

Mark G Allen

List of Publications by Year in descending order

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74
papers

1,205
citations

567144

15
h-index

414303

32
g-index

74
all docs

74
docs citations

74
times ranked

1628
citing authors

#	ARTICLE	IF	CITATIONS
1	Suppression of Eddy Current Loss in Multilayer NiFe-Polypyrrole Magnetic Cores Fabricated Using a Continuous Electrodeposition Process. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 7433-7440.	3.7	2
2	All-Passive Hardware Implementation of Multilayer Perceptron Classifiers. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 4086-4095.	7.2	6
3	Lithographically patterned polypyrrole multilayer microstructures via sidewall-controlled electropolymerization. Journal of Micromechanics and Microengineering, 2021, 31, 025008.	1.5	2
4	Water-based resistive switches for neuromorphic long-range connections. Journal Physics D: Applied Physics, 2021, 54, 225104.	1.3	10
5	Single-step label-free nanowell immunoassay accurately quantifies serum stress hormones within minutes. Science Advances, 2021, 7, .	4.7	16
6	A Wireless Artificial Mechanoreceptor in 180-nm CMOS. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 2907-2920.	2.9	4
7	Planar CMOS-Compatible Fusion-Bonded Silica Vacuum Packages. , 2021, , .		0
8	IoT4Ag: MEMS-Enabled Distributed Sensing, Communications, And Information Systems for The Internet Of Things For Precision Agriculture. , 2021, , .		0
9	A microwell-based impedance sensor on an insertable microneedle for real-time in vivo cytokine detection. Microsystems and Nanoengineering, 2021, 7, 96.	3.4	12
10	Non-lithographic and scalable fabrication of one-turn-like inductor having laminated NiFe core for power converters operating at high frequency. , 2021, , .		0
11	A ten-minute, single step, label-free, sample-to-answer assay for qualitative detection of cytokines in serum at femtomolar levels. Biomedical Microdevices, 2020, 22, 73.	1.4	8
12	A Self-Powered, Biodegradable Dissolved Oxygen Microsensor. Journal of Microelectromechanical Systems, 2020, 29, 1074-1078.	1.7	7
13	Fully Additive Fabrication of Electrically Anisotropic Multilayer Materials Based on Sequential Electrodeposition. Journal of Microelectromechanical Systems, 2020, 29, 1510-1517.	1.7	7
14	Multiwell Plate Impedance Analysis of a Nanowell Array Sensor for Label-Free Detection of Cytokines in Mouse Serum. , 2020, 4, 1-4.		8
15	Interlamination Insulation Design Considerations for Laminated Magnetics Operating at High Frequencies. IEEE Transactions on Magnetics, 2019, 55, 1-11.	1.2	3
16	CMOS Compatible Hermetic Packages Based on Localized Fusion Bonding of Fused Silica. Journal of Microelectromechanical Systems, 2019, 28, 656-665.	1.7	7
17	Electrical Interconnects Fabricated From Biodegradable Conductive Polymer Composites. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 822-829.	1.4	12
18	A Micromachined Freestanding Electrochemical Sensor for Measuring Dissolved Oxygen. Journal of Microelectromechanical Systems, 2019, 28, 521-531.	1.7	10

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19	Biodegradable batteries with immobilized electrolyte for transient MEMS. <i>Biomedical Microdevices</i> , 2019, 21, 17.	1.4	25
20	Integrated Fabrication of Serially Connected High Voltage Microbatteries via Multilayer Electrodeposition. , 2019, , .		0
21	Silica hermetic packages based on laser patterning and localized fusion bonding. , 2018, , .		5
22	Biomimetic extracellular matrix coatings improve the chronic biocompatibility of microfabricated subdural microelectrode arrays. <i>PLoS ONE</i> , 2018, 13, e0206137.	1.1	16
23	Microfabricated intracortical extracellular matrix-microelectrodes for improving neural interfaces. <i>Microsystems and Nanoengineering</i> , 2018, 4, 30.	3.4	22
24	Designing Surface Chemistry of Silver Nanocrystals for Radio Frequency Circuit Applications. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 37643-37650.	4.0	4
25	Microwell-array on a flexible needle: A transcutaneous insertable impedance sensor for label-free cytokine detection. , 2018, , .		4
26	Composite materials with controllable macromechanical properties based on MEMS-assisted structural manipulation of low-dimensional subcomponents. , 2017, , .		2
27	Implantable Sensors for Regenerative Medicine. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	34
28	Wireless Implantable Sensor for Noninvasive, Longitudinal Quantification of Axial Strain Across Rodent Long Bone Defects. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	28
29	Double-side exposure UV-LED CNC lithography for fine 3D microfabrication. , 2017, , .		3
30	Nanolaminated CoNiFe Cores with Dip-Coated Fluoroacrylic Polymer Interlamination Insulation: Fabrication, Electrical Characterization, and Performance Reliability. , 2017, , .		4
31	Intracellular delivery of molecules using microfabricated nanoneedle arrays. <i>Biomedical Microdevices</i> , 2016, 18, 10.	1.4	14
32	Biodegradable magnesium/iron batteries with polycaprolactone encapsulation: A microfabricated power source for transient implantable devices. <i>Microsystems and Nanoengineering</i> , 2015, 1, .	3.4	76
33	Supercapacitor Electrodes Based on Three-dimensional Copper Structures with Precisely Controlled Dimensions. <i>ChemElectroChem</i> , 2015, 2, 236-245.	1.7	7
34	Electrodeposited Nanolaminated CoNiFe Cores for Ultracompact DC-DC Power Conversion. <i>IEEE Transactions on Power Electronics</i> , 2015, 30, 5078-5087.	5.4	8
35	A non-enzymatic micro-needle patch sensor for freecholesterol continuous monitoring. , 2014, , .		4
36	Hypodermic-Needle-Like Hollow Polymer Microneedle Array: Fabrication and Characterization. <i>Journal of Microelectromechanical Systems</i> , 2014, 23, 991-998.	1.7	31

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37	A MEMS-enabled biodegradable battery for powering transient implantable devices. , 2014, , .		16
38	A Microfabricated Wireless RF Pressure Sensor Made Completely of Biodegradable Materials. Journal of Microelectromechanical Systems, 2014, 23, 4-13.	1.7	177
39	The use of surface-initiated polymerization to reduce template feature size and facilitate fabrication of 3D freestanding nanostructures. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	0
40	Silicon-Embedding Approaches to 3-D Toroidal Inductor Fabrication. Journal of Microelectromechanical Systems, 2013, 22, 580-588.	1.7	18
41	Monolithically-fabricated laminated inductors with electrodeposited silver windings. , 2013, , .		5
42	Nanolaminated Permalloy Core for High-Flux, High-Frequency Ultracompact Power Conversion. IEEE Transactions on Power Electronics, 2013, 28, 4376-4383.	5.4	26
43	Deformable strain sensors based on patterned MWCNTs/polydimethylsiloxane composites. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 1505-1512.	2.4	33
44	A MEMS lamination technology based on sequential multilayer electrodeposition. Journal of Micromechanics and Microengineering, 2013, 23, 095011.	1.5	9
45	Extracellular matrix-based materials for neural interfacing. MRS Bulletin, 2012, 37, 606-613.	1.7	22
46	Assessment of Laser-Induced Damage in Laser-Micromachined Rare-Earth Permanent Magnets. IEEE Transactions on Magnetics, 2012, 48, 3606-3609.	1.2	2
47	Metal-Transfer-Micromolded Three-Dimensional Microelectrode Arrays for in-vitro Brain-Slice Recordings. Journal of Microelectromechanical Systems, 2011, 20, 396-409.	1.7	32
48	Hypodermic-needle-like hollow polymer microneedle array using UV lithography into micromolds. , 2011, , .		3
49	Maskless fabrication of high aspect ratio structures by combination of micromolding and direct drawing. , 2011, , .		4
50	Watt-level wireless power transfer based on stacked flex circuit technology. , 2011, , .		6
51	Micromachined capacitors based on automated multilayer electroplating. , 2010, , .		2
52	Mechanosynthesis of three-dimensional replicated nanostructures by nanolithography-based molecular manipulation. , 2010, , .		3
53	Parylene-Insulated Ultradense Microfabricated Coils. Journal of Microelectromechanical Systems, 2010, 19, 1277-1283.	1.7	16
54	Fabrication of patterned carbon nanotube (CNT) / elastomer bilayer material and its utilization as force sensors. , 2009, , .		2

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55	Three dimensional metal pattern transfer for replica molded microstructures. Applied Physics Letters, 2009, 94, 023301.	1.5	13
56	High standoff dual-mode-actuation MEMS switches. Microsystem Technologies, 2009, 15, 777-787.	1.2	0
57	Electroplated Metal Buried Interconnect and Through-Wafer Metal-Filled Via Technology for High-Power Integrated Electronics. IEEE Transactions on Advanced Packaging, 2009, 32, 695-702.	1.7	8
58	A Micromachined Chip-to-Board Interconnect System Using Electroplating Bonding Technology. IEEE Transactions on Advanced Packaging, 2008, 31, 357-366.	1.7	6
59	A piezoelectrically-driven high flow rate axial polymer microvalve with solid hydraulic amplification. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	7
60	A micromachined airflow sensor based on RF evanescent-mode cavity resonator. , 2008, , .		4
61	Exploitation of Nonlinear Effects for Enhancement of the Sensing Performance of Resonant Sensors. , 2007, , .		1
62	Metal-Transfer-Micromolding of Air-Lifted RF Components. , 2007, , .		3
63	Fabrication of Three-Dimensional Nano-Patterns by Inclined Nanoimprinting Lithography. , 2007, , .		0
64	Chip-to-Board Micromachining for Interconnect Layer Passive Components. IEEE Transactions on Components and Packaging Technologies, 2007, 30, 15-23.	1.4	9
65	A Portable Pneumatically-Actuated Refreshable Braille Cell. , 2007, , .		12
66	Metal-Transfer-Micromolded RF Components for System-On-Package (SOP). , 2007, , .		3
67	Three-Dimensional Metal Transfer Micromolded Microelectrode Arrays (MEAS) for In-Vitro Brain Slice Recordings. , 2007, , .		12
68	Optimization of Synthetic Jet Fluidic Structures in Printed Wiring Boards. Journal of Electronic Packaging, Transactions of the ASME, 2006, 128, 353-359.	1.2	3
69	An S-Band Reflection-Type Phase Shifter - A Design Example Using Ferroelectrics. Materials Research Society Symposia Proceedings, 2002, 720, 531.	0.1	0
70	Title is missing!. Journal of Materials Science: Materials in Electronics, 2000, 11, 455-460.	1.1	8
71	Microfabricated Microneedles for Gene and Drug Delivery. Annual Review of Biomedical Engineering, 2000, 2, 289-313.	5.7	310
72	Modeling of substrate-induced anisotropy in through-plane thermal behavior of polymeric thin films. Journal of Polymer Science, Part B: Polymer Physics, 1996, 34, 1591-1596.	2.4	7

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73	Strain-modulated epitaxy: A flexible approach to π band structure engineering without surface patterning. Applied Physics Letters, 1996, 69, 257-259.	1.5	15
74	Anisotropy in Thermal, Electrical and Mechanical Properties of Spin-Coated Polymer Dielectrics. Materials Research Society Symposia Proceedings, 1994, 338, 577.	0.1	7