K Kirk Shung

List of Publications by Year
in descending order

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70 papers	2,998 citations	109321 35 h-index	175258 52 g-index
70 all docs	70 docs citations	70 times ranked	2488 citing authors

#	Article	IF	Citations
1	Single beam acoustic trapping. Applied Physics Letters, 2009, 95, 73701.	3.3	199
2	High Frequency Ultrasonic Imaging. Journal of Medical Ultrasound, 2009, 17, 25-30.	0.4	126
3	A theoretical study of the feasibility of acoustical tweezers: Ray acoustics approach. Journal of the Acoustical Society of America, 2005, 117, 3273-3280.	1.1	112
4	Multi-frequency intravascular ultrasound (IVUS) imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2015, 62, 97-107.	3.0	112
5	High-speed Intravascular Photoacoustic Imaging of Lipid-laden Atherosclerotic Plaque Enabled by a 2-kHz Barium Nitrite Raman Laser. Scientific Reports, 2014, 4, 6889.	3.3	107
6	Radiation forces exerted on arbitrarily located sphere by acoustic tweezer. Journal of the Acoustical Society of America, 2006, 120, 1084-1094.	1.1	90
7	Integrated intravascular optical coherence tomography ultrasound imaging system. Journal of Biomedical Optics, 2010, 15, 010512.	2.6	75
8	Diagnostic Ultrasound. , 0, , .		73
9	High-resolution coregistered intravascular imaging with integrated ultrasound and optical coherence tomography probe. Applied Physics Letters, 2010, 97, 133702.	3.3	72
10	80-MHz intravascular ultrasound transducer using PMN-PT free-standing film. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 2281-2288.	3.0	71
11	Novel combined miniature optical coherence tomography ultrasound probe for in vivo intravascular imaging. Journal of Biomedical Optics, 2011, 16, 060505.	2.6	69
12	Feasibility study of using high-frequency ultrasonic Nakagami imaging for characterizing the cataract lensin vitro. Physics in Medicine and Biology, 2007, 52, 6413-6425.	3.0	63
13	Spectroscopic intravascular photoacoustic imaging of lipids in atherosclerosis. Journal of Biomedical Optics, 2014, 19, 026006.	2.6	63
14	Integrated ultrasound and photoacoustic probe for co-registered intravascular imaging. Journal of Biomedical Optics, 2011, 16, 106001.	2.6	61
15	Cell Deformation by Single-beam Acoustic Trapping: A Promising Tool for Measurements of Cell Mechanics. Scientific Reports, 2016, 6, 27238.	3.3	59
16	Transverse Acoustic Trapping Using a Gaussian Focused Ultrasound. Ultrasound in Medicine and Biology, 2010, 36, 350-355.	1.5	58
17	Resonant acoustic radiation force optical coherence elastography. Applied Physics Letters, 2013, 103, 103704.	3.3	56
18	Integrated IVUS-OCT Imaging for Atherosclerotic Plaque Characterization. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 196-203.	2.9	53

#	Article	IF	Citations
19	Catheter-based photoacoustic endoscope. Journal of Biomedical Optics, 2014, 19, 1.	2.6	52
20	Integrated IVUS-OCT for Real-Time Imaging of Coronary Atherosclerosis. JACC: Cardiovascular Imaging, 2014, 7, 101-103.	5.3	51
21	Investigating contactless high frequency ultrasound microbeam stimulation for determination of invasion potential of breast cancer cells. Biotechnology and Bioengineering, 2013, 110, 2697-2705.	3.3	48
22	A High-Frame Rate Duplex Ultrasound Biomicroscopy for Small Animal Imaging In vivo. IEEE Transactions on Biomedical Engineering, 2008, 55, 2039-2049.	4.2	47
23	A dual-modality probe utilizing intravascular ultrasound and optical coherence tomography for intravascular imaging applications. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 2839-2843.	3.0	47
24	High-Resolution Acoustic-Radiation-Force-Impulse Imaging for Assessing Corneal Sclerosis. IEEE Transactions on Medical Imaging, 2013, 32, 1316-1324.	8.9	47
25	Direct and sustained intracellular delivery of exogenous molecules using acoustic-transfection with high frequency ultrasound. Scientific Reports, 2016, 6, 20477.	3.3	44
26	A Review of Intravascular Ultrasound-based Multimodal Intravascular Imaging. Ultrasonic Imaging, 2016, 38, 314-331.	2.6	44
27	Quantitative Assessment of Thin-Layer Tissue Viscoelastic Properties Using Ultrasonic Micro-Elastography With Lamb Wave Model. IEEE Transactions on Medical Imaging, 2018, 37, 1887-1898.	8.9	44
28	Particle manipulation in a microfluidic channel using acoustic trap. Biomedical Microdevices, 2011, 13, 779-788.	2.8	42
29	A feasibility study of in vivo applications of single beam acoustic tweezers. Applied Physics Letters, 2014, 105, 173701.	3.3	41
30	Multimodal characterization of compositional, structural and functional features of human atherosclerotic plaques. Biomedical Optics Express, 2011, 2, 2288.	2.9	40
31	Impedance matching network for high frequency ultrasonic transducer for cellular applications. Ultrasonics, 2016, 65, 258-267.	3.9	40
32	Acoustic-transfection for genomic manipulation of single-cells using high frequency ultrasound. Scientific Reports, 2017, 7, 5275.	3.3	40
33	Miniature optical coherence tomography-ultrasound probe for automatically coregistered three-dimensional intracoronary imaging with real-time display. Journal of Biomedical Optics, 2013, 18, 1.	2.6	39
34	Confocal acoustic radiation force optical coherence elastography using a ring ultrasonic transducer. Applied Physics Letters, 2014, 104, 123702.	3.3	39
35	High frequency ultrasonic characterization of human vocal fold tissue. Journal of the Acoustical Society of America, 2007, 122, 1827-1832.	1.1	37
36	Determining the Acoustic Properties of the Lens Using A High-Frequency Ultrasonic Needle Transducer. Ultrasound in Medicine and Biology, 2007, 33, 1971-1977.	1.5	37

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37	Focused high frequency needle transducer for ultrasonic imaging and trapping. Applied Physics Letters, 2012, 101, 24105.	3.3	37
38	Recent Advancements in Ultrasound Transducer: From Material Strategies to Biomedical Applications. BME Frontiers, 2022, 2022, .	4.5	37
39	Acoustic trapping with a high frequency linear phased array. Applied Physics Letters, 2012, 101, 214104.	3.3	33
40	Trimodality imaging system and intravascular endoscopic probe: combined optical coherence tomography, fluorescence imaging and ultrasound imaging. Optics Letters, 2014, 39, 6652.	3.3	33
41	Acoustic tweezers for studying intracellular calcium signaling in SKBR-3 human breast cancer cells. Ultrasonics, 2015, 63, 94-101.	3.9	33
42	Evaluation of Lens Hardness in Cataract Surgery using High-Frequency Ultrasonic Parameters in Vitro. Ultrasound in Medicine and Biology, 2007, 33, 1609-1616.	1.5	32
43	Non-contact High-Frequency Ultrasound Microbeam Stimulation for Studying Mechanotransduction in Human Umbilical Vein Endothelial Cells. Ultrasound in Medicine and Biology, 2014, 40, 2172-2182.	1.5	32
44	Improved fabrication of focused single element P(VDFâ€“TrFE) transducer for high frequency ultrasound applications. Ultrasonics, 2013, 53, 455-458.	3.9	31
45	Angled-focused 45MHz PMN-PT single element transducer for intravascular ultrasound imaging. Sensors and Actuators A: Physical, 2015, 228, 16-22.	4.1	31
46	A study of the adult zebrafish ventricular function by retrospective doppler-gated ultrahigh-frame-rate echocardiography. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1827-1837.	3.0	30
47	Measurements of attenuation coefficient for evaluating the hardness of a cataract lens by a high-frequency ultrasonic needle transducer. Physics in Medicine and Biology, 2009, 54, 5981-5994.	3.0	29
48	Cell membrane deformation induced by a fibronectin-coated polystyrene microbead in a 200-MHz acoustic trap. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 399-406.	3.0	29
49	Functional Assay of Cancer Cell Invasion Potential Based on Mechanotransduction of Focused Ultrasound. Frontiers in Oncology, 2017, 7, 161.	2.8	29
50	A simple method for evaluating the trapping performance of acoustic tweezers. Applied Physics Letters, 2013, 102, 84102.	3.3	27
51	Non-Rigid Ultrasound Image Registration Based on Intensity and Local Phase Information. Journal of Signal Processing Systems, 2009, 54, 33-43.	2.1	26
52	High-Resolution Shear Wave Imaging of the Human Cornea Using a Dual-Element Transducer. Sensors, 2018, 18, 4244.	3.8	26
53	Low-Intensity Ultrasound Modulates Ca2+ Dynamics in Human Mesenchymal Stem Cells via Connexin 43 Hemichannel. Annals of Biomedical Engineering, 2018, 46, 48-59.	2.5	22
54	Combined chirp coded tissue harmonic and fundamental ultrasound imaging for intravascular ultrasound: 20â€“60MHz phantom and ex vivo results. Ultrasonics, 2013, 53, 369-376.	3.9	21

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55	Intravascular Ultrasound Imaging With Virtual Source Synthetic Aperture Focusing and Coherence Factor Weighting. IEEE Transactions on Medical Imaging, 2017, 36, 2171-2178.	8.9	21
56	High frequency ultrasound: A new frontier for ultrasound. , 2009, 2009, 1953-5.		19
57	Single-Beam Acoustic Trapping of Red Blood Cells and Polystyrene Microspheres in Flowing Red Blood Cell Saline and Plasma Suspensions. Ultrasound in Medicine and Biology, 2017, 43, 852-859.	1.5	17
58	High-frequency dual mode pulsed wave Doppler imaging for monitoring the functional regeneration of adult zebrafish hearts. Journal of the Royal Society Interface, 2015, 12, 20141154.	3.4	16
59	Characterizing Deformability of Drug Resistant Patient-Derived Acute Lymphoblastic Leukemia (ALL) Cells Using Acoustic Tweezers. Scientific Reports, 2018, 8, 15708.	3.3	16
60	Monitoring of Adult Zebrafish Heart Regeneration Using High-Frequency Ultrasound Spectral Doppler and Nakagami Imaging. Sensors, 2019, 19, 4094.	3.8	12
61	Classification of Breast Cancer Cells Using the Integration of High-Frequency Single-Beam Acoustic Tweezers and Convolutional Neural Networks. Cancers, 2020, 12, 1212.	3.7	12
62	Investigation of Optimized Treatment Conditions for Acoustic-Transfection Technique for Intracellular Delivery of Macromolecules. Ultrasound in Medicine and Biology, 2018, 44, 622-634.	1.5	10
63	Development of a Low-Complexity, Cost-Effective Digital Beamformer Architecture for High-Frequency Ultrasound Imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 1002-1008.	3.0	9
64	High-resolution harmonic motion imaging (HR-HMI) for tissue biomechanical property characterization. Quantitative Imaging in Medicine and Surgery, 2015, 5, 108-17.	2.0	8
65	Investigation of Ultrasound-Mediated Intracellular Ca2+ Oscillations in HIT-T15 Pancreatic Î²-Cell Line. Cells, 2020, 9, 1129.	4.1	7
66	Integrin Antibody Decreases Deformability of Patientâ€Derived Preâ€B Acute Lymphocytic Leukemia Cells as Measured by Highâ€Frequency Acoustic Tweezers. Journal of Ultrasound in Medicine, 2020, 39, 589-595.	1.7	5
67	Manipulation and Mechanical Deformation of Leukemia Cells by High-Frequency Ultrasound Single Beam. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2022, 69, 1889-1897.	3.0	5
68	Automated estimation of cancer cell deformability with machine learning and acoustic trapping. Scientific Reports, 2022, 12, 6891.	3.3	3
69	Integrated intravascular optical coherence tomography (OCT) - ultrasound (US) catheter for characterization of atherosclerotic plaques in vivo. , 2012, 2012, 3175-8.		2
70	Characterizing the Motility of Chemotherapeutics-Treated Acute Lymphoblastic Leukemia Cells by Time-Lapse Imaging. Cells, 2020, 9, 1470.	4.1	0