

# Ronald A Roy

## List of Publications by Year in descending order

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108  
papers

4,952  
citations

117625

34  
h-index

91884

69  
g-index

123  
all docs

123  
docs citations

123  
times ranked

2629  
citing authors

#	ARTICLE	IF	CITATIONS
1	Genetic engineering biofilms in situ using ultrasound-mediated DNA delivery. <i>Microbial Biotechnology</i> , 2021, 14, 1580-1593.	4.2	4
2	The influence of droplet concentration on phase change and inertial cavitation thresholds associated with acoustic droplet vaporization. <i>Journal of the Acoustical Society of America</i> , 2020, 148, EL375-EL381.	1.1	14
3	SVD-Based Separation of Stable and Inertial Cavitation Signals Applied to Passive Cavitation Mapping During HIFU. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2019, 66, 857-866.	3.0	3
4	Photo- and Sono-Dynamic Therapy: A Review of Mechanisms and Considerations for Pharmacological Agents Used in Therapy Incorporating Light and Sound. <i>Current Pharmaceutical Design</i> , 2019, 25, 401-412.	1.9	38
5	HIFU-induced changes in optical scattering and absorption of tissue over nine orders of thermal dose. <i>Physics in Medicine and Biology</i> , 2018, 63, 245001.	3.0	8
6	Modeling-based design and assessment of an acousto-optic guided high-intensity focused ultrasound system. <i>Journal of Biomedical Optics</i> , 2017, 22, 017001.	2.6	5
7	Characterizing shock waves in hydrogel using high speed imaging and a fiber-optic probe hydrophone. <i>Physics of Fluids</i> , 2017, 29, 057101.	4.0	8
8	Thermal dose dependent optical property changes of <i>ex vivo</i> chicken breast tissues between 500 and 1100 nm. <i>Physics in Medicine and Biology</i> , 2014, 59, 3249-3260.	3.0	10
9	Improving the acousto-optic detection of high-intensity focused ultrasound lesions. <i>Proceedings of Meetings on Acoustics</i> , 2013, , .	0.3	0
10	Gold nanoparticle targeted photoacoustic cavitation for potential deep tissue imaging and therapy. <i>Biomedical Optics Express</i> , 2013, 4, 66.	2.9	72
11	Experimental characterisation of light emission during shock-driven cavity collapse. <i>Proceedings of Meetings on Acoustics</i> , 2013, , .	0.3	1
12	Measuring Tissue Properties and Monitoring Therapeutic Responses Using Acousto-Optic Imaging. <i>Annals of Biomedical Engineering</i> , 2012, 40, 474-485.	2.5	6
13	The use of optically activated nanoparticles to enhance controlled lesion formation from high intensity focused ultrasound exposures. , 2011, , .		2
14	Modeling cavitation nucleation from laser-illuminated nanoparticles subjected to acoustic stress. <i>Journal of the Acoustical Society of America</i> , 2011, 130, 3252-3263.	1.1	12
15	Real-Time Monitoring of High-Intensity Focused Ultrasound Lesion Formation Using Acousto-Optic Sensing. <i>Ultrasound in Medicine and Biology</i> , 2011, 37, 239-252.	1.5	30
16	Potentiating intra-arterial sonothrombolysis for acute ischemic stroke by the addition of the ultrasound contrast agents (Optison, & SonoVue®). <i>Journal of Thrombosis and Thrombolysis</i> , 2011, 31, 71-84.	2.1	19
17	FOREWORD. <i>Journal of the Acoustical Society of America</i> , 2011, 130, 3183-3183.	1.1	0
18	Ambient acceleration dependence of single-bubble sonoluminescence. <i>Journal of the Acoustical Society of America</i> , 2011, 130, 3282-3288.	1.1	0

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19	Dynamics of gas bubbles in time-variant temperature fields. <i>Journal of Fluid Mechanics</i> , 2010, 663, 209-232.	3.4	10
20	Mitigation of Damage to Solid Surfaces From the Collapse of Cavitation Bubble Clouds. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2010, 132, .	1.5	9
21	The Correlation Between Bubble-Enhanced HIFU Heating and Cavitation Power. <i>IEEE Transactions on Biomedical Engineering</i> , 2010, 57, 175-184.	4.2	97
22	Nanoparticle-targeted photoacoustic cavitation for tissue imaging. , 2010, , .		1
23	A photoacoustic sensor for monitoring in situ temperature during HIFU exposures. , 2010, , .		1
24	Monitoring and guidance of high intensity focused ultrasound exposures in real time using acousto-optic imaging: feasibility and demonstration ex vivo. , 2010, , .		1
25	Ultrasonic enhancement of photoacoustic emissions by nanoparticle-targeted cavitation. <i>Optics Letters</i> , 2010, 35, 2127.	3.3	50
26	Detecting cavitation in mercury exposed to a high-energy pulsed proton beam. <i>Journal of the Acoustical Society of America</i> , 2010, 127, 2231-2239.	1.1	9
27	Sensing the optical properties of diffusive media by acousto-optic pressure contrast imaging. , 2009, , .		1
28	Temporal and Spatial Detection of HIFU-Induced Inertial and Hot-Vapor Cavitation with a Diagnostic Ultrasound System. <i>Ultrasound in Medicine and Biology</i> , 2009, 35, 603-615.	1.5	114
29	Quantitative characterization of turbid media using pressure contrast acousto-optic imaging. <i>Optics Letters</i> , 2009, 34, 2850.	3.3	23
30	Detection of HIFU lesions in Excised Tissue Using Acousto-Optic Imaging. , 2009, , .		2
31	Photoacoustic thermometry for therapeutic hyperthermia. , 2009, , .		4
32	Sensing a buried resonant object by single-channel time reversal. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2009, 56, 1429-1441.	3.0	7
33	Applications of Acoustics and Cavitation to Noninvasive Therapy and Drug Delivery. <i>Annual Review of Fluid Mechanics</i> , 2008, 40, 395-420.	25.0	397
34	An audible demonstration of the speed of sound in bubbly liquids. <i>American Journal of Physics</i> , 2008, 76, 975-981.	0.7	34
35	The low-frequency sound speed of fluid-like gas-bearing sediments. <i>Journal of the Acoustical Society of America</i> , 2008, 123, EL99-EL104.	1.1	10
36	Evidence of dispersion in an artificial water-saturated sand sediment. <i>Journal of the Acoustical Society of America</i> , 2007, 121, 824-832.	1.1	17

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37	Illuminating Sound: Imaging Tissue Optical Properties with Ultrasound. <i>Acoustics Today</i> , 2007, 3, 17.	1.0	5
38	Role of acoustic cavitation in the delivery and monitoring of cancer treatment by high-intensity focused ultrasound (HIFU). <i>International Journal of Hyperthermia</i> , 2007, 23, 105-120.	2.5	359
39	Cavitation Mechanisms in Ultrasound-Accelerated Fibrinolysis. <i>Ultrasound in Medicine and Biology</i> , 2007, 33, 924-933.	1.5	138
40	The combination of pulsed acousto-optic imaging and B-mode diagnostic ultrasound for three-dimensional imaging in ex vivo biological tissue. , 2006, , .		0
41	Born Inversion for Broadband Ultrasonic Monitoring of Cancer Treatment. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	1
42	Thermal Lesion Development in Bubble-Mediated HIFU: Modeling. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	2
43	Monitoring the Development of HIFU-Induced Cavitation Activity. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	5
44	Nucleating Acoustic Cavitation with Optically Heated Nanoparticles. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	0
45	Therapeutic Bubbles: Basic Principles of Cavitation in Therapeutic Ultrasound. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	4
46	Monitoring HIFU Lesion Formation In Vitro Via The Driving Voltage. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	3
47	1D-3 Mechanisms Responsible for Ultrasound-accelerated Fibrinolysis in the Presence and Absence of Optison <sup>®</sup> . , 2006, , .		0
48	Modeling of optoacoustic signal generation for high resolution near-surface imaging with experimental verification. , 2005, 5697, 224.		1
49	Investigation of the photorefractive crystal based detection system for acousto-optical imaging (AOI) in highly diffuse media. , 2005, , .		0
50	Combination of ultrasound and acousto-optical imaging using a pulsed-ultrasound scanner. , 2005, , .		0
51	Nucleating cavitation from laser-illuminated nano-particles. <i>Acoustics Research Letters Online: ARLO</i> , 2005, 6, 138-143.	0.7	80
52	Characterization of individual submicron perfluorocarbon gas bubbles by ultrasonic backscatter. <i>Acoustics Research Letters Online: ARLO</i> , 2005, 6, 175-181.	0.7	1
53	Phase speed and attenuation in bubbly liquids inferred from impedance measurements near the individual bubble resonance frequency. <i>Journal of the Acoustical Society of America</i> , 2005, 117, 1895-1910.	1.1	52
54	Computations of the acoustically induced phase shifts of optical paths in acoustophotonic imaging with photorefractive-based detection. <i>Applied Optics</i> , 2005, 44, 3735.	2.1	19

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55	Imaging in diffuse media with pulsed-ultrasound-modulated light and the photorefractive effect. Applied Optics, 2005, 44, 4041.	2.1	22
56	Fusion of conventional ultrasound imaging and acousto-optic sensing by use of a standard pulsed-ultrasound scanner. Optics Letters, 2005, 30, 744.	3.3	41
57	Dynamics and control of cavitation during high-intensity focused ultrasound application. Acoustics Research Letters Online: ARLO, 2005, 6, 182-187.	0.7	36
58	Bubble dynamics and size distributions during focused ultrasound insonation. Journal of the Acoustical Society of America, 2004, 116, 3423-3431.	1.1	64
59	Optoacoustic Systems for Subsurface Materials Characterization. AIP Conference Proceedings, 2004, , .	0.4	0
60	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
61	Bubble dynamics near the onset of single-bubble sonoluminescence. Physical Review E, 2004, 70, 066301.	2.1	5
62	Detection of ultrasound-modulated photons in diffuse media using the photorefractive effect. Optics Letters, 2004, 29, 2509.	3.3	136
63	Enhanced detection of acousto-photon scattering using a photorefractive crystal. , 2004, , .		2
64	An improved water-filled impedance tube. Journal of the Acoustical Society of America, 2003, 113, 3245.	1.1	35
65	Measurements of bubble-enhanced heating from focused, mhz-frequency ultrasound in a tissue-mimicking material. Ultrasound in Medicine and Biology, 2001, 27, 1399-1412.	1.5	317
66	Laser-induced acoustic imaging of buried land mines: experiment and modeling. , 2001, 4394, 627.		7
67	Acoustic scattering from a bubbly-liquid-filled compliant cylinder. Acoustics Research Letters Online: ARLO, 2001, 2, 103-108.	0.7	2
68	<title>Interaction mechanisms in acousto-photon imaging</title>. , 2000, , .		0
69	Amplitude degradation of time-reversed pulses in nonlinear absorbing thermoviscous fluids. Ultrasonics, 2000, 38, 885-889.	3.9	7
70	The effects of buoyancy on sonoluminescing bubbles. Acoustics Research Letters Online: ARLO, 2000, 1, 13-18.	0.7	3
71	Dynamics of gas bubbles in viscoelastic fluids. I. Linear viscoelasticity. Journal of the Acoustical Society of America, 2000, 107, 3167-3178.	1.1	97
72	Dynamics of gas bubbles in viscoelastic fluids. II. Nonlinear viscoelasticity. Journal of the Acoustical Society of America, 2000, 108, 1640-1650.	1.1	76

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73	The underwater sounds produced by impacting snowflakes. Journal of the Acoustical Society of America, 1999, 106, 1765-1770.	1.1	8
74	Cavitation Sonophysics. , 1999, , 25-38.		8
75	Conventional and hypobaric activation of an ultrasound contrast agent. Ultrasound in Medicine and Biology, 1998, 24, 1143-1150.	1.5	15
76	The acoustic emissions from single-bubble sonoluminescence. Journal of the Acoustical Society of America, 1998, 103, 1377-1382.	1.1	82
77	Optical pulse width measurements of sonoluminescence in cavitation-bubble fields. Journal of the Acoustical Society of America, 1997, 101, 1994-2002.	1.1	39
78	Bjerknes force and bubble levitation under single-bubble sonoluminescence conditions. Journal of the Acoustical Society of America, 1997, 102, 1522-1527.	1.1	102
79	Comparisons of sonoluminescence from single-bubbles and cavitation fields: bridging the gap. Ultrasonics Sonochemistry, 1997, 4, 61-64.	8.2	30
80	Liver hemostasis using high-intensity focused ultrasound. Ultrasound in Medicine and Biology, 1997, 23, 1413-1420.	1.5	130
81	FDTD Simulation of Transcranial Focusing Using Ultrasonic Phase-Conjugate Arrays. Acoustical Imaging, 1997, , 61-66.	0.2	1
82	Measurements of the acoustic emission from glowing bubbles. Journal of the Acoustical Society of America, 1996, 100, 2717-2717.	1.1	9
83	Preliminary experimental observations of the effects of buoyancy on single-bubble sonoluminescence in microgravity and hypergravity. Journal of the Acoustical Society of America, 1996, 100, 2717-2717.	1.1	7
84	Artificial bubble cloud targets. , 1996, , .		1
85	Artificial Bubble Cloud Targets for Underwater Acoustic Remote Sensing. Journal of Atmospheric and Oceanic Technology, 1995, 12, 1287-1302.	1.3	5
86	Phase velocity measurements in bubbly liquids using a fiber optic laser interferometer. Journal of the Acoustical Society of America, 1995, 97, 1621-1624.	1.1	45
87	Comparison of Multibubble and Single-Bubble Sonoluminescence Spectra. Physical Review Letters, 1995, 75, 2602-2605.	7.8	190
88	Nonlinear coupling between the surface and volume modes of an oscillating bubble. Journal of the Acoustical Society of America, 1995, 98, 2764-2771.	1.1	12
89	Sound emissions by a laboratory bubble cloud. Journal of the Acoustical Society of America, 1994, 95, 3171-3182.	1.1	57
90	Low-frequency acoustic emissions in fresh and salt water. Journal of the Acoustical Society of America, 1994, 96, 1766-1772.	1.1	14

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91	Bubble production by capillary-gravity waves. Journal of the Acoustical Society of America, 1994, 95, 1913-1921.	1.1	14
92	Some observations on the breakage of ultrasonic files driven piezoelectrically. Dental Traumatology, 1994, 10, 71-76.	2.0	6
93	Variations in the power output of the Piezon-Master 400 ultrasonic endodontic unit. International Endodontic Journal, 1994, 27, 26-31.	5.0	5
94	Physical mechanisms governing the hydrodynamic response of an oscillating ultrasonic file. International Endodontic Journal, 1994, 27, 197-207.	5.0	86
95	The vibratory pattern of ultrasonic files driven piezoelectrically. International Endodontic Journal, 1993, 26, 120-124.	5.0	31
96	Low-frequency underwater sound generation by impacting transient cylindrical water jets. Journal of the Acoustical Society of America, 1993, 94, 2809-2820.	1.1	18
97	Low-frequency scattering from submerged bubble clouds. Journal of the Acoustical Society of America, 1992, 92, 2993-2996.	1.1	21
98	In vitro detection of cavitation induced by a diagnostic ultrasound system. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 1992, 39, 95-101.	3.0	47
99	Acoustic cavitation produced by microsecond pulses of ultrasound: A discussion of some selected results. Journal of the Acoustical Society of America, 1992, 91, 1113-1119.	1.1	83
100	Sonoluminescence and bubble dynamics for a single, stable, cavitation bubble. Journal of the Acoustical Society of America, 1992, 91, 3166-3183.	1.1	694
101	Observations of acoustic streaming fields around an oscillating ultrasonic file. Dental Traumatology, 1992, 8, 189-194.	2.0	26
102	Acoustic microcavitation: Its active and passive acoustic detection. Journal of the Acoustical Society of America, 1991, 90, 1515-1526.	1.1	94
103	An investigation of the acoustic emissions from a bubble plume. Journal of the Acoustical Society of America, 1991, 89, 2452-2455.	1.1	19
104	Mechanical characterization of microparticles by scattered ultrasound. Journal of the Acoustical Society of America, 1990, 87, 2332-2341.	1.1	25
105	An acoustic backscattering technique for the detection of transient cavitation produced by microsecond pulses of ultrasound. Journal of the Acoustical Society of America, 1990, 87, 2451-2458.	1.1	140
106	Thresholds for cavitation produced in water by pulsed ultrasound. Ultrasonics, 1988, 26, 280-285.	3.9	132
107	Reply to "On the measurement and interpretation of cavitation thresholds" [J. Acoust. Soc. Am. 82, 690-691 (1987)]. Journal of the Acoustical Society of America, 1987, 82, 691-691.	1.1	1
108	A precise technique for the measurement of acoustic cavitation thresholds and some preliminary results. Journal of the Acoustical Society of America, 1985, 78, 1799-1805.	1.1	53