David P Arnold

List of Publications by Year
in descending order

95	2,297	331670 21	223800 46
papers	citations	h-index	g-index

97	97	97	2553
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Method for the fabrication of thick multilayered nickel/iron oxide nanoparticle magnetic nanocomposites. Journal of Magnetism and Magnetic Materials, 2022, 542, 168578.	2.3	2
2	Analysis of a Dual-Transduction Receiver for Electrodynamic Wireless Power Transfer. IEEE Transactions on Power Electronics, 2022, 37, 7470-7479.	7.9	6
3	Demonstration of Substrate-Embedded Nonreciprocal Millimeter-Wave Circulators For System-In-Packaging. , 2022, , .		0
4	Model of Magnetic Particle Capture Under Physiological Flow Rates for Cytokine Removal During Cardiopulmonary Bypass. IEEE Transactions on Biomedical Engineering, 2021, 68, 1198-1207.	4.2	3
5	Dual-Transduction Electromechanical Receiver for Near-Field Wireless Power Transmission. , 2021, , .		5
6	Miniature Electrodynamic Wireless Power Transmission Receiver Using a Micromachined Silicon Suspension. Journal of Microelectromechanical Systems, 2021, 30, 144-155.	2.5	9
7	A chip-sized piezoelectric receiver for low-frequency, near-field wireless power transfer: design, modeling and experimental validation. Smart Materials and Structures, 2021, 30, 045011.	3.5	5
8	A Wirelessly Rechargeable AA Battery Using Electrodynamic Wireless Power Transmission. Energies, 2021, 14, 2368.	3.1	2
9	Electromechanical Modeling and Experimental Validation of a Dual-Transduction Electrodynamic Wireless Power Receiver. , 2021, , .		0
10	Screen-Printable, Self-Biased SrM/PDMS Composites for Integrated Magnetic Microwave Devices. IEEE Transactions on Magnetics, 2021, 57, 1-5.	2.1	4
11	Microfabricated Electro-Permanent Magnets Using AlNiCo and CoPt. IEEE Magnetics Letters, 2021, 12, 1-5.	1.1	0
12	Hybrid Piezo/Magnetic Electromechanical Transformer. Micromachines, 2021, 12, 1214.	2.9	3
13	Batch-Fabricated Substrate-Embedded Ka Band Self-Biased Circulators Using Screen-Printed Strontium Hexaferrite/PDMS Composite. , 2021, , .		0
14	Magnetically Tunable 28 GHz Array Antenna Using BaM/PDMS Composite. , 2021, , .		0
15	Electro-infiltrated nickel/iron-oxide and permalloy/iron-oxide nanocomposites for integrated power inductors. Journal of Magnetism and Magnetic Materials, 2020, 493, 165718.	2.3	10
16	Electrophoretic deposition of iron oxide nanoparticles to achieve thick nickel/iron oxide magnetic nanocomposite films. AIP Advances, 2020, 10, .	1.3	10
17	Effects of particle diameter and magnetocrystalline anisotropy on magnetic relaxation and magnetic particle imaging performance of magnetic nanoparticles. Physics in Medicine and Biology, 2020, 65, 025014.	3.0	20
18	35-GHz Barium Hexaferrite/PDMS Composite-Based Millimeter-Wave Circulators for 5G Applications. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 5065-5071.	4.6	16

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19	Screen-Printed Inductive Silver Ink Strain Sensor on Stretchable TPU Substrate. , 2020, , .		2
20	A High-Performance Electrodynamic Micro-Receiver for Low-Frequency Wireless Power Transfer. , 2020, , .		6
21	$100-mumathrm{m}$-Thick High-Energy-Density Electroplated CoPt Permanent Magnets. , 2020, , .		2
22	A High-Throughput Microfluidic Magnetic Separation (ÂµFMS) Platform for Water Quality Monitoring. Micromachines, 2020, 11, 16.	2.9	18
23	An Electrodynamic Wireless Power Receiver â€˜Chipâ€™ for Wearables and Bio-implants. , 2020, , .		2
24	Investigation of Ferromagnetic Resonance Shift in Screen-Printed Barium Ferrite/Samarium Cobalt Composites. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 3230-3236.	4.6	5
25	Fully 3D-Printed, Monolithic, Mini Magnetic Actuators for Low-Cost, Compact Systems. Journal of Microelectromechanical Systems, 2019, 28, 481-493.	2.5	37
26	Rapid isolation of Escherichia coli from water samples using magnetic microdiscs. Sensors and Actuators B: Chemical, 2019, 291, 58-66.	7.8	13
27	Modeling and experimental analysis of rotating magnet receivers for electrodynamic wireless power transmission. Journal Physics D: Applied Physics, 2019, 52, 185501.	2.8	19
28	Effect of Mechanical Cycling on the Magnetic Properties of Permalloy Films Electroplated on Stretchable Substrates. , 2019, , .		2
29	Patterning of thick electroplated CoPt magnets using SUâ€8Âmicromoulds. Micro and Nano Letters, 2019, 14, 1393-1396.	1.3	6
30	Nanoscale structural evaluation of 0-3 magnetic nanocomposites fabricated by electro-infiltration. AIP Advances, 2019, 9, .	1.3	2
31	Experimental demonstration of multi-watt wireless power transmission to ferrite-core receivers at 6.78 MHz. Wireless Power Transfer, 2019, 6, 17-25.	1.1	2
32	Ultra-Thick Electroplated CoPt Magnets for MEMS. Journal of Microelectromechanical Systems, 2019, 28, 311-320.	2.5	15
33	Microfabricated Electrodynamic Synthetic Jet Actuators. Journal of Microelectromechanical Systems, 2018, 27, 95-105.	2.5	5
34	High-current-density electrodeposition using pulsed and constant currents to produce thick CoPt magnetic films on silicon substrates. AIP Advances, 2018, 8, .	1.3	10
35	Magnetic field sensors using arrays of electrospun magnetoelectric Janus nanowires. Microsystems and Nanoengineering, 2018, 4, 37.	7.0	22
36	Experimental Generation of ELF Radio Signals Using a Rotating Magnet. IEEE Transactions on Antennas and Propagation, 2018, 66, 6265-6272.	5.1	64

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37	Benchtop magnetic particle relaxometer for detection, characterization and analysis of magnetic nanoparticles. Physics in Medicine and Biology, 2018, 63, 175016.	3.0	8
38	Thermal Stability of Cu/Co Metaconductor and Its Millimeter Wave Applications. , 2018, , .		2
39	Thermal Decomposition Synthesis of Iron Oxide Nanoparticles with Diminished Magnetic Dead Layer by Controlled Addition of Oxygen. ACS Nano, 2017, 11, 2284-2303.	14.6	286
40	Design and validation of magnetic particle spectrometer for characterization of magnetic nanoparticle relaxation dynamics. AIP Advances, 2017, 7, 056730.	1.3	8
41	Exchange-coupled hard magnetic Fe-Co/CoPt nanocomposite films fabricated by electro-infiltration. AIP Advances, 2017, 7, .	1.3	7
42	Direct measurement and microscale mapping of nanoNewton to milliNewton magnetic forces. AIP Advances, 2017, 7, 056809.	1.3	1
43	Brownian Dynamics Simulations of Magnetic Nanoparticles Captured in Strong Magnetic Field Gradients. Journal of Physical Chemistry C, 2017, 121, 801-810.	3.1	9
44	Electrophoretic deposition of nickel zinc ferrite nanoparticles into microstructured patterns. AIP Advances, 2016, 6, 056105.	1.3	13
45	Nickel-zinc ferrite/permalloy (Ni0.5Zn0.5Fe2O4/Ni-Fe) soft magnetic nanocomposites fabricated by electro-infiltration. AIP Advances, 2016, 6, .	1.3	10
46	Advancements in electrodynamic wireless power transmission. , 2016, , .		9
47	Electroplated thick-film cobalt platinum permanent magnets. Journal of Magnetism and Magnetic Materials, 2016, 416, 417-428.	2.3	17
48	Magnetic Capture of a Molecular Biomarker from Synovial Fluid in a Rat Model of Knee Osteoarthritis. Annals of Biomedical Engineering, 2016, 44, 1159-1169.	2.5	13
49	Mitigation of interfacial silicide reactions for electroplated CoPt films on Si substrates. Journal of Physics: Conference Series, 2015, 660, 012140.	0.4	0
50	Fabrication of patterned magnetic microstructures using magnetically assembled nanoparticles. , 2015, , .		1
51	Influence of temperature on the magnetic properties of electroplated L10 CoPt thick films. Journal of Applied Physics, 2015, 117, 17C718.	2.5	6
52	Characterization of fluids via measurement of the rotational dynamics of suspended magnetic microdiscs. Journal of Applied Physics, 2015, 117, .	2.5	6
53	Magnetic Assembly and Cross-Linking of Nanoparticles for Releasable Magnetic Microstructures. ACS Nano, 2015, 9, 10165-10172.	14.6	34
54	Electroplated L10 CoPt thick-film permanent magnets. Journal of Applied Physics, 2014, 115, .	2.5	21

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55	Imprinting of fine-scale magnetic patterns in electroplated hard magnetic films using magnetic foil masks. Journal of Applied Physics, 2014, 115, .	2.5	7
56	A Compact Human-Powered Energy Harvesting System. Energy Harvesting and Systems, 2014, 1, 89-100.	2.7	9
57	Fabrication, Characterization, and Modeling of Fully-Batch-Fabricated Piston-Type Electrodynamic Microactuators. Journal of Microelectromechanical Systems, 2014, 23, 220-229.	2.5	7
58	A Micromachined Wiring Board With Integrated Microinductor for Chip-Scale Power Conversion. IEEE Transactions on Power Electronics, 2014, 29, 6052-6063.	7.9	18
59	Electro-infiltration: A method to form nanocomposite soft magnetic cores for integrated magnetic devices. Journal of Micromechanics and Microengineering, 2014, 24, 107001.	2.6	7
60	The role of coupling strength in the performance of electrodynamic vibrational energy harvesters. Smart Materials and Structures, 2013, 22, 025005.	3.5	21
61	Comparative Study of Two Methods for Driving Electrodynamic Zero-Net Mass-Flux Actuators. AIAA Journal, 2013, 51, 2286-2290.	2.6	1
62	Batch Patterning of SubMillimeter Features in Hard Magnetic Films Using Pulsed Magnetic Fields and Soft Magnetizing Heads. IEEE Transactions on Magnetics, 2013, 49, 4116-4119.	2.1	6
63	An AC/DC voltage doubler with configurable power supply schemes for vibrational energy harvesting. , 2013, , .		7
64	Microfabricated electrodynamic transformers for electromechanical power conversion. Journal of Micromechanics and Microengineering, 2013, 23, 114002.	2.6	5
65	An energy harvesting system for passively generating power from human activities. Journal of Micromechanics and Microengineering, 2013, 23, 114012.	2.6	34
66	Flow and force inducement using micron size dielectric barrier discharge actuators. Applied Physics Letters, 2012, 100, 193502.	3.3	36
67	Modeling of Electrodynamic Zero-Net Mass-Flux Actuators. AIAA Journal, 2012, 50, 1347-1359.	2.6	11
68	Influence of Layer Thickness on the Performance of Stacked Thick-Film Copper Air-Core Power Inductors. IEEE Transactions on Magnetics, 2012, 48, 4436-4439.	2.1	13
69	Assessment of Laser-Induced Damage in Laser-Micromachined Rare-Earth Permanent Magnets. IEEE Transactions on Magnetics, 2012, 48, 3606-3609.	2.1	2
70	Wireless power transmission to an electromechanical receiver using low-frequency magnetic fields. Smart Materials and Structures, 2012, 21, 115017.	3.5	32
71	Electromechanical devices with enhanced inductance via electrodynamic interactions. Sensors and Actuators A: Physical, 2012, 180, 187-192.	4.1	2
72	Microelectromechanical inductors with high inductance density via mechanical energy storage. Journal of Micromechanics and Microengineering, 2012, 22, 094003.	2.6	0

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73	A Voltage-Multiplying Self-Powered AC/DC Converter with 0.35-V Minimum Input Voltage for Energy Harvesting Applications. IEEE Transactions on Power Electronics, 2011, 26, 2542-2549.	7.9	41
74	Micromachined Radial Thermoelectric Modules for Power Generation Using Hot Gas Streams. Journal of Microelectromechanical Systems, 2011, 20, 512-521.	2.5	9
75	Input-powered energy harvesting interface circuits with zero standby power. , 2011, , .		7
76	An Input-Powered Vibrational Energy Harvesting Interface Circuit With Zero Standby Power. IEEE Transactions on Power Electronics, 2011, 26, 3524-3533.	7.9	87
77	Experimental Demonstration of an Electrodynamic Transformer. IEEE Transactions on Magnetics, 2011, 47, 4433-4436.	2.1	4
78	Morphology and magnetic properties of electroplated Co-rich Co-Zn thin films. Microsystem Technologies, 2011, 17, 85-91.	2.0	1
79	A Microscale Differential Capacitive Direct Wall-Shear-Stress Sensor. Journal of Microelectromechanical Systems, 2011, 20, 622-635.	2.5	45
80	High-Inductance-Density, Air-Core, Power Inductors, and Transformers Designed for Operation at 100â€“500 MHz. IEEE Transactions on Magnetics, 2010, 46, 2236-2239.	2.1	80
81	An input-powered active AC/DC converter with zero standby power for energy harvesting applications. , 2010, , .		16
82	Magnetic Self-Assembly of Millimeter-Scale Components With Angular Orientation. Journal of Microelectromechanical Systems, 2010, 19, 599-609.	2.5	18
83	Design of a Miniaturized Thermoelectric Generator Using Micromachined Silicon Substrates. Journal of Electronic Materials, 2009, 38, 1293-1302.	2.2	11
84	Permanent Magnets for MEMS. Journal of Microelectromechanical Systems, 2009, 18, 1255-1266.	2.5	140
85	An electromagnetically actuated microspeaker with fully-integrated wax-bonded Nd-Fe-B micromagnets for hearing aid applications. , 2009, , .		8
86	High temperature operation of multi-watt, axial-flux, permanent-magnet microgenerators. Sensors and Actuators A: Physical, 2008, 148, 299-305.	4.1	14
87	Self-Assembly of Millimeter-Scale Components Using Integrated Micromagnets. IEEE Transactions on Magnetics, 2008, 44, 4293-4296.	2.1	30
88	Thick Electroplated Co-Rich Co-Pt Micromagnet Arrays for Magnetic MEMS. IEEE Transactions on Magnetics, 2008, 44, 3969-3972.	2.1	29
89	A study of scaling and geometry effects on the forces between cuboidal and cylindrical magnets using analytical force solutions. Journal Physics D: Applied Physics, 2008, 41, 105001.	2.8	75
90	Wax-bonded NdFeB micromagnets for microelectromechanical systems applications. Journal of Applied Physics, 2008, 103, .	2.5	40

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91	Modeling of magnetic vibrational energy harvesters using equivalent circuit representations. Journal of Micromechanics and Microengineering, 2007, 17, 2328-2335.	2.6	96
92	Investigation of Microscale Magnetic Forces for Magnet Array Self-Assembly. IEEE Transactions on Magnetics, 2007, 43, 2713-2715.	2.1	13
93	Review of Microscale Magnetic Power Generation. IEEE Transactions on Magnetics, 2007, 43, 3940-3951.	2.1	449
94	Design optimization of an 8 W, microscale, axial-flux, permanent-magnet generator. Journal of Micromechanics and Microengineering, 2006, 16, S290-S296.	2.6	48
95	A directional acoustic array using silicon micromachined piezoresistive microphones. Journal of the Acoustical Society of America, 2003, 113, 289-298.	1.1	37