inverse Design of Substrate from Warpage Surrogate Model Using Global Optimisation Algorithms in Ultra-Thin Packages. , 2020, , .		4
38	Tensor Train Decomposition for Data-Driven Prognosis of Fracture Dynamics in Composite Materials. , 2020, , .		2
39	Piecewise Model-Based Online Prognosis of Lithium-Ion Batteries Using Particle Filters. IEEE Access, 2020, 8, 153508-153516.	2.6	13
40	Generalized Convolution Simulation Stack for RRAM Device based Deep Learning Neural Network. , 2020, , .		2
41	A Novel Framework for Semiconductor Manufacturing Final Test Yield Classification Using Machine Learning Techniques. IEEE Access, 2020, 8, 197885-197895.	2.6	29
42	Data Driven Prognosis of Fracture Dynamics Using Tensor Train and Gaussian Process Regression. IEEE Access, 2020, 8, 222256-222266.	2.6	3
43	Assessing multi-output Gaussian process regression for modeling of non-monotonic degradation trends of light emitting diodes in storage. Microelectronics Reliability, 2020, 114, 113794.	0.9	4
44	Exploration of Multi-output Gaussian Process Regression for Residual Storage Life Prediction in Lithium Ion Battery. , 2020, , .		2
45	Learning Localized Spatial Material Properties of Substrates in Ultra-Thin Packages Using Markov Chain Monte Carlo and Finite Element Analysis. IEEE Access, 2020, 8, 50163-50170.	2.6	5
46	Exploring the Impact of Variability in Resistance Distributions of RRAM on the Prediction Accuracy of Deep Learning Neural Networks. Electronics (Switzerland), 2020, 9, 414.	1.8	8
47	Origins and Signatures of Tail Bit Failures in Ultrathin MgO Based STT-MRAM. , 2020, , .		2
48	Correlation of Dielectric Breakdown and Nanoscale Adhesion in Silicon Dioxide Thin Films. , 2020, , .		2
49	Random Telegraph Noise Nano-spectroscopy in High-Î° Dielectrics Using Scanning Probe Microscopy Techniques. , 2020, , 417-440.		3
50	Sensitivity of Thermal Predictions to Uncertain Surface Tension Data in Laser Additive Manufacturing. Journal of Heat Transfer, 2020, 142, .	1.2	21
51	Temporal Convolutional Network Based Transfer Learning for Structural Health Monitoring of Composites. Lecture Notes in Computer Science, 2020, , 141-152.	1.0	1
52	Reliability-Based Design Optimization of Polymer Nanocomposites (PNCs) Based on Percolation Model Considering Correlated Input Variables. Transactions of the Korean Society of Mechanical Engineers, A, 2020, 44, 229-240.	0.1	0
53	Exploring RRAM Variability as Synapses on Inception Simulation Framework to Characterize the Prediction Accuracy and Power Estimation per Bit for Convolution Neural Network. , 2020, , .		1
54	Deep Learning Based Detection for Mitigating Sneak Path Interference in Resistive Memory Arrays. , 2020, , .		4

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55	Fiber-Integrated Reversibly Wavelength-Tunable Nanowire Laser Based on Nanocavity Mode Coupling. ACS Nano, 2019, 13, 9965-9972.	7.3	11
56	3D characterization of hard breakdown in RRAM device. Microelectronic Engineering, 2019, 216, 111042.	1.1	4
57	Boron Vacancies Causing Breakdown in 2D Layered Hexagonal Boron Nitride Dielectrics. IEEE Electron Device Letters, 2019, 40, 1321-1324.	2.2	16
58	The effect of carbon nanotube chirality on the electrical conductivity of polymer nanocomposites considering tunneling resistance. Nanotechnology, 2019, 30, 465701.	1.3	22
59	Reliability analysis and design of a single diode solar cell model using polynomial chaos and active subspace. Microelectronics Reliability, 2019, 100-101, 113477.	0.9	5
60	Quantitative identification of technological paradigm changes using knowledge persistence. PLoS ONE, 2019, 14, e0220819.	1.1	10
61	Prognosis of power MOSFET resistance degradation trend using artificial neural network approach. Microelectronics Reliability, 2019, 100-101, 113467.	0.9	10
62	Correct Extrapolation Model for TDDB of STT-MRAM MgO Magnetic Tunnel Junctions. , 2019, , .		3
63	Machine Learning Approach to Improve Accuracy of Warpage Simulations. , 2019, , .		7
64	Dielectric Breakdown in 2D Layered Hexagonal Boron Nitride â€" The Knowns and the Unknowns. , 2019, , .		2
65	New Insights into Dielectric Breakdown of MgO in STT-MRAM Devices. , 2019, , .		5
66	Spatio-Temporal Defect Generation Process in Irradiated HfO₂ MOS Stacks: Correlated Versus Uncorrelated Mechanisms. , 2019, , .		1
67	Data-Driven Design Space Exploration and Exploitation for Design for Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, .	1.7	44
68	Lubricating Oil Degradation Modeling and Prognostics using the Wiener Process. , 2019, , .		1
69	Lubrication Oil Degradation Trajectory Prognosis with ARIMA and Bayesian Models. , 2019, , .		1
70	Neural Network Assisted Speed Up of High Fidelity Warpage Simulations towards Design for Reliability in Ultra-Thin Packages. , 2019, , .		7
71	Guest Editorial Special Section on the Second Electron Devices Technology and Manufacturing (EDTM) Conference 2019. IEEE Journal of the Electron Devices Society, 2019, 7, 1200-1200.	1.2	0
72	Exploring the Power â€“ Prediction Accuracy Trade-Off in a Deep Learning Neural Network using Wide Compliance RRAM Device. , 2019, , .		0

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73	New Physics of Breakdown in 2D Hexagonal Boron Nitride Dielectrics and Its Potential Applications. , 2019, , .		1
74	Discovering business diversification opportunities using patent information and open innovation cases. Technological Forecasting and Social Change, 2019, 139, 144-154.	6.2	17
75	Experiments and simulations on solidification microstructure for Inconel 718 in powder bed fusion electron beam additive manufacturing. Additive Manufacturing, 2019, 25, 511-521.	1.7	59
76	Recommended Methods to Study Resistive Switching Devices. Advanced Electronic Materials, 2019, 5, 1800143.	2.6	452
77	Prediction of Percolation Threshold and Electrical Conductivity Characteristics for Polymer Nanocomposites According to Geometric Parameters of CNTs. Transactions of the Korean Society of Mechanical Engineers, A, 2019, 43, 297-306.	0.1	0
78	Atomic Scale Modulation of Selfâ€Rectifying Resistive Switching by Interfacial Defects. Advanced Science, 2018, 5, 1800096.	5.6	29
79	Conductive Atomic Force Microscope Study of Bipolar and Threshold Resistive Switching in 2D Hexagonal Boron Nitride Films. Scientific Reports, 2018, 8, 2854.	1.6	55
80	Impact of Carbon Doping on Polysilicon Grain Size Distribution and Yield Enhancement for 40-nm Embedded Nonvolatile Memory Technology. IEEE Transactions on Device and Materials Reliability, 2018, 18, 64-69.	1.5	4
81	Heuristic Kalman optimized particle filter for remaining useful life prediction of lithium-ion battery. Microelectronics Reliability, 2018, 81, 232-243.	0.9	77
82	Role of scan strategies on thermal gradient and solidification rate in electron beam powder bed fusion. Additive Manufacturing, 2018, 22, 516-527.	1.7	42
83	Random telegraph noise in 2D hexagonal boron nitride dielectric films. Applied Physics Letters, 2018, 112, .	1.5	23
84	Stochastic Modeling of FinFET Degradation Based on a Resistor Network Embedded Metropolis Monte Carlo Method. IEEE Transactions on Electron Devices, 2018, 65, 440-447.	1.6	6
85	Nanostructure and nanomaterial characterization, growth mechanisms, and applications. Nanotechnology Reviews, 2018, 7, 209-231.	2.6	45
86	Roughening Particle Filter Based Prognosis on Power MOSFETs Using ON-Resistance Variation. , 2018, , .		3
87	Investigating the Statistical-Physical Nature of MgO Dielectric Breakdown in STT-MRAM at Different Operating Conditions. , 2018, , .		13
88	Study on Partial Stratified Resampling for Particle Filter Based Prognosis on Li-Ion Batteries. , 2018, , .		0
89	Prognostic Health Management for LED with Missing Data: Multi-task Gaussian Process Regression Approach. , 2018, , .		4
90	Comparison of experimental, analytical and simulation methods to estimate substrate material properties for warpage reliability analysis. Microelectronics Reliability, 2018, 88-90, 817-823.	0.9	11

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91	Nonlinear Mixed Effect Model-Based Prognostics for Lithium-ion Battery Charge Decay. , 2018, , .		1
92	Application of multi-output Gaussian process regression for remaining useful life prediction of light emitting diodes. Microelectronics Reliability, 2018, 88-90, 80-84.	0.9	20
93	Gaussian process regression approach for robust design and yield enhancement of self-assembled nanostructures. Microelectronics Reliability, 2018, 88-90, 85-90.	0.9	0
94	Statistical nature of hard breakdown recovery in high-Î¤ dielectric stacks studied using ramped voltage stress. Microelectronics Reliability, 2018, 88-90, 164-168.	0.9	1
95	Stochastic Model for Lithium Ion Battery Lifecycle Prediction and Parametric Uncertainties. , 2018, , .		2
96	A holistic comparison of the different resampling algorithms for particle filter based prognosis using lithium ion batteries as a case study. Microelectronics Reliability, 2018, 91, 160-169.	0.9	21
97	Evolution of the Physics and Stochastics of Failure in Ultra-Thin Dielectrics - From SiO2 to Advanced High-K Gate Stacks. , 2018, , .		1
98	A microfiber temperature sensor based on fluorescence lifetime. Optics Communications, 2018, 426, 231-236.	1.0	11
99	Application of expectation maximization and Kalman smoothing for prognosis of lumen maintenance life for light emitting diodes. Microelectronics Reliability, 2018, 87, 206-212.	0.9	4
100	Area and pulsewidth dependence of bipolar TDDB in MgO magnetic tunnel junction. , 2018, , .		7
101	Fast response CdS-CdS Te1â^'-CdTe core-shell nanobelt photodetector. Science Bulletin, 2018, 63, 1118-1124.	4.3	24
102	Additive Manufacturing of Nickel Superalloys: Opportunities for Innovation and Challenges Related to Qualification. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3764-3780.	1.1	129
103	Mechanism of soft and hard breakdown in hexagonal boron nitride 2D dielectrics. , 2018, , .		10
104	Role of metal nanocrystals on the breakdown statistics of flash memory high-Î¤ stacks. Microelectronic Engineering, 2017, 178, 293-297.	1.1	1
105	Asymmetric dielectric breakdown behavior in MgO based magnetic tunnel junctions. Microelectronic Engineering, 2017, 178, 308-312.	1.1	6
106	Failure of Weibull distribution to represent switching statistics in OxRAM. Microelectronic Engineering, 2017, 178, 230-234.	1.1	6
107	Nanoscale investigations of soft breakdown events in few layered fluorinated graphene. , 2017, , .		0
108	Transient Thermo-mechanical Modeling of stress Evolution and Re-melt Volume Fraction in Electron Beam Additive Manufacturing Process. Procedia Manufacturing, 2017, 11, 571-583.	1.9	8

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109	Uncertainty quantification in nanowire growth modeling â€“ A precursor to quality semiconductor nanomanufacturing. Microelectronics Reliability, 2017, 76-77, 106-111.	0.9	0
110	Localized characterization of charge transport and random telegraph noise at the nanoscale in HfO2 films combining scanning tunneling microscopy and multi-scale simulations. Journal of Applied Physics, 2017, 122, 024301.	1.1	11
111	Application of multiplicative dimensional reduction method for uncertainty quantification and sensitivity analysis of MEMS electrostatic actuators. Microelectronics Reliability, 2017, 76-77, 619-625.	0.9	2
112	Highly polarized single mode nanobelt laser. Applied Physics Letters, 2017, 110, .	1.5	9
113	Statistical basis and physical evidence for clustering model in FinFET degradation. , 2017, , .		2
114	Statistics of disturb events in OxRAM devices â€" A phenomenological model. , 2017, , .		2
115	Uncertainty quantification in prognostics: A data driven polynomial chaos approach. , 2017, , .		2
116	A metaheuristic approach to remaining useful life estimation of systems subject to multiple degradation mechanisms. , 2017, , .		3
117	Coexistence of volatile and non-volatile resistive switching in 2D h-BN based electronic synapses. , 2017, , .		17
118	Tutorial: Physics of failure based prognostics. , 2017, , .		0
119	Statistical Characterization of the State-of-Health of Lithium-Ion Batteries with Weibull Distribution Functionâ€"A Consideration of Random Effect Model in Charge Capacity Decay Estimation. Batteries, 2017, 3, 32.	2.1	17
120	Percolation Framework and Monte Carlo Techniques for Improved Probabilistic Design of Variability in Products and Systems. Smart Innovation, Systems and Technologies, 2017, , 433-445.	0.5	0
121	Single vacancy defect spectroscopy on HfO2 using random telegraph noise signals from scanning tunneling microscopy. Journal of Applied Physics, 2016, 119, .	1.1	20
122	Multiphysics based 3D percolation framework model for multi-stage degradation and breakdown in high-Î º â€" Interfacial layer stacks. , 2016, , .		2
123	Observation of resistive switching by physical analysis techniques. , 2016, , .		0
124	New understanding of dielectric breakdown in advanced FinFET devices â€" physical, electrical, statistical and multiphysics study. , 2016, , .		8
125	Microstructure Development in Electron Beam-Melted Inconel 718 and Associated Tensile Properties. Jom, 2016, 68, 1012-1020.	0.9	98
126	Understanding the switching mechanism in RRAM using in-situ TEM. , 2016, , .		5

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127	CAFM based spectroscopy of stress-induced defects in HfO<inf>2</inf> with experimental evidence of the clustering model and metastable vacancy defect state. , 2016, , .		10
128	Analysis of quantum conductance, read disturb and switching statistics in HfO2 RRAM using conductive AFM. Microelectronics Reliability, 2016, 64, 172-178.	0.9	17
129	Application of the defect clustering model for forming, SET and RESET statistics in RRAM devices. Microelectronics Reliability, 2016, 64, 54-58.	0.9	10
130	Conductive filament formation at grain boundary locations in polycrystalline HfO2 -based MIM stacks: Computational and physical insight. Microelectronics Reliability, 2016, 64, 204-209.	0.9	12
131	Real-time update of multi-state system reliability using prognostic data-driven techniques. , 2016, , .		0
132	Probabilistic insight to possibility of new metal filament nucleation during repeated cycling of conducting bridge memory. Microelectronics Reliability, 2015, 55, 1412-1416.	0.9	0
133	Evolution of Filament Formation in Ni/HfO₂/SiO<i>_x</i>/Siâ€Based RRAM Devices. Advanced Electronic Materials, 2015, 1, 1500130.	2.6	37
134	Understanding defect kinetics in ultra-thin dielectric logic and memory devices using random telegraph noise analysis. , 2015, , .		0
135	Remaining useful life estimation for systems subject to multiple degradation mechanisms. , 2015, , .		1
136	Statistics of retention failure in the low resistance state for hafnium oxide RRAM using a Kinetic Monte Carlo approach. Microelectronics Reliability, 2015, 55, 1422-1426.	0.9	14
137	Reliability of emerging nanodevices. , 2015, , 143-168.		2
138	Causes and consequences of the stochastic aspect of filamentary RRAM. Microelectronic Engineering, 2015, 147, 171-175.	1.1	91
139	Particle filter approach to lifetime prediction for microelectronic devices and systems with multiple failure mechanisms. Microelectronics Reliability, 2015, 55, 1297-1301.	0.9	10
140	An SEM/STM based nanoprobing and TEM study of breakdown locations in HfO2/SiOx dielectric stacks for failure analysis. Microelectronics Reliability, 2015, 55, 1450-1455.	0.9	4
141	Spectroscopy of SILC trap locations and spatial correlation study of percolation path in the high-κ and interfacial layer. , 2015, , .		3
142	Monte Carlo model of reset stochastics and failure rate estimation of read disturb mechanism in HfO<inf>x</inf> RRAM. , 2015, , .		3
143	On the bipolar resistive-switching characteristics of Al2O3- and HfO2-based memory cells operated in the soft-breakdown regime. Journal of Applied Physics, 2014, 116, 134502.	1.1	26
144	Spatial correlation of conductive filaments for multiple switching cycles in CBRAM. , 2014, , .		1

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145	High-Î¹ dielectric breakdown in nanoscale logic devices â€“ Scientific insight and technology impact. Microelectronics Reliability, 2014, 54, 847-860.	0.9	38
146	Analysis of Correlated Gate and Drain Random Telegraph Noise in Post-Soft Breakdown TiN/HfLaO/${m SiO}_{x}$ nMOSFETs. IEEE Electron Device Letters, 2014, 35, 157-159.	2.2	17
147	Performance and reliability trade-offs for high-Î¹ RRAM. Microelectronics Reliability, 2014, 54, 2253-2257.	0.9	39
148	Prognostic methodology for remaining useful life estimation of retention loss in nanoscale resistive switching memory. Microelectronics Reliability, 2014, 54, 1729-1734.	0.9	3
149	Assessment of read disturb immunity in conducting bridge memory devices â€“ A thermodynamic perspective. Microelectronics Reliability, 2014, 54, 2295-2299.	0.9	0
150	Variability model for forming process in oxygen vacancy modulated high-Î¹ based resistive switching memory devices. Microelectronics Reliability, 2014, 54, 2266-2271.	0.9	4
151	Impact of local structural and electrical properties of grain boundaries in polycrystalline HfO2 on reliability of SiOx interfacial layer. Microelectronics Reliability, 2014, 54, 1712-1717.	0.9	11
152	Impact of ionic drift and vacancy defect passivation on TDDB statistics and lifetime enhancement of metal gate high-κ stacks. , 2014, , .		2
153	Hourglass concept for RRAM: A dynamic and statistical device model. , 2014, , .		32
154	Stochastic failure model for endurance degradation in vacancy modulated HfO<inf>x</inf> RRAM using the percolation cell framework. , 2014, , .		7
155	Noise-based prognostic design for real-time degradation analysis of nanodevice dielectric breakdown. , 2013, , .		2
156	Study of preferential localized degradation and breakdown of HfO2/SiOx dielectric stacks at grain boundary sites of polycrystalline HfO2 dielectrics. Microelectronic Engineering, 2013, 109, 364-369.	1.1	45
157	Identifying the First Layer to Fail in Dual-Layer ${m SiO}_{m x}/{m HfSiON}$ Gate Dielectric Stacks. IEEE Electron Device Letters, 2013, 34, 1289-1291.	2.2	28
158	Modeling the Impact of Reset Depth on Vacancy-Induced Filament Perturbations in ${m HfO}_{2}$ RRAM. IEEE Electron Device Letters, 2013, 34, 614-616.	2.2	25
159	Impact of local variations in high-k dielectric on breakdown and recovery characteristics of advanced gate stacks. , 2013, , .		2
160	Feasibility of SILC Recovery in Sub-10-Ã... EOT Advanced Metal Gateâ€“High-$kappa$ Stacks. IEEE Electron Device Letters, 2013, 34, 1053-1055.	2.2	8
161	Intrinsic switching variability in HfO<inf>2</inf> RRAM. , 2013, , .		74
162	The “buffering” role of high-к in post breakdown degradation immunity of advanced dual layer dielectric gate stacks. , 2013, , .		6

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163	Intrinsic nanofilamentation in resistive switching. Journal of Applied Physics, 2013, 113, 114503.	1.1	69
164	Statistical insight into controlled forming and forming free stacks for HfOx RRAM. Microelectronic Engineering, 2013, 109, 177-181.	1.1	39
165	Performance and reliability of Ultra-Thin HfO<inf>2</inf>-based RRAM (UTO-RRAM). , 2013, , .		5
166	Monte Carlo evidence for need of improved percolation model for non-weibullian degradation in high-κ dielectrics. , 2013, , .		2
167	Microscopic origin of random telegraph noise fluctuations in aggressively scaled RRAM and its impact on read disturb variability. , 2013, , .		58
168	Stochastic variability of vacancy filament configuration in ultra-thin dielectric RRAM and its impact on OFF-state reliability. , 2013, , .		41
169	Multiphonon ionization of traps formed in hafnium oxide by electrical stress. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 361-366.	0.8	0
170	Real-time analysis of ultra-thin gate dielectric breakdown and recovery - A reality. , 2013, , .		4
171	Resilience of ultra-thin oxynitride films to percolative wear-out and reliability implications for high-Î° stacks at low voltage stress. Journal of Applied Physics, 2013, 114, 094504.	1.1	8
172	Dielectric breakdown — Recovery in logic and resistive switching in memory — Bridging the gap between the two phenomena. , 2012, , .		2
173	Role of grain boundary percolative defects and localized trap generation on the reliability statistics of high-κ gate dielectric stacks. , 2012, , .		15
174	Nanoscale physical analysis of localized breakdown events in HfO<inf>2</inf>/SiO<inf>X</inf> dielectric stacks: A correlation study of STM induced BD with C-AFM and TEM. , 2012, , .		3
175	Triggering voltage for post-breakdown random telegraph noise in HfLaO dielectric metal gate metal-oxide-semiconductor field effect transistors and its reliability implications. Journal of Applied Physics, 2012, 111, 024101.	1.1	3
176	Percolative Model and Thermodynamic Analysis of Oxygen-Ion-Mediated Resistive Switching. IEEE Electron Device Letters, 2012, 33, 712-714.	2.2	19
177	New Leakage Mechanism and Dielectric Breakdown Layer Detection in Metal-Nanocrystal-Embedded Dual-Layer Memory Gate Stack. IEEE Electron Device Letters, 2011, 32, 800-802.	2.2	4
178	Modified Percolation Model for Polycrystalline High-$ kappa$ Gate Stack With Grain Boundary Defects. IEEE Electron Device Letters, 2011, 32, 78-80.	2.2	30
179	Very Low Reset Current for an RRAM Device Achieved in the Oxygen-Vacancy-Controlled Regime. IEEE Electron Device Letters, 2011, 32, 716-718.	2.2	27
180	Filamentation Mechanism of Resistive Switching in Fully Silicided High- $kappa$ Gate Stacks. IEEE Electron Device Letters, 2011, 32, 455-457.	2.2	13

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181	Oxygen-Soluble Gate Electrodes for Prolonged High-$ kappa$ Gate-Stack Reliability. IEEE Electron Device Letters, 2011, 32, 252-254.	2.2	20
182	Stress migration risk on electromigration reliability in advanced narrow line copper interconnects. Journal of Applied Physics, 2011, 110, 083702.	1.1	6
183	The effect of stress migration on electromigration in dual damascene copper interconnects. Journal of Applied Physics, 2011, 109, .	1.1	19
184	Physical analysis of breakdown in high-Î¹/metal gate stacks using TEM/EELS and STM for reliability enhancement (invited). Microelectronic Engineering, 2011, 88, 1365-1372.	1.1	19
185	Evidence for compliance controlled oxygen vacancy and metal filament based resistive switching mechanisms in RRAM. Microelectronic Engineering, 2011, 88, 1124-1128.	1.1	44
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