Robin O Cleveland

List of Publications by Year
in descending order

91 papers	4,494 citations	136950 32 h-index	106344 65 g-index
96 all docs	96 docs citations	96 times ranked	4031 citing authors

#	Article	IF	Citations
1	Chronic Traumatic Encephalopathy in Blast-Exposed Military Veterans and a Blast Neurotrauma Mouse Model. Science Translational Medicine, 2012, 4, 134ra60.	12.4	684
2	Concussion, microvascular injury, and early tauopathy in young athletes after impact head injury and an impact concussion mouse model. Brain, 2018, 141, 422-458.	7.6	315
3	Ultrasound Neuromodulation: A Review of Results, Mechanisms and Safety. Ultrasound in Medicine and Biology, 2019, 45, 1509-1536.	1.5	297
4	Shock Wave Technology and Application: An Update. European Urology, 2011, 59, 784-796.	1.9	251
5	Cavitation Bubble Cluster Activity in the Breakage of Kidney Stones by Lithotripter Shockwaves. Journal of Endourology, 2003, 17, 435-446.	2.1	196
6	FDTD simulation of finite-amplitude pressure and temperature fields for biomedical ultrasound. Journal of the Acoustical Society of America, 1999, 105, L7-L12.	1.1	153
7	Experimental validation of a tractable numerical model for focused ultrasound heating in flow-through tissue phantoms. Journal of the Acoustical Society of America, 2004, 116, 2451-2458.	1.1	142
8	Effect of overpressure and pulse repetition frequency on cavitation in shock wave lithotripsy. Journal of the Acoustical Society of America, 2002, 112, 1183-1195.	1.1	141
9	Timeâ€domain modeling of finiteâ€amplitude sound in relaxing fluids. Journal of the Acoustical Society of America, 1996, 99, 3312-3318.	1.1	127
10	Modeling elastic wave propagation in kidney stones with application to shock wave lithotripsy. Journal of the Acoustical Society of America, 2005, 118, 2667-2676.	1.1	110
11	Ultrasonic contrast agent shell rupture detected by inertial cavitation and rebound signals. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2006, 53, 126-136.	3.0	94
12	Modeling of an electrohydraulic lithotripter with the KZK equation. Journal of the Acoustical Society of America, 1999, 106, 102-112.	1.1	91
13	A dual passive cavitation detector for localized detection of lithotripsy-induced cavitationin vitro. Journal of the Acoustical Society of America, 2000, 107, 1745-1758.	1.1	91
14	Time domain simulation of nonlinear acoustic beams generated by rectangular pistons with application to harmonic imaging. Journal of the Acoustical Society of America, 2005, 117, 113-123.	1.1	86
15	Cavitation detection during shock-wave lithotripsy. Ultrasound in Medicine and Biology, 2005, 31, 1245-1256.	1.5	84
16	Design and characterization of a research electrohydraulic lithotripter patterned after the Dornier HM3. Review of Scientific Instruments, 2000, 71, 2514-2525.	1.3	83
17	The acoustic emissions from single-bubble sonoluminescence. Journal of the Acoustical Society of America, 1998, 103, 1377-1382.	1.1	82
18	Ultracal-30 gypsum artificial stones for research on the mechanisms of stone breakage in shock wave lithotripsy. Urological Research, 2005, 33, 429-434.	1.5	82

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19	Simulations of the thermo-acoustic lens effect during focused ultrasound surgery. Journal of the Acoustical Society of America, 2001, 109, 2245-2253.	1.1	75
20	Acoustic Field of a Ballistic Shock Wave Therapy Device. Ultrasound in Medicine and Biology, 2007, 33, 1327-1335.	1.5	75
21	Effect of Stone Motion on in Vitro Comminution Efficiency of Storz Modulith SLX. Journal of Endourology, 2004, 18, 629-633.	2.1	74
22	Comparison of electrohydraulic lithotripters with rigid and pressure-release ellipsoidal reflectors. II. Cavitation fields. Journal of the Acoustical Society of America, 1999, 106, 1149-1160.	1.1	73
23	Imaging Artifacts of Medical Instruments in Ultrasound-Guided Interventions. Journal of Ultrasound in Medicine, 2007, 26, 1303-1322.	1.7	72
24	Comparison of electrohydraulic lithotripters with rigid and pressure-release ellipsoidal reflectors. I. Acoustic fields. Journal of the Acoustical Society of America, 1998, 104, 2517-2524.	1.1	69
25	Transcranial ultrasound stimulation in humans is associated with an auditory confound that can be effectively masked. Brain Stimulation, 2020, 13, 1527-1534.	1.6	60
26	In Vivo Pressure Measurements of Lithotripsy Shock Waves in Pigs. Ultrasound in Medicine and Biology, 1998, 24, 293-306.	1.5	59
27	Comparison of computer codes for the propagation of sonic boom waveforms through isothermal atmospheres. Journal of the Acoustical Society of America, 1996, 100, 3017-3027.	1.1	54
28	Three-dimensional echocardiographyâ€"guided beating-heart surgery without cardiopulmonary bypass: A feasibility study. Journal of Thoracic and Cardiovascular Surgery, 2004, 128, 579-587.	0.8	44
29	Modeling the propagation of nonlinear three-dimensional acoustic beams in inhomogeneous media. Journal of the Acoustical Society of America, 2007, 122, 1352-1364.	1.1	40
30	Nonlinear and diffraction effects in propagation ofN-waves in randomly inhomogeneous moving media. Journal of the Acoustical Society of America, 2011, 129, 1760-1772.	1.1	38
31	Effect of macroscopic air bubbles on cell lysis by shock wave lithotripsy in vitro. Ultrasound in Medicine and Biology, 1999, 25, 473-479.	1.5	33
32	Lipid-mRNA Nanoparticle Designed to Enhance Intracellular Delivery Mediated by Shock Waves. ACS Applied Materials & Interfaces, 2019, 11, 10481-10491.	8.0	32
33	Real-Time Monitoring of High-Intensity Focused Ultrasound Lesion Formation Using Acousto-Optic Sensing. Ultrasound in Medicine and Biology, 2011, 37, 239-252.	1.5	30
34	Radiation impedance matrices for rectangular interfaces within rigid baffles: Calculation methodology and applications. Journal of the Acoustical Society of America, 2002, 111, 672-684.	1.1	28
35	Sparsity driven ultrasound imaging. Journal of the Acoustical Society of America, 2012, 131, 1271-1281.	1.1	28
36	Fourier continuation methods for high-fidelity simulation of nonlinear acoustic beams. Journal of the Acoustical Society of America, 2012, 132, 2371-2387.	1.1	26

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37	Quantitative measurements of acoustic emissions from cavitation at the surface of a stone in response to a lithotripter shock wave. Journal of the Acoustical Society of America, 2006, 119, 1929-1932.	1.1	24
38	Producing diffuse ultrasound reflections from medical instruments using a quadratic residue diffuser. Ultrasound in Medicine and Biology, 2006, 32, 721-727.	1.5	23
39	Tunable Diacetylene Polymerized Shell Microbubbles as Ultrasound Contrast Agents. Langmuir, 2012, 28, 3766-3772.	3.5	23
40	Microvessels-on-a-Chip to Assess Targeted Ultrasound-Assisted Drug Delivery. ACS Applied Materials & Interfaces, 2016, 8, 31541-31549.	8.0	23
41	Response of Single Cells to Shock Waves and Numerically Optimized Waveforms for Cancer Therapy. Biophysical Journal, 2018, 114, 1433-1439.	0.5	22
42	The effect of polypropylene vials on lithotripter shock waves. Ultrasound in Medicine and Biology, 1997, 23, 939-952.	1.5	21
43	Determining the pulse-echo electromechanical characteristic of a transducer using flat plates and point targets. Journal of the Acoustical Society of America, 2004, 116, 90-96.	1.1	20
44	Time-lapse nondestructive assessment of shock wave damage to kidney stonesin vitrousing micro-computed tomography. Journal of the Acoustical Society of America, 2001, 110, 1733-1736.	1.1	18
45	Simulation of nonlinear propagation of biomedical ultrasound using <scp>pzflex</scp> and the Khokhlov-Zabolotskaya-Kuznetsov Texas code. Journal of the Acoustical Society of America, 2016, 140, 2039-2046.	1.1	17
46	CT Texture Analysis of Ex Vivo Renal Stones Predicts Ease of Fragmentation with Shockwave Lithotripsy. Journal of Endourology, 2017, 31, 694-700.	2.1	16
47	Acoustic and Cavitation Fields of Shock Wave Therapy Devices. AIP Conference Proceedings, 2006, , .	0.4	14
48	Customization of the acoustic field produced by a piezoelectric array through interelement delays. Journal of the Acoustical Society of America, 2008, 123, 4174-4185.	1.1	14
49	Molecular dynamics simulations of heterogeneous cell membranes in response to uniaxial membrane stretches at high loading rates. Scientific Reports, 2017, 7, 8316.	3.3	14
50	Monodisperse Micro-Oil Droplets Stabilized by Polymerizable Phospholipid Coatings as Potential Drug Carriers. Langmuir, 2015, 31, 9762-9770.	3.5	12
51	Dual-Array Passive Acoustic Mapping for Cavitation Imaging With Enhanced 2-D Resolution. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 647-663.	3.0	11
52	Title is missing!. Cytotechnology, 1998, 19, 303-310.	0.7	10
53	Thermal dose dependent optical property changes of<i>ex vivo</i>chicken breast tissues between 500 and 1100 nm. Physics in Medicine and Biology, 2014, 59, 3249-3260.	3.0	10
54	On measuring the acoustic state changes in lipid membranes using fluorescent probes. Soft Matter, 2018, 14, 9702-9712.	2.7	10

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55	Mitigation of Damage to Solid Surfaces From the Collapse of Cavitation Bubble Clouds. Journal of Fluids Engineering, Transactions of the ASME, 2010, 132, .	1.5	9
56	Detecting cavitation in mercury exposed to a high-energy pulsed proton beam. Journal of the Acoustical Society of America, 2010, 127, 2231-2239.	1.1	9
57	HIFU-induced changes in optical scattering and absorption of tissue over nine orders of thermal dose. Physics in Medicine and Biology, 2018, 63, 245001.	3.0	8
58	Amplitude degradation of time-reversed pulses in nonlinear absorbing thermoviscous fluids. Ultrasonics, 2000, 38, 885-889.	3.9	7
59	Effect of the diameter and the sound speed of a kidney stone on the acoustic field induced by shock waves. Acoustics Research Letters Online: ARLO, 2004, 5, 37-43.	0.7	7
60	Multi-parameter acoustic imaging of uniform objects in inhomogeneous soft tissue. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 1700-1712.	3.0	7
61	Quantification of the Range of Motion of Kidney and Ureteral Stones During Shockwave Lithotripsy in Conscious Patients. Journal of Endourology, 2016, 30, 406-410.	2.1	7
62	The Application of Clinical Lithotripter Shock Waves to RNA Nucleotide Delivery to Cells. Ultrasound in Medicine and Biology, 2016, 42, 2478-2492.	1.5	6
63	<i>In Vitro</i> Assessment of Three Clinical Lithotripters Employing Different Shock Wave Generators. Journal of Endourology, 2016, 30, 560-565.	2.1	6
64	3D multicellular model of shock wave-cell interaction. Acta Biomaterialia, 2018, 77, 282-291.	8.3	6
65	The Acoustics of Shock Wave Lithotripsy. AIP Conference Proceedings, 2007, , .	0.4	5
66	Modeling-based design and assessment of an acousto-optic guided high-intensity focused ultrasound system. Journal of Biomedical Optics, 2017, 22, 017001.	2.6	5
67	Tracking kidney stones in a homogeneous medium using a trilateration approach. Journal of the Acoustical Society of America, 2017, 142, 3715-3721.	1.1	5
68	Interactions of Cavitation Bubbles Observed by High-Speed Imaging in Shock Wave Lithotripsy. AIP Conference Proceedings, 2006, , .	0.4	3
69	Comparison of mechanisms involved in image enhancement of Tissue Harmonic Imaging. AIP Conference Proceedings, 2006, , .	0.4	3
70	Semi-analytical computation of the acoustic field of a segment of a cylindrically concave transducer in lossless and attenuating media. Journal of the Acoustical Society of America, 2007, 121, 1226-1237.	1.1	3
71	Linear hydrophone arrays for measurement of shock wave lithotripter acoustic fields. , 2009, , .		3
72	Thermodynamic state of the interface during acoustic cavitation in lipid suspensions. Physical Review Materials, 2019, 3, .	2.4	3

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73	Detecting Fragmentation of Kidney Stones in Lithotripsy by Means of Shock Wave Scattering. AIP Conference Proceedings, 2006, , .	0.4	2
74	Modelling Nonlinear Ultrasound Propagation in Bone. AIP Conference Proceedings, 2006, , .	0.4	2
75	Shape-based ultrasound tomography using a Born model with application to high intensity focused ultrasound therapy. Journal of the Acoustical Society of America, 2008, 123, 2944-2956.	1.1	2
76	The Advantage of a Broad Focal Zone in SWL. AIP Conference Proceedings, 2008, , .	0.4	2
77	Detection of HIFU lesions in Excised Tissue Using Acousto-Optic Imaging. , 2009, , .		2
78	Instantaneous beamwidth measurements of an electrohydraulic lithotripter. , 2010, , .		2
79	The origins of nonlinear enhancement in ex vivo tissue during high intensity focused ultrasound (HIFU) ablation. Proceedings of Meetings on Acoustics, 2013, , .	0.3	2
80	Nonlinear acoustics in biomedical ultrasound. AIP Conference Proceedings, 2015, , .	0.4	2
81	Tailoring acoustics and devices for gene therapy. Physics of Life Reviews, 2018, 26-27, 47-48.	2.8	2
82	HIFU lesion characterization on liver: acquisition and results. , 2009, , .		1
83	Fast computation of the acoustic field for ultrasound elements. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2009, 56, 1903-1912.	3.0	1
84	Hydrophone arrays for instantaneous measurement of high-pressure acoustic fields. AIP Conference Proceedings, 2010, , .	0.4	1
85	Single-shot measurements of the acoustic field of an electrohydraulic lithotripter using a hydrophone array. Journal of the Acoustical Society of America, 2013, 133, 3176-3185.	1.1	1
86	Spatial filters suppress ripple artifacts in the computation of acoustic fields with the angular spectrum method. Journal of the Acoustical Society of America, 2018, 144, 2947-2951.	1.1	1
87	Fdtd Simulation of Transcranial Focusing Using Ultrasonic Phase-Conjugate Arrays. Acoustical Imaging, 1997, , 61-66.	0.2	1
88	New Devices and Old Pitfalls in Shock Wave Therapy. AIP Conference Proceedings, 2006, , .	0.4	0
89	Advantage of a Broad Focal Zone in SWL: Synergism Between Squeezing and Shear. AIP Conference Proceedings, 2007, , .	0.4	0
90	Modeling HMI measurement of HIFU lesion formation with temperature-dependent tissue properties. , 2012, , .		0

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91	Electromagnetic-Acoustic (EMA) imaging of stiffness and dielectric properties in gels. Proceedings of Meetings on Acoustics, 2013, , .	0.3	0