

# Ruimin Chen

## List of Publications by Year in descending order

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112  
papers

3,214  
citations

136740

32  
h-index

161609

54  
g-index

112  
all docs

112  
docs citations

112  
times ranked

3008  
citing authors

#	ARTICLE	IF	CITATIONS
1	Simultaneous functional photoacoustic and ultrasonic endoscopy of internal organs in vivo. Nature Medicine, 2012, 18, 1297-1302.	15.2	378
2	Stretchable ultrasonic transducer arrays for three-dimensional imaging on complex surfaces. Science Advances, 2018, 4, eaar3979.	4.7	204
3	Simultaneous photoacoustic microscopy of microvascular anatomy, oxygen saturation, and blood flow. Optics Letters, 2015, 40, 910.	1.7	117
4	A 25-mm diameter probe for photoacoustic and ultrasonic endoscopy. Optics Express, 2012, 20, 23944.	1.7	110
5	Stretchable Nanolayered Thermoelectric Energy Harvester on Complex and Dynamic Surfaces. Nano Letters, 2020, 20, 4445-4453.	4.5	106
6	Flexible piezoelectric ultrasonic energy harvester array for bio-implantable wireless generator. Nano Energy, 2019, 56, 216-224.	8.2	105
7	Label-free automated three-dimensional imaging of whole organs by microtomy-assisted photoacoustic microscopy. Nature Communications, 2017, 8, 1386.	5.8	104
8	Reflection-mode submicron-resolution in vivo photoacoustic microscopy. Journal of Biomedical Optics, 2012, 17, 020501.	1.4	102
9	Evaluation of breast tumor margins in vivo with intraoperative photoacoustic imaging. Optics Express, 2012, 20, 8726.	1.7	92
10	Phase-resolved acoustic radiation force optical coherence elastography. Journal of Biomedical Optics, 2012, 17, 110505.	1.4	87
11	Ultrasound-aided Multi-parametric Photoacoustic Microscopy of the Mouse Brain. Scientific Reports, 2016, 5, 18775.	1.6	78
12	Optical-resolution photoacoustic endomicroscopy in vivo. Biomedical Optics Express, 2015, 6, 918.	1.5	73
13	Microscale 1-3-Type (Na,K)NbO <sub>3</sub> -Based Pb-Free Piezocomposites for High-Frequency Ultrasonic Transducer Applications. Journal of the American Ceramic Society, 2011, 94, 1346-1349.	1.9	71
14	Fully motorized optical-resolution photoacoustic microscopy. Optics Letters, 2014, 39, 2117.	1.7	69
15	Real-time four-dimensional optical-resolution photoacoustic microscopy with Au nanoparticle-assisted subdiffraction-limit resolution. Optics Letters, 2011, 36, 1137.	1.7	66
16	Optimal ultraviolet wavelength for <i>in vivo</i> photoacoustic imaging of cell nuclei. Journal of Biomedical Optics, 2012, 17, 056004.	1.4	61
17	Ultrasound-Induced Wireless Energy Harvesting for Potential Retinal Electrical Stimulation Application. Advanced Functional Materials, 2019, 29, 1902522.	7.8	56
18	Correspondence: Lead-free intravascular ultrasound transducer using BZT-50BCT ceramics. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1272-1276.	1.7	53

#	ARTICLE	IF	CITATIONS
19	Feasibility of co-registered ultrasound and acoustic-resolution photoacoustic imaging of human colorectal cancer. <i>Biomedical Optics Express</i> , 2018, 9, 5159.	1.5	53
20	Catheter-based photoacoustic endoscope. <i>Journal of Biomedical Optics</i> , 2014, 19, 1.	1.4	52
21	Multiparametric photoacoustic microscopy of the mouse brain with 300-kHz A-line rate. <i>Neurophotonics</i> , 2016, 3, 045006.	1.7	52
22	Eco-Friendly Highly Sensitive Transducers Based on a New KNN $\alpha$ -NTK $\alpha$ -FM Lead-Free Piezoelectric Ceramic for High-Frequency Biomedical Ultrasonic Imaging Applications. <i>IEEE Transactions on Biomedical Engineering</i> , 2019, 66, 1580-1587.	2.5	51
23	Three-Dimensional Photoacoustic Endoscopic Imaging of the Rabbit Esophagus. <i>PLoS ONE</i> , 2015, 10, e0120269.	1.1	43
24	Micromachined high frequency PMN-PT/epoxy 1 $\alpha$ -3 composite ultrasonic annular array. <i>Ultrasonics</i> , 2012, 52, 497-502.	2.1	42
25	A feasibility study of <i>in vivo</i> applications of single beam acoustic tweezers. <i>Applied Physics Letters</i> , 2014, 105, 173701.	1.5	41
26	Development of a Mechanical Scanning Device With High-Frequency Ultrasound Transducer for Ultrasonic Capsule Endoscopy. <i>IEEE Transactions on Medical Imaging</i> , 2017, 36, 1922-1929.	5.4	39
27	Fabrication of a (K,Na)NbO <sub>3</sub> -based lead-free 1-3 piezocomposite for high-sensitivity ultrasonic transducers application. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	39
28	Acoustic levitation and manipulation by a high-frequency focused ring ultrasonic transducer. <i>Applied Physics Letters</i> , 2019, 114, .	1.5	39
29	Urogenital photoacoustic endoscope. <i>Optics Letters</i> , 2014, 39, 1473.	1.7	38
30	Transparent High-Frequency Ultrasonic Transducer for Photoacoustic Microscopy Application. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2020, 67, 1848-1853.	1.7	37
31	PMN-PT single-crystal high-frequency kerfless phased array. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2014, 61, 1033-1041.	1.7	36
32	PMN-PT/Epoxy 1-3 composite based ultrasonic transducer for dual-modality photoacoustic and ultrasound endoscopy. <i>Photoacoustics</i> , 2019, 15, 100138.	4.4	32
33	Transvaginal fast-scanning optical-resolution photoacoustic endoscopy. <i>Journal of Biomedical Optics</i> , 2018, 23, 1.	1.4	32
34	Lead-free KNLNT piezoelectric ceramics for high-frequency ultrasonic transducer application. <i>Ultrasonics</i> , 2009, 49, 395-398.	2.1	31
35	Saturation effect in functional photoacoustic imaging. <i>Journal of Biomedical Optics</i> , 2010, 15, 021317.	1.4	31
36	Lead-free BNT composite film for high-frequency broadband ultrasonic transducer applications. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2013, 60, 1533-1537.	1.7	31

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37	Measurements of attenuation coefficient for evaluating the hardness of a cataract lens by a high-frequency ultrasonic needle transducer. <i>Physics in Medicine and Biology</i> , 2009, 54, 5981-5994.	1.6	29
38	Development of a KNN Ceramic-Based Lead-Free Linear Array Ultrasonic Transducer. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2018, 65, 2113-2120.	1.7	29
39	High-Performance Ultrasound Needle Transducer Based on Modified PMN-PT Ceramic With Ultrahigh Clamped Dielectric Permittivity. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2018, 65, 223-230.	1.7	25
40	A Review of Transparent Sensors for Photoacoustic Imaging Applications. <i>Photonics</i> , 2021, 8, 324.	0.9	25
41	High-speed wide-field multi-parametric photoacoustic microscopy. <i>Optics Letters</i> , 2020, 45, 2756.	1.7	25
42	An adjustable multi-scale single beam acoustic tweezers based on ultrahigh frequency ultrasonic transducer. <i>Biotechnology and Bioengineering</i> , 2017, 114, 2637-2647.	1.7	23
43	Transparent lead lanthanum zirconate titanate (PLZT) ceramic fibers for high-frequency ultrasonic transducer applications. <i>Ceramics International</i> , 2016, 42, 18554-18559.	2.3	21
44	Recent advances in high-speed photoacoustic microscopy. <i>Photoacoustics</i> , 2021, 24, 100294.	4.4	21
45	Systematic study of high-frequency ultrasonic transducer design for laser-scanning photoacoustic ophthalmoscopy. <i>Journal of Biomedical Optics</i> , 2014, 19, 016015.	1.4	20
46	Focused Ultrasound Stimulates ER Localized Mechanosensitive PANXIN-1 to Mediate Intracellular Calcium Release in Invasive Cancer Cells. <i>Frontiers in Cell and Developmental Biology</i> , 2020, 8, 504.	1.8	20
47	Single-Beam Acoustic Trapping of Red Blood Cells and Polystyrene Microspheres in Flowing Red Blood Cell Saline and Plasma Suspensions. <i>Ultrasound in Medicine and Biology</i> , 2017, 43, 852-859.	0.7	17
48	High-Frequency Ultrasonic Imaging with Lead-free (Na,K)(Nb,Ta)O <sub>3</sub> Single Crystal. <i>Ultrasonic Imaging</i> , 2017, 39, 348-356.	1.4	17
49	Optical Resolution Photoacoustic Microscopy of Ovary and Fallopian Tube. <i>Scientific Reports</i> , 2019, 9, 14306.	1.6	17
50	Characterizing Deformability of Drug Resistant Patient-Derived Acute Lymphoblastic Leukemia (ALL) Cells Using Acoustic Tweezers. <i>Scientific Reports</i> , 2018, 8, 15708.	1.6	16
51	Correcting the limited view in optical-resolution photoacoustic microscopy. <i>Journal of Biophotonics</i> , 2018, 11, e201700196.	1.1	15
52	Helical-Like 3D Ultrathin Piezoelectric Element for Complicated Ultrasonic Field. <i>Advanced Functional Materials</i> , 2019, 29, 1902912.	7.8	15
53	Co-Integrated PIN-PMN-PT 2-D Array and Transceiver Electronics by Direct Assembly Using a 3-D Printed Interposer Grid Frame. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2020, 67, 387-401.	1.7	15
54	Thermal-independent properties of PIN-PMN-PT single-crystal linear-array ultrasonic transducers. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2012, 59, 2777-84.	1.7	14

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55	Pulse Inversion Chirp Coded Tissue Harmonic Imaging (PI-CTHI) of Zebrafish Heart Using High Frame Rate Ultrasound Biomicroscopy. <i>Annals of Biomedical Engineering</i> , 2013, 41, 41-52.	1.3	12
56	Photoacoustic thermal flowmetry with a single light source. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	1.4	12
57	Acoustic radiation force of a solid elastic sphere immersed in a cylindrical cavity filled with ideal fluid. <i>Wave Motion</i> , 2018, 80, 37-46.	1.0	11
58	2-D Ultrasonic Array-Based Optical Coherence Elastography. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021, 68, 1096-1104.	1.7	11
59	Simulation and fabrication of $\text{O}^{\circ}3$ composite PZT films for ultrahigh frequency (100 $\hat{c}$ 300 MHz) ultrasonic transducers. <i>Journal of Applied Physics</i> , 2016, 119, .	1.1	10
60	Fabrication and Performance of a Miniaturized and Integrated Endoscope Ultrasound Convex Array for Digestive Tract Imaging. <i>IEEE Transactions on Biomedical Engineering</i> , 2018, 65, 140-148.	2.5	10
61	Feasibility of rotational scan ultrasound imaging by an angled high frequency transducer for the posterior segment of the eye. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2009, 56, 676-680.	1.7	8
62	A Dual-Modality Hybrid Imaging System Harnesses Radioluminescence and Sound to Reveal Molecular Pathology of Atherosclerotic Plaques. <i>Scientific Reports</i> , 2018, 8, 8992.	1.6	8
63	Dual-axis illumination for virtually augmenting the detection view of optical-resolution photoacoustic microscopy. <i>Journal of Biomedical Optics</i> , 2018, 23, 1.	1.4	8
64	Title is missing!. <i>Journal of Medical and Biological Engineering</i> , 2013, 33, 103.	1.0	8
65	A Review of High-Frequency Ultrasonic Transducers for Photoacoustic Imaging Applications. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2022, 69, 1848-1858.	1.7	8
66	Volumetric photoacoustic endoscopy of upper gastrointestinal tract: ultrasonic transducer technology development. <i>Proceedings of SPIE</i> , 2011, , .	0.8	7
67	Modular Fabrication and Assembly of Large 2D Arrays with Interface Asics, Pin-Pmn-Pt Composite, and 3D Printed Backing. , 2018, , .		7
68	Tiled Large Element 1.75D Aperture with Dual Array Modules by Adjacent Integration of PIN-PMN-PT Transducers and Custom High Voltage Switching ASICs. , 2019, , .		7
69	P6H-6 Lead-Free Piezoelectric Ceramics for High-Frequency Ultrasound Transducers. <i>Proceedings IEEE Ultrasonics Symposium</i> , 2007, , .	0.0	6
70	Toward dual-wavelength functional photoacoustic endoscopy: laser and peripheral optical systems development. <i>Proceedings of SPIE</i> , 2012, , .	0.8	5
71	20 MHz forward-imaging single-element beam steering with an internal rotating variable-angle reflecting surface: Wire phantom and ex vivo pilot study. <i>Ultrasonics</i> , 2013, 53, 561-569.	2.1	5
72	Integrin Antibody Decreases Deformability of Patient $\hat{c}$ Derived Pre $\hat{c}$ B Acute Lymphocytic Leukemia Cells as Measured by High $\hat{c}$ Frequency Acoustic Tweezers. <i>Journal of Ultrasound in Medicine</i> , 2020, 39, 589-595.	0.8	5

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73	Volumetric photoacoustic endoscopy of internal organs: a phantom and in situ study. , 2010, , .		4
74	Sonothrombolysis of Ear Marginal Vein of Rabbits Monitored with High-frequency Ultrasound Needle Transducer. Journal of Medical and Biological Engineering, 2013, 33, 103-110.	1.0	4
75	Highly Integrated Multiplexing and Buffering Electronics for Large Aperture Ultrasonic Arrays. BME Frontiers, 2022, 2022, .	2.2	4
76	Ultrasonic Doppler measurements of blood flow velocity of rabbit retinal vessels using a 45-MHz needle transducer. Graefe's Archive for Clinical and Experimental Ophthalmology, 2010, 248, 675-680.	1.0	3
77	A 2.5-mm outer diameter photoacoustic endoscopic mini-probe based on a highly sensitive PMN-PT ultrasonic transducer. Proceedings of SPIE, 2012, , .	0.8	3
78	Catheter-based photoacoustic endoscope for use in the instrument channel of a clinical video endoscope. , 2015, , .		3
79	High frequency single crystal ultrasonic transducers up to 100 MHz for high resolution ophthalmic imaging applications. , 2017, , .		3
80	Large Area 1.75D Array for Liver Cancer by Tiling of Multi-Generation ASIC Array Modules. , 2020, , .		3
81	Micromachined high frequency PMN-PT/Epoxy 1&#x2013;3 composite ultrasonic annular arrays. , 2010, , .		2
82	Harmonic distortion reduction technique of the power amplifier for very high frequency ultrasonic transducer applications. , 2013, , .		2
83	Photoacoustic endoscopic imaging study of melanoma tumor growth in a rat colorectum in vivo. , 2013, , .		2
84	High frequency single crystal ultrasonic transducers up to 100 MHz for high resolution ophthalmic imaging applications. , 2017, , .		2
85	Correlation of IOP with Corneal Acoustic Impedance in Porcine Eye Model. BioMed Research International, 2017, 2017, 1-6.	0.9	2
86	PIN-PMN-PT single crystal composite and 3D printed interposer backing for ASIC integration of large aperture 2D array. , 2017, , .		2
87	Reflection-mode submicron-resolution photoacoustic microscopy in vivo. , 2012, , .		2
88	Isotropic-resolution photoacoustic microscopy with multi-angle illumination. Optics Letters, 2019, 44, 1.	1.7	2
89	Layer-specific ultrasound elastography using a multi-layered shear wave dispersion model for assessing the viscoelastic properties. Physics in Medicine and Biology, 2021, 66, 035003.	1.6	2
90	High frequency, high frame rate pulse inversion chirp coded tissue harmonic imaging. , 2011, , .		1

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91	Volumetric Photoacoustic Endoscopy. , 2012, , .		1
92	In vivo imaging of cell nuclei by photoacoustic microscopy without staining. Proceedings of SPIE, 2012, , .	0.8	1
93	Combined optical and mechanical scanning in optical-resolution photoacoustic microscopy. Proceedings of SPIE, 2014, , .	0.8	1
94	PIN-PMN-PT single crystal composite and 3D printed interposer backing for ASIC integration of large aperture 2D array. , 2017, , .		1
95	Biomedical Applications: Ultrasound-Induced Wireless Energy Harvesting for Potential Retinal Electrical Stimulation Application (Adv. Funct. Mater. 33/2019). Advanced Functional Materials, 2019, 29, 1970231.	7.8	1
96	Ultrasonic Doppler measurements of blood flow velocity of rabbit retinal vessels with high-frequency angled needle transducer. , 2008, , .		0
97	A novel scan method using angled high frequency single element needle transducers. , 2008, , .		0
98	In situ measurements of attenuation coefficient for evaluating the hardness of cataract lens by a high frequency ultrasonic needle transducer. , 2009, , .		0
99	High speed inverted optical-resolution photoacoustic microscopy. Proceedings of SPIE, 2011, , .	0.8	0
100	Dual-frequency acoustic cavitation for noninvasively breaking down a cataractous lens. , 2012, , .		0
101	Photoacoustic endoscopic imaging of the rabbit mediastinum. , 2013, , .		0
102	A parabolic mirror-based proximally actuated photoacoustic endoscope. Proceedings of SPIE, 2013, , .	0.8	0
103	Micromachined high-frequency ultrasound 2-dimensional array transducer. , 2013, , .		0
104	Three-dimensional photoacoustic and ultrasonic endoscopic imaging of two rabbit esophagi. , 2015, , .		0
105	Recent advances in developing biomedical applications of single beam acoustic tweezers. , 2015, , .		0
106	Label-free optical-resolution photoacoustic endomicroscopy in vivo. , 2015, , .		0
107	Discrimination of minimal residual disease in acute lymphoblastic leukemia by using single-beam acoustic tweezer. , 2017, , .		0
108	Discrimination of minimal residual disease in acute lymphoblastic leukemia by using single-beam acoustic tweezer. , 2017, , .		0

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109	Assessment of Electromechanical Coupling Coefficient for a Completed PIN-PMN-PT Array. , 2018, , .		0
110	Intraoperative photoacoustic tumor imaging. , 2012, , .		0
111	Whole-organ atlas imaged by label-free high-resolution photoacoustic microscopy assisted by a microtome. , 2018, , .		0
112	Ultrasound and acoustic resolution photoacoustic microscopy: a novel modality for surveilling human rectal cancer after therapy. , 2019, , .		0