

# Sandy Cochran

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1112658/publications.pdf>

Version: 2024-02-01

259  
papers

3,062  
citations

236612

25  
h-index

205818

48  
g-index

262  
all docs

262  
docs citations

262  
times ranked

3165  
citing authors

#	ARTICLE	IF	CITATIONS
1	Piezoelectric Micromachined Ultrasound Transducer (PMUT) Arrays for Integrated Sensing, Actuation and Imaging. <i>Sensors</i> , 2015, 15, 8020-8041.	2.1	257
2	Independent trapping and manipulation of microparticles using dexterous acoustic tweezers. <i>Applied Physics Letters</i> , 2014, 104, 154103.	1.5	168
3	Mechanical Evidence of the Orbital Angular Momentum to Energy Ratio of Vortex Beams. <i>Physical Review Letters</i> , 2012, 108, 194301.	2.9	143
4	Dexterous manipulation of microparticles using Bessel-function acoustic pressure fields. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	127
5	Array-controlled ultrasonic manipulation of particles in planar acoustic resonator. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2012, 59, 1258-1266.	1.7	85
6	1 <sup>st</sup> connectivity piezoelectric ceramic-polymer composite transducers made with viscous polymer processing for high frequency ultrasound. <i>Ultrasonics</i> , 2004, 42, 479-484.	2.1	84
7	Intraoperative Ultrasound-Guided Resection of Gliomas: A Meta-Analysis and Review of the Literature. <i>World Neurosurgery</i> , 2016, 92, 255-263.	0.7	78
8	Intelligent magnetic manipulation for gastrointestinal ultrasound. <i>Science Robotics</i> , 2019, 4, .	9.9	77
9	Resonance tracking and vibration stabilization for high power ultrasonic transducers. <i>Ultrasonics</i> , 2014, 54, 187-194.	2.1	76
10	Acoustic Tractor Beam. <i>Physical Review Letters</i> , 2014, 112, 174302.	2.9	74
11	Manipulation of microparticles using phase-controllable ultrasonic standing waves. <i>Journal of the Acoustical Society of America</i> , 2010, 128, EL195-EL199.	0.5	72
12	In Vivo Characterization of a Wireless Telemetry Module for a Capsule Endoscopy System Utilizing a Conformal Antenna. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2018, 12, 95-105.	2.7	64
13	Ultrasound assisted particle and cell manipulation on-chip. <i>Advanced Drug Delivery Reviews</i> , 2013, 65, 1600-1610.	6.6	62
14	Periodic shock-emission from acoustically driven cavitation clouds: A source of the subharmonic signal. <i>Ultrasonics</i> , 2014, 54, 2151-2158.	2.1	61
15	Acoustic Devices for Particle and Cell Manipulation and Sensing. <i>Sensors</i> , 2014, 14, 14806-14838.	2.1	53
16	Echogenic Regional Anaesthesia Needles: A Comparison Study in Thiel Cadavers. <i>Ultrasound in Medicine and Biology</i> , 2012, 38, 702-707.	0.7	44
17	Letters: optically transparent piezoelectric transducer for ultrasonic particle manipulation. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2014, 61, 389-391.	1.7	43
18	Ultrasound-mediated targeted drug delivery with a novel cyclodextrin-based drug carrier by mechanical and thermal mechanisms. <i>Journal of Controlled Release</i> , 2013, 170, 316-324.	4.8	41

#	ARTICLE	IF	CITATIONS
19	Development of a Mechanical Scanning Device With High-Frequency Ultrasound Transducer for Ultrasonic Capsule Endoscopy. IEEE Transactions on Medical Imaging, 2017, 36, 1922-1929.	5.4	39
20	Tunable beam shaping with a phased array acousto-optic modulator. Optics Express, 2015, 23, 26.	1.7	35
21	Gastrointestinal diagnosis using non-white light imaging capsule endoscopy. Nature Reviews Gastroenterology and Hepatology, 2019, 16, 429-447.	8.2	35
22	An evaluation of Thiel-embalmed cadavers for ultrasound-based regional anaesthesia training and research. Ultrasound, 2010, 18, 125-129.	0.3	31
23	Thick aluminium nitride films deposited by room-temperature sputtering for ultrasonic applications. Ultrasonics, 2004, 42, 485-490.	2.1	28
24	Investigation of dental samples using a 35MHz focussed ultrasound piezocomposite transducer. Ultrasonics, 2009, 49, 212-218.	2.1	28
25	Ultrasound capsule endoscopy: sounding out the future. Annals of Translational Medicine, 2017, 5, 201-201.	0.7	28
26	Quantitative assessment of Thiel soft-embalmed human cadavers using shear wave elastography. Annals of Anatomy, 2015, 202, 52-56.	1.0	27
27	Mass-spring matching layers for high-frequency ultrasound transducers: a new technique using vacuum deposition. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 1911-1921.	1.7	26
28	Multimodal Integrated Sensor Platform for Rapid Biomarker Detection. IEEE Transactions on Biomedical Engineering, 2020, 67, 614-623.	2.5	26
29	<i>In-Vivo</i> Evaluation of Microultrasound and Thermometric Capsule Endoscopes. IEEE Transactions on Biomedical Engineering, 2019, 66, 632-639.	2.5	25
30	Light sheet microscopy with acoustic sample confinement. Nature Communications, 2019, 10, 669.	5.8	25
31	Common acoustic phonon lifetimes in inorganic and hybrid lead halide perovskites. Physical Review Materials, 2019, 3, .	0.9	23
32	Net-shape ceramic processing as a route to ultrafine scale 1-3 connectivity piezoelectric ceramic-polymer composite transducers. , 0, , .		22
33	Characterization of piezocrystals for practical configurations with temperature- and pressure-dependent electrical impedance spectroscopy. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 1793-1803.	1.7	21
34	Functional Piezocrystal Characterisation under Varying Conditions. Materials, 2015, 8, 8304-8326.	1.3	21
35	Piezoelectric 1â€³ Composites for High Frequency Ultrasonic Transducer Applications. Ferroelectrics, 2004, 304, 201-205.	0.3	20
36	1â€³ Connectivity lithium niobate composites for high temperature operation. Ultrasonics, 2007, 47, 15-22.	2.1	20

#	ARTICLE	IF	CITATIONS
37	Translation of sonoelastography from Thiel cadaver to patients for peripheral nerve blocks*. Anaesthesia, 2012, 67, 721-728.	1.8	20
38	In Vitro Investigation of the Individual Contributions of Ultrasound-Induced Stable and Inertial Cavitation in Targeted Drug Delivery. Ultrasound in Medicine and Biology, 2015, 41, 1853-1864.	0.7	20
39	Thin Film PZT-Based PMUT Arrays for Deterministic Particle Manipulation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2019, 66, 1606-1615.	1.7	20
40	Application of gel-casting to the fabrication of 3D piezoelectric ceramic-polymer composites for high-frequency ultrasound devices. Journal of Micromechanics and Microengineering, 2012, 22, 125001.	1.5	19
41	Ultrasound Capsule Endoscopy With a Mechanically Scanning Micro-ultrasound: A Porcine Study. Ultrasound in Medicine and Biology, 2020, 46, 796-804.	0.7	19
42	Mathematical Optimization of Multilayer Piezoelectric Devices with Nonuniform Layers by Simulated Annealing. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 1920-1929.	1.7	17
43	Directed jetting from collapsing cavities exposed to focused ultrasound. Applied Physics Letters, 2012, 100, 024104.	1.5	17
44	Increased variability in ApcMin/+ intestinal tissue can be measured with microultrasound. Scientific Reports, 2016, 6, 29570.	1.6	17
45	Design and Simulation of a Ring-Shaped Linear Array for Microultrasound Capsule Endoscopy. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 589-599.	1.7	17
46	A Prototype Therapeutic Capsule Endoscope for Ultrasound-Mediated Targeted Drug Delivery. Journal of Medical Robotics Research, 2018, 03, 1840001.	1.0	17
47	Progress towards ultrasound applications of new single crystal materials. Journal of Materials Science: Materials in Electronics, 2004, 15, 715-720.	1.1	16
48	Ultrasound mediated delivery of quantum dots from a proof of concept capsule endoscope to the gastrointestinal wall. Scientific Reports, 2021, 11, 2584.	1.6	16
49	Ultrabroadband single crystal composite transducers for underwater ultrasound. , 0, , .		15
50	Ultrasonics Part 12. Fundamentals of ultrasonic phased arrays. Insight: Non-Destructive Testing and Condition Monitoring, 2006, 48, 212-217.	0.3	15
51	Screen-printed ultrasonic 2-D matrix array transducers for microparticle manipulation. Ultrasonics, 2015, 62, 136-146.	2.1	15
52	Acoustic Sensing and Ultrasonic Drug Delivery in Multimodal Theranostic Capsule Endoscopy. Sensors, 2017, 17, 1553.	2.1	15
53	A Learning-Based Microultrasound System for the Detection of Inflammation of the Gastrointestinal Tract. IEEE Transactions on Medical Imaging, 2021, 40, 38-47.	5.4	14
54	Lithium niobate transducers for MRI-guided ultrasonic microsurgery. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 1570-1576.	1.7	13

#	ARTICLE	IF	CITATIONS
55	Modelling and characterisation of a ultrasound-actuated needle for improved visibility in ultrasound-guided regional anaesthesia and tissue biopsy. <i>Ultrasonics</i> , 2016, 69, 38-46.	2.1	13
56	Piezocrystal-polymer composites: new materials for transducers for ultrasonic NDT. <i>Insight: Non-Destructive Testing and Condition Monitoring</i> , 2004, 46, 653-657.	0.3	12
57	Microfabrication of electrode patterns for high-frequency ultrasound transducer arrays. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2012, 59, 1820-1829.	1.7	12
58	The importance of physics to progress in medical treatment. <i>Lancet, The</i> , 2012, 379, 1534-1543.	6.3	11
59	Ultrasound-Mediated Targeted Drug Delivery Generated by Multifocal Beam Patterns: An In Vitro Study. <i>Ultrasound in Medicine and Biology</i> , 2013, 39, 507-514.	0.7	11
60	1 $\mu$ m <sup>3</sup> piezocomposite design optimised for high frequency kerfless transducer arrays. , 2009, , .		10
61	Shear Wave Elastography. <i>Anesthesiology</i> , 2013, 119, 698-698.	1.3	10
62	Progress towards a multi-modal capsule endoscopy device featuring microultrasound imaging. , 2016, , .		10
63	Luminally expressed gastrointestinal biomarkers. <i>Expert Review of Gastroenterology and Hepatology</i> , 2017, 11, 1119-1134.	1.4	10
64	Full Set of Material Properties of Lead-Free PIC 700 for Transducer Designers. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021, 68, 1797-1807.	1.7	10
65	Multilayer piezocomposite structures with piezoceramic volume fractions determined by mathematical optimisation. <i>Ultrasonics</i> , 2004, 42, 259-265.	2.1	9
66	Comparison of y/36 $\text{\AA}$ -cut and z-cut lithium niobate composites for high temperature ultrasonic applications. <i>Nondestructive Testing and Evaluation</i> , 2005, 20, 77-87.	1.1	9
67	Material parameter variations of lead metaniobate piezoceramic in elevated temperature applications. <i>Electronics Letters</i> , 2008, 44, 940.	0.5	9
68	Low-voltage coded excitation utilizing a miniaturized integrated ultrasound system employing piezoelectric 2-D arrays. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2010, 57, 353-362.	1.7	9
69	Characterization of an epoxy filler for piezocomposites compatible with microfabrication processes [Correspondence]. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2011, 58, 2743-2748.	1.7	9
70	Micromachined diaphragm transducers for miniaturised ultrasound arrays. , 2012, , .		9
71	A randomised, single-blind technical study comparing the ultrasonic visibility of smooth-surfaced and textured needles in a soft embalmed cadaver model. <i>Anaesthesia</i> , 2015, 70, 537-542.	1.8	9
72	A highly compact packaging concept for ultrasound transducer arrays embedded in neurosurgical needles. <i>Microsystem Technologies</i> , 2017, 23, 3881-3891.	1.2	9

#	ARTICLE	IF	CITATIONS
73	Ultrasonic thin film transducers for high-temperature NDT. Insight: Non-Destructive Testing and Condition Monitoring, 2005, 47, 85-87.	0.3	9
74	Progress towards wafer-scale fabrication of ultrasound arrays for real-time high-resolution biomedical imaging. Sensor Review, 2009, 29, 333-338.	1.0	8
75	Early exploration of MRI-compatible diagnostic ultrasound transducers. , 2010, , .		8
76	Micro-moulded randomised piezocomposites for high frequency ultrasound imaging. , 2012, , .		8
77	Design and simulation of a high-frequency ring-shaped linear array for capsule ultrasound endoscopy. , 2014, , .		8
78	Open-source, high-throughput ultrasound treatment chamber. Biomedizinische Technik, 2015, 60, 77-87.	0.9	8
79	Microultrasound characterisation of <i>ex vivo</i> porcine tissue for ultrasound capsule endoscopy. Journal of Physics: Conference Series, 2017, 797, 012003.	0.3	8
80	Implementation of multilayer ultrasonic transducer structures with optimised non-uniform layer thicknesses. , 0, , .		7
81	Imaging with lithium niobate/epoxy composites. Ultrasonics, 2004, 42, 439-442.	2.1	7
82	Net-shape ceramic manufacturing as an aid to realize ultrasonic transducers for high-resolution medical imaging. , 0, , .		7
83	P3Q-1 Ultra Precision Grinding in the Fabrication of High Frequency Piezocomposite Ultrasonic Transducers. , 2006, , .		7
84	P3K-5 Passive Materials for High Frequency Ultrasound Components. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	7
85	2F-6 Properties and Application-Oriented Performance of High Frequency Piezocomposite Ultrasonic Transducers. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	7
86	5B-2 3D Imaging of Teeth Using High Frequency Ultrasound. , 2007, , .		7
87	Characterisation of an epoxy filler for piezocomposite material compatible with microfabrication processes. , 2008, , .		7
88	Concepts and issues in piezo-on-3D silicon structures. Sensor Review, 2009, 29, 326-332.	1.0	7
89	Transducer arrays for ultrasonic particle manipulation. , 2010, , .		7
90	Piezoelectricity and basic configurations for piezoelectric ultrasonic transducers. , 2012, , 3-35.		7

#	ARTICLE	IF	CITATIONS
91	Enhanced US-guided needle intervention through ultrasound actuation of a standard needle. , 2014, , .		7
92	High-performance planar ultrasonic tool based on $d_{31}$ -mode piezocrystal. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 428-438.	1.7	7
93	Growth of sputtered AlN thin film on glass in room temperature. , 0, , .		6
94	Lithium niobate piezocomposite phased arrays operating at high temperatures. Insight: Non-Destructive Testing and Condition Monitoring, 2004, 46, 662-665.	0.3	6
95	2F-5 Surface Preparation of 1-3 Piezocomposite Material for Microfabrication of High Frequency Transducer Arrays. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	6
96	Determining moisture content in concrete under simulated precipitation using ultrasonic propagation time measurements. Nondestructive Testing and Evaluation, 2008, 23, 241-255.	1.1	6
97	Focused ultrasound for early detection of tooth decay. , 2009, , .		6
98	Functional characterisation of high frequency arrays based on micro-moulded $1\mu\text{m}^3$ piezocomposites. , 2009, , .		6
99	Loss effects on adhesively-bonded multilayer ultrasonic transducers by self-heating. Ultrasonics, 2010, 50, 508-511.	2.1	6
100	Ultrasonic cutting with resonance tracking and vibration stabilization. , 2012, , .		6
101	Reduced penetration force through ultrasound activation of a standard needle: An experimental and computational study. , 2013, , .		6
102	Synthesis and Inclusion Study of a Novel $\beta$ -Cyclodextrin Derivative as a Potential Thermo-Sensitive Carrier for Doxorubicin. Chemical and Pharmaceutical Bulletin, 2014, 62, 627-635.	0.6	6
103	Imitation of spin density wave order in $\text{Cu}_3\text{Nb}_2\text{O}_8$ . Physical Review B, 2020, 102, .	1.1	6
104	High-Efficiency High Voltage Hybrid Charge Pump Design With an Improved Chip Area. IEEE Access, 2021, 9, 94386-94397.	2.6	6
105	Techniques for wirebond free interconnection of piezoelectric ultrasound arrays operating above 50 MHz. , 2009, , .		5
106	Application of sonoelastography to regional anaesthesia: a descriptive study with the Thiel embalmed cadaver model. Ultrasound, 2012, 20, 41-48.	0.3	5
107	Ultrasound Activated Nano-Encapsulated Targeted Drug Delivery and Tumour Cell Poration. Advances in Experimental Medicine and Biology, 2012, 733, 135-144.	0.8	5
108	High-power characterization of a microcutter actuated by PMN-PT piezocrystals. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 1957-1967.	1.7	5

#	ARTICLE	IF	CITATIONS
109	Dual Orientation 16-MHz Single-Element Ultrasound Needle Transducers for Image-Guided Neurosurgical Intervention. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 233-244.	1.7	5
110	Glass-windowed ultrasound transducers. Ultrasonics, 2016, 68, 108-119.	2.1	5
111	Ultrasound and Microbubbles Promote the Retention of Fluorescent Compounds in the Small Intestine. , 2018, , .		5
112	Challenges in developing collaborative interdisciplinary research between gastroenterologists and engineers. Journal of Medical Engineering and Technology, 2018, 42, 435-442.	0.8	5
113	Spin-wave directional anisotropies in antiferromagnetic Ba <sub>3</sub> NbFe <sub>3</sub> Si <sub>2</sub> O <sub>14</sub> . Physical Review B, 2019, 100, .	1.1	5
114	Experimental investigation of alternative pre-stress components for a 3-1 connectivity multilayer piezoelectric-polymer composite ultrasonic transducer. Ultrasonics, 2002, 40, 913-919.	2.1	4
115	Towards the Automatic Interpretation of Ultrasonic Non-Destructive Testing Data through the Application of Image-Thresholding and Region-Growing Segmentation. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2006, 220, 1011-1016.	1.5	4
116	A modular FPGA-based ultrasonic array system for applications including non-destructive testing. Insight: Non-Destructive Testing and Condition Monitoring, 2008, 50, 74-77.	0.3	4
117	Operation of a high frequency piezoelectric ultrasound array with an application specific integrated circuit. , 2009, , .		4
118	The development of a robotic approach to therapeutic ultrasound. Journal of Physics: Conference Series, 2009, 181, 012017.	0.3	4
119	Future integration of silicon electronics with miniature piezoelectric ultrasonic transducers and arrays. , 2010, , .		4
120	Ultrasonic cutting with a d <sub>31</sub> -mode PMN-PT-driven planar tool. , 2011, , .		4
121	Modelling ultrasonic-transducer performance: one-dimensional models. , 2012, , 187-219.		4
122	Simultaneous Measurement of Thermophysical Properties of Tissue-Mimicking Phantoms for High Intensity Focused Ultrasound (HIFU) Exposures. International Journal of Thermophysics, 2012, 33, 495-504.	1.0	4
123	Hybrid optical and acoustic force based sorting. , 2014, , .		4
124	Advanced electrical array interconnections for ultrasound probes integrated in surgical needles. , 2014, , .		4
125	Performance optimization of ultrasonic needle actuating device for insertion operation into tissue mimics. , 2014, , .		4
126	Capsule-based ultrasound-mediated targeted gastrointestinal drug delivery. , 2015, , .		4



#	ARTICLE	IF	CITATIONS
127	Design and Characterization of an Ultrasonic Surgical Tool Using d31 PMN-PT Plate. Physics Procedia, 2015, 63, 182-188.	1.2	4
128	Alignment of an acoustic manipulation device with cepstral analysis of electronic impedance data. Ultrasonics, 2015, 56, 172-177.	2.1	4
129	Ultrasound facilitated marking of gastrointestinal tissue with fluorescent material. , 2016, , .		4
130	First step to facilitate long-term and multi-centre studies of shear wave elastography in solid breast lesions using a computer-assisted algorithm. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1533-1542.	1.7	4
131	High Resolution Microultrasound ( $\frac{1}{4}$ US) Investigation of the Gastrointestinal (GI) Tract. Methods in Molecular Biology, 2017, 1572, 541-561.	0.4	4
132	Imaging Fluorophore-Labelled Intestinal Tissue via Fluorescence Endoscope Capsule. Proceedings (mdpi), 2018, 2, 766.	0.2	4
133	Introduction of a Measurement Setup to Monitor the Pressure Applied During Handheld Ultrasound Elastography. Ultrasound in Medicine and Biology, 2020, 46, 2556-2559.	0.7	4
134	Investigation of crack sizing using ultrasonic phased arrays with signal processing techniques. Insight: Non-Destructive Testing and Condition Monitoring, 2006, 48, 80-83.	0.3	3
135	11D-3 MOSAIC: An Integrated Ultrasonic 2D Array System. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	3
136	4F-4 Parametric Array Design and Characterisation for Underwater Sonar and Medical Strain Imaging Applications. , 2007, , .		3
137	Fundamental performance characterisation of high frequency piezocomposites made with net-shape viscous polymer processing for medical ultrasound transducers. , 2008, , .		3
138	Investigation of Elevated Temperature Effects on Multiple Layer Piezoelectric Ultrasonic Transducers with Adhesive Bondlines by Self-Heating. , 2010, , .		3
139	Progress towards the development of novel fabrication and assembly methods for the next generation of ultrasonic transducers. , 2010, , .		3
140	Design, manufacturing and packaging of high frequency micro ultrasonic transducers for medical applications. , 2011, , .		3
141	A sonic screwdriver: Acoustic angular momentum transfer for ultrasonic manipulation. , 2011, , .		3
142	Design and fabrication of PMN-PT based high frequency ultrasound imaging devices integrated into medical interventional tools. , 2011, , .		3
143	15 MHz single element ultrasound needle transducers for neurosurgical applications. , 2014, , .		3
144	Automatic frequency tracking system for needle actuating device. , 2014, , .		3

#	ARTICLE	IF	CITATIONS
145	Ultrasound beam distortion and pressure reduction in transcostal focused ultrasound surgery. Applied Acoustics, 2014, 76, 337-345.	1.7	3
146	2-D crossed-electrode transducer arrays for ultrasonic particle manipulation. , 2016, , .		3
147	An in vitro sonication system for applications in ultrasound-mediated targeted drug delivery. , 2016, , .		3
148	Development of a therapeutic capsule endoscope for treatment in the gastrointestinal tract: Bench testing to translational trial. , 2017, , .		3
149	Development of a therapeutic capsule endoscope for treatment in the gastrointestinal Tract: Bench testing to translational trial. , 2017, , .		3
150	An area-efficient hybrid high-voltage charge pump design for IoT applications. , 2018, , .		3
151	Improved Performance of $d_{31}$ -Mode Needle-Actuating Transducer With PMN-PT Piezocrystal. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 1415-1422.	1.7	3
152	Microfabrication of 1-3 Composites with Photolithographically Defined Electrode Patterns for Kerfless Microultrasound Arrays. , 2019, , .		3
153	Multi-Channel Signal-Generator ASIC for Acoustic Holograms. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 49-56.	1.7	3
154	Design of Nanoparticles for Focused Ultrasound Drug Delivery. , 2019, , 205-239.		3
155	An Organoid-derived Cell Layer as an in vitro Model for US-mediated Drug Delivery Studies. , 2020, , .		3
156	Development of a Point-of-Care Ultrasound Driver for Applications with Low Power and Reduced Area Requirements. , 2021, , .		3
157	Ultrasound technology for capsule endoscopy. , 2022, , 215-240.		3
158	Condition monitoring with ultrasonic arrays at elevated temperatures. Insight: Non-Destructive Testing and Condition Monitoring, 2003, 45, 130-133.	0.3	2
159	The effect of pillar misalignment on the underwater performance of high frequency multilayer 1-3 piezocomposite transducers with acoustic matching and backing layers. , 0, , .		2
160	Nondestructive and destructive investigation of bondlines for high-power multilayer ultrasonic transducers for underwater sonar. , 0, , .		2
161	4F-2 Effects of Increasing Environmental Temperature on the Practical Performance of PMN-PT and PZN-PT Single Crystals. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	2
162	Characterisation of self-heating effects on multilayer ultrasonic transducers with adhesive bondlines. Electronics Letters, 2008, 44, 1333.	0.5	2

#	ARTICLE	IF	CITATIONS
163	The development of therapeutic ultrasound with assistance of robotic manipulator. , 2009, 2009, 733-6.		2
164	Lithium niobate ultrasound transducers for high-resolution focused ultrasound surgery. , 2010, , .		2
165	Effect of focus splitting on ultrasound propagation through the rib cage in focused ultrasound surgery. , 2011, , .		2
166	Multi-wavelength ultrasonic standing wave device for non-invasive cell manipulation and characterisation. , 2011, , .		2
167	Focused ultrasound ablation using real time ultrasound image guidance. , 2011, , .		2
168	New piezocrystal material in the development of a 96-element array transducer for MR-guided focused ultrasound surgery. AIP Conference Proceedings, 2012, , .	0.3	2
169	Focusing through the rib cage for MR-guided transcostal FUS. , 2012, , .		2
170	Particle manipulation in a microfluidic channel with an electronically controlled linear piezoelectric array. , 2012, , .		2
171	Investigating the motility of Dictyostelium discoideum using high frequency ultrasound as a method of manipulation. , 2012, , .		2
172	Automatic estimation of elasticity parameters in breast tissue. Proceedings of SPIE, 2014, , .	0.8	2
173	Automated performance assessment of ultrasound systems using a dynamic phantom. Ultrasound, 2014, 22, 199-204.	0.3	2
174	Functional characterization of piezocrystals monitored under high power driving conditions. , 2015, , .		2
175	Loss characterisation of piezocrystals under elevated environmental conditions. , 2016, , .		2
176	Assessment of the ultrasonic properties of additive manufactured materials for passive components of piezoelectric transducers. , 2016, , .		2
177	Ultrasound Capsule Endoscopy Components for in vivo and ex vivo Microultrasound Near-Field Imaging. , 2019, , .		2
178	Progress towards wafer-scale fabrication based on gel casting technique for 1â€³ randomised piezocomposite 1/4US linear array. Journal of the European Ceramic Society, 2022, 42, 5565-5574.	2.8	2
179	Spatial response of symmetric and asymmetric planar SQUID gradiometers. IEEE Transactions on Applied Superconductivity, 1997, 7, 3220-3223.	1.1	1
180	Mathematical optimisation of multilayer piezoelectric devices with non-uniform layer thicknesses by simulated annealing. , 0, , .		1

#	ARTICLE	IF	CITATIONS
181	Material property variation as a factor in commercial adoption of piezocrystals for composite transducer manufacture. , 0, , .		1
182	P5C-5 Design and Validation of an Ultrasound Array Optimised for Epidural Needle Guidance. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	1
183	3F-2 Investigation of Element Cross Talk in Arrays Using 1-3 Piezocomposite Substrates. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	1
184	3F-3 Theoretical Effects of Epoxy Interlayer Bonds in Multilayer Piezoelectric Transducers. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	1
185	P11-1 Acoustical Parameters Characterisation of Aluminium Nitride Thin Film BAW Resonators Using Resonant Spectrum Approach. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	1
186	MOSAIC: A SCALABLE RECONFIGURABLE 2D ARRAY SYSTEM FOR NDT. AIP Conference Proceedings, 2008, , .	0.3	1
187	Characterization of PMN-29%PT as a function of temperature and pressure. , 2011, , .		1
188	The sonic screwdriver: a model system for study of wave angular momentum. , 2011, , .		1
189	Low temperature bonding of piezoelectric single crystal materials for miniaturized high resolution ultrasound transducers. , 2012, , .		1
190	Effects of power levels and soft tissue loads on an ultrasonic planar tool driven by PMN-PT d<inf>31</inf> plates. , 2013, , .		1
191	Customized modular multichannel electronics for ultrasound-mediated targeted drug delivery with a geodesic piezocrystal phased array. , 2014, , .		1
192	Vacuum deposition of mass-spring matching layers for high-frequency ultrasound transducers. , 2014, , .		1
193	Ex-vivo navigation of neurosurgical biopsy needles using microultrasound transducers with M-mode imaging. , 2015, , .		1
194	Microultrasound and small bowel inflammation: Tissue phantom studies. , 2015, , .		1
195	Comparison of needle actuation transducers working in the d<inf>31</inf> and d<inf>33</inf> modes. , 2016, , .		1
196	Implementation of a PMN-PT piezocrystal-based focused array with geodesic faceted structure. Ultrasonics, 2016, 69, 137-143.	2.1	1
197	Role of periodic shock waves in passive acoustic mapping of cavitation. , 2016, , .		1
198	The Performance of Piezoelectric Materials Under Stress. , 2017, , 787-814.		1

#	ARTICLE	IF	CITATIONS
199	Notice of Removal: A fully-automated insonation system for in vitro investigations of ultrasound-mediated targeted drug delivery. , 2017, , .		1
200	Integrated Front End Circuitry for Microultrasound Capsule Endoscopy. , 2018, , .		1
201	Progress Towards Piezocrystal and Pb-Free Piezoceramic Performance Prediction for High Power Ultrasound Devices. , 2018, , .		1
202	Development of a 1-D Linear Phased Ultrasonic Array for Intravascular Sonoporation. , 2019, , .		1
203	Quantitative Ultrasound Differentiates Brain and Brain Tumour Phantoms. , 2019, , .		1
204	Evaluation of PIC 181 and Mn:PIN-PMN-PT thickness extensional rings for use in power ultrasonic devices for minimally invasive surgery. , 2020, , .		1
205	Effect of Freezing and Fixation on Quantitative Ultrasound Parameters in Phantoms of Brain and Brain Tumour. , 2020, , .		1
206	Progress Towards the Miniaturization of an Ultrasonic Scalpel for Robotic Endoscopic Surgery Using Mn:PIN-PMN-PT High Performance Piezocrystals. , 2020, , .		1
207	Twisting waves increase the visibility of nonlinear behaviour. New Journal of Physics, 2020, 22, 063021.	1.2	1
208	Manipulating the Barrier Function of a Cell Monolayer Using a High-power Miniature Ultrasonic Transducer. , 2021, , .		1
209	Images in anesthesiology: shear wave elastography: novel technology for ultrasound-guided regional anesthesia. Anesthesiology, 2013, 119, 698.	1.3	1
210	Ultrasonic instruments & devicesâ€”reference for modern instrumentation, techniques and technology. Ultrasound in Medicine and Biology, 2001, 27, 1439.	0.7	0
211	Extending the synthetic aperture focusing algorithm to deal with flat and curved features in NDT. , 0, , .		0
212	Piezocomposite transducers for operation in 15-25 kHz range. , 0, , .		0
213	Low voltage operation of 2D ultrasonic arrays for NDT. , 0, , .		0
214	Characterisation and modelling of multilayer ultrasonic transducers with non-uniform bondlines. Electronics Letters, 2005, 41, 880.	0.5	0
215	Resonant electromechanical device fabrication with new thin film materials. , 0, , .		0
216	Investigating post-processing of phased array data for detection and sizing capabilities using incoherent compounding. Insight: Non-Destructive Testing and Condition Monitoring, 2006, 48, 228-232.	0.3	0

#	ARTICLE	IF	CITATIONS
217	2D ultrasonic arrays with low-voltage operation for high density electronics. Insight: Non-Destructive Testing and Condition Monitoring, 2006, 48, 94-97.	0.3	0
218	P3E-8 Technique for Automatic Characterisation of an Amputee's Residual Limb. , 2006, , .		0
219	Comparison of Wax and Wax-free Mounting of Irregular Piezocomposite Materials for Thinning for High-frequency Medical Devices. IEEE International Symposium on Semiconductor Manufacturing Conference, Proceedings, 2008, , .	0.0	0
220	High performance ultrasonic tool for tissue cutting. , 2011, , .		0
221	Validation of an automated dynamic phantom to assess the performance of ultrasound system. , 2011, , .		0
222	Automated transducer testing and calibration with a dynamic phantom. , 2011, , .		0
223	High-frequency transducer for MR-guided FUS. Biomedizinische Technik, 2012, 57, .	0.9	0
224	Optimizing sonication protocols for transthoracic focused ultrasound surgery. , 2012, , .		0
225	Simultaneous measurements of thermo-physical properties of egg white phantoms for HIFU by using the step-wise transient plane source technique. , 2012, , .		0
226	Applicator for in-vitro ultrasound-activated targeted drug delivery. , 2012, , .		0
227	Low temperature bonding of piezoelectric single crystal materials for miniaturized high resolution ultrasound transducers. , 2012, , .		0
228	Mapping out tractor beams: topological angular momentum and reduced axial flux; gradient versus non-conservative forces. , 2013, , .		0
229	Thick film PZT transducer arrays for particle manipulation. , 2013, , .		0
230	Tailoring Acoustic Beam Momentum and Angular Momentum. , 2013, , .		0
231	Transparent glass-windowed ultrasound transducers. , 2014, , .		0
232	Characterization of a Langevin transducer incorporating Mn-doped piezocrystal material. , 2014, , .		0
233	Non-linear cavitation cloud oscillations in High-Intensity Focused Ultrasound. , 2014, , .		0
234	FPGA embedded system for ultrasound particle manipulation with Sonotweezers. , 2014, , .		0

#	ARTICLE	IF	CITATIONS
235	A compact packaging technique for the integration of ultrasound probes in surgical needles. , 2015, , .		0
236	Development of a hybrid custom / commercial multi-channel, high-frequency transmit pulser and beamformer system. , 2015, , .		0
237	A feasibility study of soft embalmed human breast tissue for preclinical trials of HIFU- preliminary results. AIP Conference Proceedings, 2017, , .	0.3	0
238	Optimization and characterisation of bonding of piezoelectric transducers using anisotropic conductive adhesive. , 2017, , .		0
239	Translational trial outcomes for capsule endoscopy test devices. , 2017, , .		0
240	Nanotechnology in multimodal theranostic capsule endoscopy. , 2017, , .		0
241	The fabrication and integration of a 15 MHz array within a biopsy needle. , 2017, , .		0
242	Translational trial outcomes for capsule endoscopy test devices. , 2017, , .		0
243	Optimization and characterisation of bonding of piezoelectric transducers using anisotropic conductive adhesive. , 2017, , .		0
244	Acoustic radiation pressure as a versatile tool for cell compression and mechanobiology studies. , 2017, , .		0
245	The fabrication and integration of a 15 MHz array within a biopsy needle. , 2017, , .		0
246	Notice of Removal: A few twists regarding the momentum of shaped beams. , 2017, , .		0
247	Circuits and Systems for Biosensing with Microultrasound. , 2018, , 187-209.		0
248	Virtual Prototyping of a Catheter Transducer Array for Internal Hepatic Sonoporation. , 2018, , .		0
249	Lead-Free Piezoceramic Based Ultrasonic Device for Medical Application. , 2018, , .		0
250	A Robust, Compact SPICE Model for Piezoelectric Ultrasonic Transducer Array Elements. , 2018, , .		0
251	Effect of Ultrasonication on the Attachment of Biological material in Proximity of Gold Nanowire Arrays. , 2018, , .		0
252	Enhanced Modelling of a 1-D Phased Ultrasonic Array for Intracorporeal Sonoporation. , 2020, , .		0

#	ARTICLE	IF	CITATIONS
253	Encapsulation and controlled release of chemotherapeutic drugs by novel $\beta$ -cyclodextrin derived carriers.. Journal of Clinical Oncology, 2011, 29, e13062-e13062.	0.8	0
254	Planar Particle Trapping and Manipulation with Ultrasonic Transducer Arrays. , 2013, , .		0
255	Common acoustic phonon lifetimes in inorganic and hybrid lead halide perovskites. Physical Review Materials, 2019, 3, .	0.9	0
256	A Measure of Energy Density to Quantify Progress in Pb-free Piezoelectric Material Development. , 2021, , .		0
257	High-Power Characterization of d32-Mode Mn:PIN-PMN-PT Piezoelectric Single Crystals at Different Temperatures. , 2021, , .		0
258	Design and characterisation of a micro-US linear array based on randomised piezocomposite. , 2021, , .		0
259	Deep Compressed Sensing for Characterizing Inflammation Severity with Microultrasound. , 2020, , .		0