

Michael C Hamilton

List of Publications by Year in descending order

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112
papers

1,878
citations

361045

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40
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113
all docs

113
docs citations

113
times ranked

2235
citing authors

#	ARTICLE	IF	CITATIONS
1	Thin-Film Organic Polymer Phototransistors. IEEE Transactions on Electron Devices, 2004, 51, 877-885.	1.6	280
2	Two-Dimensional-Material-Based Field-Effect Transistor Biosensor for Detecting COVID-19 Virus (SARS-CoV-2). ACS Nano, 2021, 15, 11461-11469.	7.3	149
3	Conductive interpenetrating networks of polypyrrole and polycaprolactone encourage electrophysiological development of cardiac cells. Acta Biomaterialia, 2015, 28, 109-120.	4.1	130
4	Reliability of Ag Sintering for Power Semiconductor Die Attach in High-Temperature Applications. IEEE Transactions on Power Electronics, 2017, 32, 7083-7095.	5.4	95
5	Organic Polymer Thin-Film Transistor Photosensors. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 840-848.	1.9	78
6	Investigation into the application of low melting temperature alloys as wet thermal interface materials. International Journal of Heat and Mass Transfer, 2015, 85, 996-1002.	2.5	78
7	High Channel Mobility 4H-SiC MOSFETs by Antimony Counter-Doping. IEEE Electron Device Letters, 2014, 35, 894-896.	2.2	52
8	Pressureless Sintering of Microscale Silver Paste for 300 Å°C Applications. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 1258-1264.	1.4	51
9	Flexible superconducting Nb transmission lines on thin film polyimide for quantum computing applications. Superconductor Science and Technology, 2016, 29, 084007.	1.8	51
10	Field-Effect Mobility of Organic Polymer Thin-Film Transistors. Chemistry of Materials, 2004, 16, 4699-4704.	3.2	48
11	Characterization of transferred vertically aligned carbon nanotubes arrays as thermal interface materials. International Journal of Heat and Mass Transfer, 2016, 97, 94-100.	2.5	46
12	Spiking neuron circuits using superconducting quantum phase-slip junctions. Journal of Applied Physics, 2018, 124, .	1.1	38
13	The effects of proton irradiation on the lateral and vertical scaling of UHV/CVD SiGe HBT BiCMOS technology. IEEE Transactions on Nuclear Science, 2000, 47, 2515-2520.	1.2	37
14	High-frequency reverse-time chaos generation using digital chaotic maps. Electronics Letters, 2014, 50, 1683-1685.	0.5	37
15	Thermal performance of low melting temperature alloys at the interface between dissimilar materials. Applied Thermal Engineering, 2016, 99, 72-79.	3.0	37
16	Proton radiation response of SiGe HBT analog and RF circuits and passives. IEEE Transactions on Nuclear Science, 2001, 48, 2238-2243.	1.2	34
17	Resistive switching characteristics in printed Cu/CuO/(AgO)/Ag memristors. Electronics Letters, 2013, 49, 829-830.	0.5	33
18	High-Performance and High-Data-Rate Quasi-Coaxial LTCC Vertical Interconnect Transitions for Multichip Modules and System-on-Package Applications. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2015, 5, 307-313.	1.4	23

#	ARTICLE	IF	CITATIONS
19	Accelerated aging and thermal cycling of low melting temperature alloys as wet thermal interface materials. <i>Microelectronics Reliability</i> , 2015, 55, 2698-2704.	0.9	22
20	Superconducting Neuromorphic Computing Using Quantum Phase-Slip Junctions. <i>IEEE Transactions on Applied Superconductivity</i> , 2019, 29, 1-5.	1.1	20
21	SiC Power Device Die Attach for Extreme Environments. <i>IEEE Transactions on Electron Devices</i> , 2015, 62, 346-353.	1.6	18
22	Recent advances in energy harvesting technology and techniques. , 2012, , .		16
23	Reduced-Loss Ink-Jet Printed Flexible CPW With Copper Coating. <i>IEEE Microwave and Wireless Components Letters</i> , 2013, 23, 178-180.	2.0	13
24	On the anomaly in the electrical characteristics of thin film transistors with multi-layered sol-gel processed ZnO. <i>Thin Solid Films</i> , 2019, 672, 152-156.	0.8	13
25	Three-Dimensional FDTD Simulation of Nonlinear Ferroelectric Materials in Rectangular Waveguide. <i>IEEE Transactions on Plasma Science</i> , 2013, 41, 365-370.	0.6	12
26	SPICE model implementation of quantum phase-slip junctions. <i>Electronics Letters</i> , 2015, 51, 979-981.	0.5	12
27	Thin-Film Nb/Polyimide Superconducting Stripline Flexible Cables. <i>IEEE Transactions on Applied Superconductivity</i> , 2019, 29, 1-5.	1.1	12
28	Monolayer 2D quantum materials subjected to gamma irradiation in high-vacuum for nuclear and space applications. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	12
29	Characterization of Bi-Ag-X Solder for High Temperature SiC Die Attach. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2014, 4, 1778-1784.	1.4	11
30	Charge-Based Superconducting Digital Logic Family Using Quantum Phase-Slip Junctions. <i>IEEE Transactions on Applied Superconductivity</i> , 2018, 28, 1-4.	1.1	11
31	Pressureless, Low Temperature Sintering of Micro-scale Silver Paste for Die Attach for 300°C Applications. <i>Additional Conferences (Device Packaging HiTEC HiTEN & CICMT)</i> , 2014, 2014, 000165-000171.	0.2	11
32	Embedded Niobium Using PI-2611 for Superconducting Flexible Cables. <i>MRS Advances</i> , 2017, 2, 2199-2204.	0.5	10
33	Fabrication and Characterization of Double Helix Structures for Compliant and Reworkable Electrical Interconnects. <i>Journal of Microelectromechanical Systems</i> , 2014, 23, 1219-1227.	1.7	9
34	Impact of surface enhancements upon boiling heat transfer in a liquid immersion cooled high performance small form factor server model. , 2014, , .		9
35	High frequency signal transmission across contact interface subjected to vibration induced fretting corrosion. , 2017, , .		9
36	Understanding the impact of temperature variations on measurement of stress dependent parameters of bipolar junction transistors. , 2014, , .		8

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37	Microwave Performance of Niobium/Kapton Superconducting Flexible Cables. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-4.	1.1	8
38	High-Quality Factor Superconducting Flexible Resonators Embedded in Thin-Film Polyimide HD-4110. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	8
39	Spectroscopic photo <i>V</i> diagnostics of nitride-based high electron mobility transistor structures on Si wafers. Electronics Letters, 2013, 49, 1547-1548.	0.5	7
40	Efficient Determination of Copper Electroplating Chemistry Additives. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 1380-1390.	1.4	7
41	A digital matched filter for reverse time chaos. Chaos, 2016, 26, 073108.	1.0	7
42	Evaluation of Thick-Film Materials for High-Temperature Packaging. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 773-783.	1.4	7
43	Proton-induced displacement damage in ZnO thin film transistors: Impact of damage location. Microelectronics Reliability, 2018, 91, 262-268.	0.9	7
44	Complementary Quantum Logic Family Using Josephson Junctions and Quantum Phase-Slip Junctions. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-6.	1.1	7
45	High dose gamma irradiation effects on properties of active layers in ZnO thin film transistors. Semiconductor Science and Technology, 2021, 36, 105011.	1.0	7
46	Electrical characteristics and density of states of thin-film transistors based on sol-gel derived ZnO channel layers with different annealing temperatures. Journal of Applied Physics, 2018, 123, 161503.	1.1	7
47	Organic-polymer thin-film transistors for active-matrix flat-panel displays?. Journal of the Society for Information Display, 2003, 11, 543.	0.8	6
48	Comparison of different neural network architectures for digit image recognition. , 2011, , .		6
49	Solution-Based Fabrication of Carbon Nanotube Bumps for Flip-Chip Interconnects. IEEE Nanotechnology Magazine, 2014, 13, 1118-1126.	1.1	6
50	Low-loss cable-to-cable parallel connection method for thin-film superconducting flexible microwave transmission lines. Superconductor Science and Technology, 2019, 32, 075006.	1.8	6
51	Isochronous data link across a superconducting Nb flex cable with 5 femtojoules per bit[*]. Superconductor Science and Technology, 2022, 35, 045014.	1.8	6
52	Broadband characterisation of engineered dielectric fluids using microstrip ring resonator technique. Electronics Letters, 2014, 50, 576-578.	0.5	5
53	Investigation and characterization of a high performance, small form factor, modular liquid immersion cooled server model. , 2014, , .		5
54	Durability of Low Melt Alloys as Thermal Interface Materials. Journal of Electronic Packaging, Transactions of the ASME, 2016, 138, .	1.2	5

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55	Study of device instability of bottom-gate ZnO transistors with sol-gel derived channel layers. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2017, 35, 03D104.	0.6	5
56	Influence of Fatigue and Bending Strain on Critical Currents of Niobium Superconducting Flexible Cables Containing Ti and Cu Interfacial Layers. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	5
57	Process Optimization of Pressure-Assisted Rapid Ag Sintering Die Attach for 300 °C Applications. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 855-861.	1.4	5
58	Mechanical Reliability of Thick Films for High-Temperature Packaging. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 1003-1013.	1.4	5
59	High-Speed and Low-Power Superconducting Neuromorphic Circuits Based on Quantum Phase-Slip Junctions. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-8.	1.1	5
60	Face-to-Face Cable Interconnect Scheme for Thin Flexible Superconducting Stripline Cables. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.1	5
61	Through Si vias using liquid metal conductors for re-workable 3D electronics. , 2013, , .		4
62	Solution-Deposited Carbon Nanotube Flip Chip Interconnect for High-Frequency Applications. IEEE Microwave and Wireless Components Letters, 2015, 25, 229-231.	2.0	4
63	Reliability of AuGe Die Attach on DBC Substrates With Different Ni Surface Finishes. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 1598-1607.	1.4	4
64	The Effect of Vibration Induced Fretting on Contact Failure in the Coaxial Connector. , 2019, , .		4
65	Towards Cable-to-Cable Connectors for Flexible Thin-Film Superconducting Transmission Lines. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-6.	1.1	4
66	Effect of Illumination on Organic Polymer Thin-Film Transistors. Materials Research Society Symposia Proceedings, 2003, 771, 10171.	0.1	4
67	Toward Learning in Neuromorphic Circuits Based on Quantum Phase Slip Junctions. Frontiers in Neuroscience, 2021, 15, 765883.	1.4	4
68	Capacitive Fringing Field Moisture Sensors Implemented in Flexible Printed Circuit Board Technology. Journal of Microelectronics and Electronic Packaging, 2014, 11, 122-127.	0.8	3
69	Microwave Loss Measurements of Copper-Clad Superconducting Niobium Microstrip Resonators on Flexible Polyimide Substrates. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-7.	1.1	3
70	Reliability of Die Attach on DBC Substrates With Different Ni Surface Finishes Using BiAgX Solder. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 1940-1950.	1.4	3
71	Distinguishing Dielectric Loss From Superconductor Loss Using Flexible Thin-Film Superconducting Resonator Structures. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.1	3
72	Reliability Characterization of a Flexible Interconnect for Cryogenic and Quantum Applications. , 2021, , .		3

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73	Atomic Layer Deposited Materials as Barrier Layers for Preservation of Nb Superconductivity in Multilayered Thin-Film Structures. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-4.	1.1	3
74	Radiation Effects on Thin Flexible Superconducting Cables. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.1	3
75	Preserving Nb Superconductivity in Thin Film Flexible Structures. Additional Conferences (Device) Tj ETQq1 1 0.784314 rgBT /Overlock	0.2	3
76	Minimizing Film Stress and Degradation in Thin-Film Niobium Superconducting Cables. Additional Conferences (Device Packaging HiTEC HiTEN & CICMT), 2017, 2017, 1-25.	0.2	3
77	Superconducting Molybdenum Multi-Chip Module Approach for Cryogenic and Quantum Applications. , 2022, , .		3
78	Organic polymer thin film phototransistors. , 2003, , .		2
79	Ink-Jet Printed Cu/Cu _x O/Ag ReRAM Memory Devices Fabricated on Flexible Substrate. Materials Research Society Symposia Proceedings, 2014, 1692, 45.	0.1	2
80	Flip-chip interconnects based on solution deposited carbon nanotube bumps. , 2014, , .		2
81	Time-Resolved Photocurrent Spectroscopic Diagnostics of Electrically Active Defects in AlGa _N /Ga _N High Electron Mobility Transistor (HEMT) Structure Grown on Si Wafers. Journal of Nanoscience and Nanotechnology, 2016, 16, 7630-7634.	0.9	2
82	Simulation of the Refractive Index of Ga Doped ZnO Nanoparticles Embedded in PEDOT:PSS Using Effective Medium Approximations. Journal of Nanoscience and Nanotechnology, 2016, 16, 7358-7362.	0.9	2
83	Cryogenic microwave characterization of Kapton polyimide using superconducting resonators. , 2016, , .		2
84	Thin-Film Multichip Packaging for High-Temperature Geothermal Application. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 692-702.	1.4	2
85	Reliability of low melt alloys as thermal interface materials. , 2017, , .		2
86	Enhancement of electrical characteristics of aZTO TFTs based on channel layers produced with alternating precursor concentration. Electronics Letters, 2018, 54, 1298-1300.	0.5	2
87	Time dependence of organic polymer thin film transistor current. , 2003, 5217, 7.		1
88	Source / drain contacts in organic polymer thin film transistors. Materials Research Society Symposia Proceedings, 2003, 771, 621.	0.1	1
89	The Influence of Uniaxial Normal Stress on the Performance of Vertical Bipolar Transistors. , 2013, , .		1
90	Indium plated carbon nanotubes pattern on flexible substrate defined by ink-jet printing. Materials Research Society Symposia Proceedings, 2013, 1505, 1.	0.1	1

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91	Flip chip based on compliant double helix interconnect for high frequency applications. , 2014, , .		1
92	A 0.8–3GHz wideband folded down-converter with noise cancellation in 0.18um SiGe technology. , 2015, , .		1
93	Lead-Free Solder for Assembly of Thick-Film Hybrid Modules for Use in High-Temperature Applications. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 373-382.	1.4	1
94	Conductive Mechanism of Bi-Doped Thick-Film Dielectric in High-Temperature Aging With Bias. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2018, 8, 784-791.	1.4	1
95	Reliability Studies of Nb/AlO x /Al/Nb Josephson Junctions Through Accelerated-Life Electrical Stress Testing. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-7.	1.1	1
96	Low Temperature, Fast Sintering of Micro-Scale Silver Paste for Die Attach for 300Â°C Applications. International Symposium on Microelectronics, 2015, 2015, 000654-000660.	0.3	1
97	Additive manufacturing and characterization of microstructures using two-photon polymerization for use in cryogenic applications. Journal of Materials Research, 2022, 37, 1978-1985.	1.2	1
98	Approaches for High Performance and Thermally Optimized Flexible Cryogenic Microwave Ribbon Cables. IOP Conference Series: Materials Science and Engineering, 2022, 1241, 012027.	0.3	1
99	Nanostructured Amorphous Silicon on Metal Electrodes: Electrical and Optical Properties. Materials Research Society Symposia Proceedings, 2013, 1551, 61-66.	0.1	0
100	A low-cost NLOS ultra-violet V2I identification system for vehicular theft recovery. , 2013, , .		0
101	Durability of Low Melt Alloys as Thermal Interface Materials. , 2015, , .		0
102	Dual-band quad-core transformer coupled VCO with phase noise optimization. , 2015, , .		0
103	A 1D numerical model for rapid stress analysis in bipolar junction transistors. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2016, 29, 1161-1179.	1.2	0
104	Thin-Film Flip-Chip Assembly for High-Temperature Geothermal Application. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, , 1-8.	1.4	0
105	Thin-Film Signal and Power Redistribution Layers Based on AL-X and Cu. International Symposium on Microelectronics, 2012, 2012, 000326-000333.	0.3	0
106	Frequency and Time-Domain Performance of LTCC Transmission Lines Fabricated Using Multiple Printing Techniques. Additional Conferences (Device Packaging HiTEC HiTEN & CICMT), 2013, 2013, 000047-000053.	0.2	0
107	Investigation into the Role of Different Substrate Ni Compositions and Plating Methods on Die Attach Reliability. Additional Conferences (Device Packaging HiTEC HiTEN & CICMT), 2015, 2015, 000073-000082.	0.2	0
108	Design and fabrication of MEMS-type compliant overhang flip-chip interconnect for RF applications. Additional Conferences (Device Packaging HiTEC HiTEN & CICMT), 2015, 2015, 002082-002094.	0.2	0

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109	Component Attachment with Pressureless Sintering for 300°C Applications. Additional Conferences (Device Packaging HiTEC HiTEN & CICMT), 2016, 2016, 000226-000233.	0.2	0
110	A Matched Filter Developed for Chaotic Waveforms. Additional Conferences (Device Packaging HiTEC) Tj ETQq0 0 0 rgBT /Overlock 10 T	0.2	0
111	Component Attachment with Pressureless Ag Sintering for 300°C Applications. Journal of Microelectronics and Electronic Packaging, 2016, 13, 155-162.	0.8	0
112	Microwave Characterization of Gamma Ray Irradiated Thin Film Embedded and Non-embedded Nb Resonators. IOP Conference Series: Materials Science and Engineering, 2022, 1241, 012055.	0.3	0