

Michael H Azarian

List of Publications by Year in descending order

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87
papers

1,854
citations

304743

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89
all docs

89
docs citations

89
times ranked

1628
citing authors

#	ARTICLE	IF	CITATIONS
1	Learnable Wavelet Scattering Networks: Applications to Fault Diagnosis of Analog Circuits and Rotating Machinery. Electronics (Switzerland), 2022, 11, 451.	3.1	10
2	Comparison Between Synthetic Oil Lubricants for Reducing Fretting Degradation in Lightly Loaded Gold-Plated Contacts. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2022, 12, 616-626.	2.5	0
3	Life model for tantalum electrolytic capacitors with conductive polymers. Microelectronics Reliability, 2020, 104, 113550.	1.7	5
4	Reliability analysis of multilayer polymer aluminum electrolytic capacitors. Microelectronics Reliability, 2020, 112, 113725.	1.7	9
5	Improved electromagnetic coil insulation health monitoring using equivalent circuit model analysis. International Journal of Electrical Power and Energy Systems, 2020, 119, 105829.	5.5	9
6	Effect of different lubricant films on contact resistance of stationary separable gold-plated electrical contacts. Journal of Materials Science: Materials in Electronics, 2019, 30, 14368-14381.	2.2	2
7	A Comparative Study of Deep Learning-Based Diagnostics for Automotive Safety Components Using a Raspberry Pi. , 2019, , .		3
8	Development of a Microvia Fatigue Life Model Using a Response Surface Method. IEEE Transactions on Device and Materials Reliability, 2019, 19, 176-188.	2.0	6
9	Electronic Circuit Diagnosis with No Data. , 2019, , .		3
10	Fretting Performance Comparison between PFPE and PAO Based Lubricants for Lightly-Loaded Gold-Plated Electrical Contacts. , 2019, , .		0
11	Metallized film capacitors used for EMI filtering: A reliability review. Microelectronics Reliability, 2019, 92, 123-135.	1.7	38
12	Analyzing Data Complexity Using Metafeatures for Classification Algorithm Selection. , 2018, , .		3
13	Ieee Access Special Section Editorial:Complex System Health Management Based On Condition Monitoring And Test Data. IEEE Access, 2018, 6, 72028-72032.	4.2	0
14	Effects of Moisture and Temperature on Membrane Switches in Laptop Keyboards. IEEE Transactions on Device and Materials Reliability, 2018, 18, 535-545.	2.0	5
15	Impedance-Based Condition Monitoring for Insulation Systems Used in Low-Voltage Electromagnetic Coils. IEEE Transactions on Industrial Electronics, 2017, 64, 3748-3757.	7.9	17
16	Failure of Polymer Aluminum Electrolytic Capacitors Under Elevated Temperature Humidity Environments. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 745-750.	2.5	20
17	An ensemble learning-based fault diagnosis method for rotating machinery. , 2017, , .		11
18	Electromagnetic coil equivalent circuit model sensitivity analysis for impedance-based insulation health monitoring. , 2017, , .		1

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19	Correlation analysis for impedance-based health monitoring of electromagnetic coils. , 2016, , .		1
20	Rapid Assessment Testing of Polymer Aluminum Electrolytic Capacitors in Elevated Temperature-Humidity Environments. Journal of Failure Analysis and Prevention, 2016, 16, 1059-1066.	0.9	4
21	Motor Bearing Fault Detection Using Spectral Kurtosis-Based Feature Extraction Coupled With K-Nearest Neighbor Distance Analysis. IEEE Transactions on Industrial Electronics, 2016, 63, 1793-1803.	7.9	372
22	Opportunistic maintenance for multi-component systems considering structural dependence and economic dependence. Journal of Systems Engineering and Electronics, 2015, 26, 493-501.	2.2	19
23	Health monitoring of cooling fan bearings based on wavelet filter. Mechanical Systems and Signal Processing, 2015, 64-65, 149-161.	8.0	51
24	Effects of Voiding on Thermomechanical Reliability of Copper-Filled Microvias: Modeling and Simulation. IEEE Transactions on Device and Materials Reliability, 2015, 15, 500-510.	2.0	14
25	Remaining-Life Prediction of Solder Joints Using RF Impedance Analysis and Gaussian Process Regression. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 1602-1609.	2.5	31
26	Failure mechanisms of ball bearings under lightly loaded, non-accelerated usage conditions. Tribology International, 2015, 81, 291-299.	5.9	23
27	Reliability of Manganese Dioxide and Conductive Polymer Tantalum Capacitors under Temperature Humidity Bias Testing. International Symposium on Microelectronics, 2015, 2015, 000713-000719.	0.0	3
28	Fault diagnostic opportunities for solenoid operated valves using physics-of-failure analysis. , 2014, , .		11
29	Rolling element bearing fault detection using density-based clustering. , 2014, , .		5
30	Scintillation Conditioning of Tantalum Capacitors With Manganese Dioxide Cathodes. IEEE Transactions on Device and Materials Reliability, 2014, 14, 630-638.	2.0	2
31	Detection and Reliability Risks of Counterfeit Electrolytic Capacitors. IEEE Transactions on Reliability, 2014, 63, 468-479.	4.6	27
32	Effects of Voiding on the Degradation of Microvias in High Density Interconnect Printed Circuit Boards Under Thermomechanical Stresses. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 1374-1379.	2.5	4
33	Analysis of the Kinetics of Electrochemical Migration on Printed Circuit Boards Using Nernst-Planck Transport Equation. Electrochimica Acta, 2014, 142, 1-10.	5.2	18
34	Detection of capacitor electrolyte residues with FTIR in failure analysis. Journal of Materials Science: Materials in Electronics, 2014, 25, 635-644.	2.2	7
35	Modeling the Electrical Conduction in Epoxy-BaTiO ₃ Nanocomposites. Journal of Electronic Materials, 2013, 42, 1101-1107.	2.2	10
36	Reliability monitoring of a separable land grid array using time domain reflectometry. , 2013, , .		1

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37	Detection of under-lubricated ball bearings using vibration signals. , 2013, , .		0
38	A Critique of the IPC-9591 Standard: Performance Parameters for Air Moving Devices. IEEE Transactions on Device and Materials Reliability, 2013, 13, 146-155.	2.0	10
39	Comparative evaluation of metal and polymer ball bearings. Wear, 2013, 302, 1499-1505.	3.1	20
40	Effect of Temperature and Relative Humidity on the Impedance Degradation of Dust-Contaminated Electronics. Journal of the Electrochemical Society, 2013, 160, C97-C105.	2.9	40
41	Failure Prediction of Multilayer Ceramic Capacitors (MLCCs) under Temperature-Humidity-Bias Testing Conditions Using Non-Linear Modeling. Journal of the Microelectronics and Packaging Society, 2013, 20, 7-10.	0.1	4
42	Highly Accelerated Life Testing of Embedded Planar Capacitors With Epoxy- BaTiO_3 Nanocomposite Dielectric. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 1580-1586.	2.5	4
43	Reliability of Embedded Planar Capacitors With Epoxy- BaTiO_3 Composite Dielectric During Temperature-Humidity-Bias Tests. IEEE Transactions on Device and Materials Reliability, 2012, 12, 86-93.	2.0	7
44	Accelerated Temperature and Voltage Stress Tests of Embedded Planar Capacitors With Epoxy- BaTiO_3 Composite Dielectric. Journal of Electronic Packaging, Transactions of the ASME, 2012, 134, .	1.8	6
45	The role of impedance control in early detection of interconnect degradation using time domain reflectometry. , 2012, , .		1
46	Gear fault diagnosis using electrical signals and its application to wind power systems. , 2012, , .		4
47	Effects of moisture absorption on the electrical parameters of embedded capacitors with epoxy- BaTiO_3 nanocomposite dielectric. Journal of Materials Science: Materials in Electronics, 2012, 23, 1504-1510.	2.2	14
48	Embedded Capacitors in Printed Wiring Board: A Technological Review. Journal of Electronic Materials, 2012, 41, 2286-2303.	2.2	26
49	Physics-of-failure analysis of cooling fans. , 2011, , .		3
50	An analytical model of the RF impedance change due to solder joint cracking. , 2011, , .		12
51	Nondestructive Sensing of Interconnect Failure Mechanisms Using Time-Domain Reflectometry. IEEE Sensors Journal, 2011, 11, 1236-1241.	4.7	24
52	Influence of Molding Compound on Leakage Current in MOS Transistors. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 1054-1063.	2.5	12
53	Numerical simulation of impedance discontinuities resulting from degradation of interconnections on printed circuit boards. , 2011, , .		1
54	Temperature and voltage aging effects on electrical conduction mechanism in epoxy- BaTiO_3 composite dielectric used in embedded capacitors. Microelectronics Reliability, 2011, 51, 946-952.	1.7	26

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55	Evaluation of Electrochemical Migration on Printed Circuit Boards with Lead-Free and Tin-Lead Solder. Journal of Electronic Materials, 2011, 40, 1921-1936.	2.2	26
56	Cooling fan bearing fault identification using vibration measurement. , 2011, , .		14
57	Prognostics of Failures in Embedded Planar Capacitors using Model-Based and Data-Driven Approaches. Journal of Intelligent Material Systems and Structures, 2011, 22, 1293-1304.	2.5	37
58	Effectiveness of embedded capacitors in reducing the number of surface mount capacitors for decoupling applications. Circuit World, 2010, 36, 22-30.	0.9	12
59	Sensor Systems for Prognostics and Health Management. Sensors, 2010, 10, 5774-5797.	3.8	192
60	Prognostics of Embedded Planar Capacitors Under Temperature and Voltage Aging. , 2010, , .		3
61	An investigation into a low insulation resistance failure of multilayer ceramic capacitors. , 2010, , .		1
62	Physics-of-failure approach for fan PHM in electronics applications. , 2010, , .		18
63	Degradation of digital signal characteristics due to intermediate stages of interconnect failure. , 2010, , .		2
64	An Assessment of Immersion Silver Surface Finish for Lead-Free Electronics. Journal of Electronic Materials, 2009, 38, 815-827.	2.2	45
65	Early Detection of Interconnect Degradation by Continuous Monitoring of RF Impedance. IEEE Transactions on Device and Materials Reliability, 2009, 9, 296-304.	2.0	55
66	Identification of interconnect failure mechanisms using RF impedance analysis. , 2009, , .		12
67	Detection of solder joint failure precursors on tin-lead and lead-free assemblies using RF impedance analysis. , 2009, , .		5
68	Failure prognostics of multilayer ceramic capacitors in temperature-humidity-bias conditions. , 2008, , .		20
69	Early detection of interconnect degradation using RF impedance and SPRT. , 2008, , .		22
70	Analysis of Solder Joint Failure Criteria and Measurement Techniques in the Qualification of Electronic Products. IEEE Transactions on Components and Packaging Technologies, 2008, 31, 469-477.	1.3	33
71	Qualification for product development. , 2008, , .		6
72	Effect of Solder Joint Degradation on RF Impedance. , 2008, , .		12

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73	Flex Cracking of Multilayer Ceramic Capacitors Assembled With Pb-Free and Tin-Lead Solders. IEEE Transactions on Device and Materials Reliability, 2008, 8, 182-192.	2.0	33
74	Failure site isolation on passive RFID tags. , 2008, , .		7
75	Detection of solder joint degradation using RF impedance analysis. , 2008, , .		17
76	Reliability of Printed Circuit Boards Processed Using No-Clean Flux Technology in Temperature-Humidity-Bias Conditions. IEEE Transactions on Device and Materials Reliability, 2008, 8, 426-434.	2.0	60
77	Sensor System Selection for Prognostics and Health Monitoring. , 2008, , .		17
78	Using a reliability capability maturity model to benchmark electronics companies. International Journal of Quality and Reliability Management, 2007, 24, 547-563.	2.0	31
79	Prognostics of ceramic capacitor temperature-humidity-bias reliability using Mahalanobis distance analysis. Circuit World, 2007, 33, 21-28.	0.9	35
80	Isothermal aging effects on flex cracking of multilayer ceramic capacitors with standard and flexible terminations. Microelectronics Reliability, 2007, 47, 2215-2225.	1.7	15
81	Surface Insulation Resistance of Conformally Coated Printed Circuit Boards Processed With No-Clean Flux. IEEE Transactions on Electronics Packaging Manufacturing, 2006, 29, 217-223.	1.4	57
82	Failure Site Transition During Drop Testing of Printed Wiring Assemblies. , 2005, , .		3
83	An investigation of nano-wear during contact recording. Wear, 1996, 197, 211-220.	3.1	24
84	Nanoindentation, microscratch, friction and wear studies of coatings for contact recording applications. Wear, 1995, 181-183, 743-758.	3.1	67
85	Head-disk interaction in gas-lubricated slider bearings. Wear, 1993, 168, 49-57.	3.1	5
86	Tribology of thin-film media in both flying and sliding modes. Wear, 1993, 168, 59-76.	3.1	7
87	Wear characteristics in thin-film media. Wear, 1993, 168, 77-83.	3.1	2