

# 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	Microfabricated Microneedles for Gene and Drug Delivery. Annual Review of Biomedical Engineering, 2000, 2, 289-313.	5.7	310
2	A Microfabricated Wireless RF Pressure Sensor Made Completely of Biodegradable Materials. Journal of Microelectromechanical Systems, 2014, 23, 4-13.	1.7	177
3	Biodegradable magnesium/iron batteries with polycaprolactone encapsulation: A microfabricated power source for transient implantable devices. Microsystems and Nanoengineering, 2015, 1, .	3.4	76
4	Implantable Sensors for Regenerative Medicine. Journal of Biomechanical Engineering, 2017, 139, .	0.6	34
5	Deformable strain sensors based on patterned MWCNTs/polydimethylsiloxane composites. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 1505-1512.	2.4	33
6	Metal-Transfer-Micromolded Three-Dimensional Microelectrode Arrays for in-vitro Brain-Slice Recordings. Journal of Microelectromechanical Systems, 2011, 20, 396-409.	1.7	32
7	Hypodermic-Needle-Like Hollow Polymer Microneedle Array: Fabrication and Characterization. Journal of Microelectromechanical Systems, 2014, 23, 991-998.	1.7	31
8	Wireless Implantable Sensor for Noninvasive, Longitudinal Quantification of Axial Strain Across Rodent Long Bone Defects. Journal of Biomechanical Engineering, 2017, 139, .	0.6	28
9	Nanolaminated Permalloy Core for High-Flux, High-Frequency Ultracompact Power Conversion. IEEE Transactions on Power Electronics, 2013, 28, 4376-4383.	5.4	26
10	Biodegradable batteries with immobilized electrolyte for transient MEMS. Biomedical Microdevices, 2019, 21, 17.	1.4	25
11	Extracellular matrix-based materials for neural interfacing. MRS Bulletin, 2012, 37, 606-613.	1.7	22
12	Microfabricated intracortical extracellular matrix-microelectrodes for improving neural interfaces. Microsystems and Nanoengineering, 2018, 4, 30.	3.4	22
13	Silicon-Embedding Approaches to 3-D Toroidal Inductor Fabrication. Journal of Microelectromechanical Systems, 2013, 22, 580-588.	1.7	18
14	Parylene-Insulated Ultradense Microfabricated Coils. Journal of Microelectromechanical Systems, 2010, 19, 1277-1283.	1.7	16
15	A MEMS-enabled biodegradable battery for powering transient implantable devices. , 2014, , .		16
16	Biomimetic extracellular matrix coatings improve the chronic biocompatibility of microfabricated subdural microelectrode arrays. PLoS ONE, 2018, 13, e0206137.	1.1	16
17	Single-step label-free nanowell immunoassay accurately quantifies serum stress hormones within minutes. Science Advances, 2021, 7, .	4.7	16
18	Strain-modulated epitaxy: A flexible approach to $\Gamma$ band structure engineering without surface patterning. Applied Physics Letters, 1996, 69, 257-259.	1.5	15

#	ARTICLE	IF	CITATIONS
19	Intracellular delivery of molecules using microfabricated nanoneedle arrays. Biomedical Microdevices, 2016, 18, 10.	1.4	14
20	Three dimensional metal pattern transfer for replica molded microstructures. Applied Physics Letters, 2009, 94, 023301.	1.5	13
21	A Portable Pneumatically-Actuated Refreshable Braille Cell. , 2007, , .		12
22	Three-Dimensional Metal Transfer Micromolded Microelectrode Arrays (MEAS) for In-Vitro Brain Slice Recordings. , 2007, , .		12
23	Electrical Interconnects Fabricated From Biodegradable Conductive Polymer Composites. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2019, 9, 822-829.	1.4	12
24	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
25	A Micromachined Freestanding Electrochemical Sensor for Measuring Dissolved Oxygen. Journal of Microelectromechanical Systems, 2019, 28, 521-531.	1.7	10
26	Water-based resistive switches for neuromorphic long-range connections. Journal Physics D: Applied Physics, 2021, 54, 225104.	1.3	10
27	Chip-to-Board Micromachining for Interconnect Layer Passive Components. IEEE Transactions on Components and Packaging Technologies, 2007, 30, 15-23.	1.4	9
28	A MEMS lamination technology based on sequential multilayer electrodeposition. Journal of Micromechanics and Microengineering, 2013, 23, 095011.	1.5	9
29	Title is missing!. Journal of Materials Science: Materials in Electronics, 2000, 11, 455-460.	1.1	8
30	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
31	Electrodeposited Nanolaminated CoNiFe Cores for Ultracompact DC-DC Power Conversion. IEEE Transactions on Power Electronics, 2015, 30, 5078-5087.	5.4	8
32	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
33	Multiwell Plate Impedance Analysis of a Nanowell Array Sensor for Label-Free Detection of Cytokines in Mouse Serum. , 2020, 4, 1-4.		8
34	Anisotropy in Thermal, Electrical and Mechanical Properties of Spin-Coated Polymer Dielectrics. Materials Research Society Symposia Proceedings, 1994, 338, 577.	0.1	7
35	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
36	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

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37	Supercapacitor Electrodes Based on Three-Dimensional Copper Structures with Precisely Controlled Dimensions. ChemElectroChem, 2015, 2, 236-245.	1.7	7
38	CMOS Compatible Hermetic Packages Based on Localized Fusion Bonding of Fused Silica. Journal of Microelectromechanical Systems, 2019, 28, 656-665.	1.7	7
39	A Self-Powered, Biodegradable Dissolved Oxygen Microsensor. Journal of Microelectromechanical Systems, 2020, 29, 1074-1078.	1.7	7
40	Fully Additive Fabrication of Electrically Anisotropic Multilayer Materials Based on Sequential Electrodeposition. Journal of Microelectromechanical Systems, 2020, 29, 1510-1517.	1.7	7
41	A Micromachined Chip-to-Board Interconnect System Using Electroplating Bonding Technology. IEEE Transactions on Advanced Packaging, 2008, 31, 357-366.	1.7	6
42	Watt-level wireless power transfer based on stacked flex circuit technology. , 2011, , .		6
43	All-Passive Hardware Implementation of Multilayer Perceptron Classifiers. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 4086-4095.	7.2	6
44	Monolithically-fabricated laminated inductors with electrodeposited silver windings. , 2013, , .		5
45	Silica hermetic packages based on laser patterning and localized fusion bonding. , 2018, , .		5
46	A micromachined airflow sensor based on RF evanescent-mode cavity resonator. , 2008, , .		4
47	Maskless fabrication of high aspect ratio structures by combination of micromolding and direct drawing. , 2011, , .		4
48	A non-enzymatic micro-needle patch sensor for freecholesterol continuous monitoring. , 2014, , .		4
49	Nanolaminated CoNiFe Cores with Dip-Coated Fluoroacrylic Polymer Interlamination Insulation: Fabrication, Electrical Characterization, and Performance Reliability. , 2017, , .		4
50	Designing Surface Chemistry of Silver Nanocrystals for Radio Frequency Circuit Applications. ACS Applied Materials & Interfaces, 2018, 10, 37643-37650.	4.0	4
51	Microwell-array on a flexible needle: A transcutaneous insertable impedance sensor for label-free cytokine detection. , 2018, , .		4
52	A Wireless Artificial Mechanoreceptor in 180-nm CMOS. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 2907-2920.	2.9	4
53	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
54	Metal-Transfer-Micromolding of Air-Lifted RF Components. , 2007, , .		3

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55	Metal-Transfer-Micromolded RF Components for System-On-Package (SOP). , 2007, , .		3
56	Mechanosynthesis of three-dimensional replicated nanostructures by nanolithography-based molecular manipulation. , 2010, , .		3
57	Hypodermic-needle-like hollow polymer microneedle array using UV lithography into micromolds. , 2011, , .		3
58	Double-side exposure UV-LED CNC lithography for fine 3D microfabrication. , 2017, , .		3
59	Interlamination Insulation Design Considerations for Laminated Magnetics Operating at High Frequencies. IEEE Transactions on Magnetics, 2019, 55, 1-11.	1.2	3
60	Fabrication of patterned carbon nanotube (CNT) / elastomer bilayer material and its utilization as force sensors. , 2009, , .		2
61	Micromachined capacitors based on automated multilayer electroplating. , 2010, , .		2
62	Assessment of Laser-Induced Damage in Laser-Micromachined Rare-Earth Permanent Magnets. IEEE Transactions on Magnetics, 2012, 48, 3606-3609.	1.2	2
63	Composite materials with controllable macromechanical properties based on MEMS-assisted structural manipulation of low-dimensional subcomponents. , 2017, , .		2
64	Lithographically patterned polypyrrole multilayer microstructures via sidewall-controlled electropolymerization. Journal of Micromechanics and Microengineering, 2021, 31, 025008.	1.5	2
65	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
66	Exploitation of Nonlinear Effects for Enhancement of the Sensing Performance of Resonant Sensors. , 2007, , .		1
67	An S-Band Reflection-Type Phase Shifter - A Design Example Using Ferroelectrics. Materials Research Society Symposia Proceedings, 2002, 720, 531.	0.1	0
68	Fabrication of Three-Dimensional Nano-Patterns by Inclined Nanoimprinting Lithography. , 2007, , .		0
69	High standoff dual-mode-actuation MEMS switches. Microsystem Technologies, 2009, 15, 777-787.	1.2	0
70	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
71	Integrated Fabrication of Serially Connected High Voltage Microbatteries via Multilayer Electrodeposition. , 2019, , .		0
72	Planar CMOS-Compatible Fusion-Bonded Silica Vacuum Packages. , 2021, , .		0

#	ARTICLE	IF	CITATIONS
73	IoT4Ag: MEMS-Enabled Distributed Sensing, Communications, And Information Systems for The Internet Of Things For Precision Agriculture. , 2021, , .		0
74	Non-lithographic and scalable fabrication of one-turn-like inductor having laminated NiFe core for power converters operating at high frequency. , 2021, , .		0