

Michael H Azarian

List of Publications by Year in descending order

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papers

1,854
citations

304743

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89
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docs citations

89
times ranked

1628
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Sensor Systems for Prognostics and Health Management. Sensors, 2010, 10, 5774-5797.	3.8	192
3	Nanoindentation, microscratch, friction and wear studies of coatings for contact recording applications. Wear, 1995, 181-183, 743-758.	3.1	67
4	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
5	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
6	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
7	Health monitoring of cooling fan bearings based on wavelet filter. Mechanical Systems and Signal Processing, 2015, 64-65, 149-161.	8.0	51
8	An Assessment of Immersion Silver Surface Finish for Lead-Free Electronics. Journal of Electronic Materials, 2009, 38, 815-827.	2.2	45
9	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
10	Metallized film capacitors used for EMI filtering: A reliability review. Microelectronics Reliability, 2019, 92, 123-135.	1.7	38
11	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
12	Prognostics of ceramic capacitor temperature-humidity-bias reliability using Mahalanobis distance analysis. Circuit World, 2007, 33, 21-28.	0.9	35
13	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
14	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
15	Using a reliability capability maturity model to benchmark electronics companies. International Journal of Quality and Reliability Management, 2007, 24, 547-563.	2.0	31
16	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
17	Detection and Reliability Risks of Counterfeit Electrolytic Capacitors. IEEE Transactions on Reliability, 2014, 63, 468-479.	4.6	27
18	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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19	Evaluation of Electrochemical Migration on Printed Circuit Boards with Lead-Free and Tin-Lead Solder. <i>Journal of Electronic Materials</i> , 2011, 40, 1921-1936.	2.2	26
20	Embedded Capacitors in Printed Wiring Board: A Technological Review. <i>Journal of Electronic Materials</i> , 2012, 41, 2286-2303.	2.2	26
21	An investigation of nano-wear during contact recording. <i>Wear</i> , 1996, 197, 211-220.	3.1	24
22	Nondestructive Sensing of Interconnect Failure Mechanisms Using Time-Domain Reflectometry. <i>IEEE Sensors Journal</i> , 2011, 11, 1236-1241.	4.7	24
23	Failure mechanisms of ball bearings under lightly loaded, non-accelerated usage conditions. <i>Tribology International</i> , 2015, 81, 291-299.	5.9	23
24	Early detection of interconnect degradation using RF impedance and SPRT. , 2008, , .		22
25	Failure prognostics of multilayer ceramic capacitors in temperature-humidity-bias conditions. , 2008, , .		20
26	Comparative evaluation of metal and polymer ball bearings. <i>Wear</i> , 2013, 302, 1499-1505.	3.1	20
27	Failure of Polymer Aluminum Electrolytic Capacitors Under Elevated Temperature Humidity Environments. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2017, 7, 745-750.	2.5	20
28	Opportunistic maintenance for multi-component systems considering structural dependence and economic dependence. <i>Journal of Systems Engineering and Electronics</i> , 2015, 26, 493-501.	2.2	19
29	Physics-of-failure approach for fan PHM in electronics applications. , 2010, , .		18
30	Analysis of the Kinetics of Electrochemical Migration on Printed Circuit Boards Using Nernst-Planck Transport Equation. <i>Electrochimica Acta</i> , 2014, 142, 1-10.	5.2	18
31	Detection of solder joint degradation using RF impedance analysis. , 2008, , .		17
32	Impedance-Based Condition Monitoring for Insulation Systems Used in Low-Voltage Electromagnetic Coils. <i>IEEE Transactions on Industrial Electronics</i> , 2017, 64, 3748-3757.	7.9	17
33	Sensor System Selection for Prognostics and Health Monitoring. , 2008, , .		17
34	Isothermal aging effects on flex cracking of multilayer ceramic capacitors with standard and flexible terminations. <i>Microelectronics Reliability</i> , 2007, 47, 2215-2225.	1.7	15
35	Cooling fan bearing fault identification using vibration measurement. , 2011, , .		14
36	Effects of moisture absorption on the electrical parameters of embedded capacitors with epoxy-BaTiO ₃ nanocomposite dielectric. <i>Journal of Materials Science: Materials in Electronics</i> , 2012, 23, 1504-1510.	2.2	14

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37	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
38	Effect of Solder Joint Degradation on RF Impedance. , 2008, , .		12
39	Identification of interconnect failure mechanisms using RF impedance analysis. , 2009, , .		12
40	Effectiveness of embedded capacitors in reducing the number of surface mount capacitors for decoupling applications. Circuit World, 2010, 36, 22-30.	0.9	12
41	An analytical model of the RF impedance change due to solder joint cracking. , 2011, , .		12
42	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
43	Fault diagnostic opportunities for solenoid operated valves using physics-of-failure analysis. , 2014, , .		11
44	An ensemble learning-based fault diagnosis method for rotating machinery. , 2017, , .		11
45	Modeling the Electrical Conduction in Epoxyâ€“BaTiO ₃ Nanocomposites. Journal of Electronic Materials, 2013, 42, 1101-1107.	2.2	10
46	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
47	Learnable Wavelet Scattering Networks: Applications to Fault Diagnosis of Analog Circuits and Rotating Machinery. Electronics (Switzerland), 2022, 11, 451.	3.1	10
48	Reliability analysis of multilayer polymer aluminum electrolytic capacitors. Microelectronics Reliability, 2020, 112, 113725.	1.7	9
49	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
50	Tribology of thin-film media in both flying and sliding modes. Wear, 1993, 168, 59-76.	3.1	7
51	Failure site isolation on passive RFID tags. , 2008, , .		7
52	Reliability of Embedded Planar Capacitors With Epoxyâ€“ BaTiO_3 Composite Dielectric During Temperatureâ€“Humidityâ€“Bias Tests. IEEE Transactions on Device and Materials Reliability, 2012, 12, 86-93.	2.0	7
53	Detection of capacitor electrolyte residues with FTIR in failure analysis. Journal of Materials Science: Materials in Electronics, 2014, 25, 635-644.	2.2	7
54	Qualification for product development. , 2008, , .		6

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55	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
56	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
57	Head-disk interaction in gas-lubricated slider bearings. Wear, 1993, 168, 49-57.	3.1	5
58	Detection of solder joint failure precursors on tin-lead and lead-free assemblies using RF impedance analysis. , 2009, , .		5
59	Rolling element bearing fault detection using density-based clustering. , 2014, , .		5
60	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
61	Life model for tantalum electrolytic capacitors with conductive polymers. Microelectronics Reliability, 2020, 104, 113550.	1.7	5
62	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
63	Gear fault diagnosis using electrical signals and its application to wind power systems. , 2012, , .		4
64	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
65	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
66	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
67	Prognostics of Embedded Planar Capacitors Under Temperature and Voltage Aging. , 2010, , .		3
68	Physics-of-failure analysis of cooling fans. , 2011, , .		3
69	Analyzing Data Complexity Using Metafeatures for Classification Algorithm Selection. , 2018, , .		3
70	A Comparative Study of Deep Learning-Based Diagnostics for Automotive Safety Components Using a Raspberry Pi. , 2019, , .		3
71	Electronic Circuit Diagnosis with No Data. , 2019, , .		3
72	Failure Site Transition During Drop Testing of Printed Wiring Assemblies. , 2005, , .		3

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73	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
74	Wear characteristics in thin-film media. Wear, 1993, 168, 77-83.	3.1	2
75	Degradation of digital signal characteristics due to intermediate stages of interconnect failure. , 2010, , .		2
76	Scintillation Conditioning of Tantalum Capacitors With Manganese Dioxide Cathodes. IEEE Transactions on Device and Materials Reliability, 2014, 14, 630-638.	2.0	2
77	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
78	An investigation into a low insulation resistance failure of multilayer ceramic capacitors. , 2010, , .		1
79	Numerical simulation of impedance discontinuities resulting from degradation of interconnections on printed circuit boards. , 2011, , .		1
80	The role of impedance control in early detection of interconnect degradation using time domain reflectometry. , 2012, , .		1
81	Reliability monitoring of a separable land grid array using time domain reflectometry. , 2013, , .		1
82	Correlation analysis for impedance-based health monitoring of electromagnetic coils. , 2016, , .		1
83	Electromagnetic coil equivalent circuit model sensitivity analysis for impedance-based insulation health monitoring. , 2017, , .		1
84	Detection of under-lubricated ball bearings using vibration signals. , 2013, , .		0
85	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
86	Fretting Performance Comparison between PFPE and PAO Based Lubricants for Lightly-Loaded Gold-Plated Electrical Contacts. , 2019, , .		0
87	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