

Salavat R Aglyamov

List of Publications by Year in descending order

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126
papers

3,745
citations

136740

32
h-index

149479

56
g-index

129
all docs

129
docs citations

129
times ranked

2545
citing authors

#	ARTICLE	IF	CITATIONS
1	An Overview of Elastography-An Emerging Branch of Medical Imaging. <i>Current Medical Imaging</i> , 2011, 7, 255-282.	0.4	340
2	Photoacoustic imaging and temperature measurement for photothermal cancer therapy. <i>Journal of Biomedical Optics</i> , 2008, 13, 034024.	1.4	303
3	Intravascular photoacoustic imaging using an IVUS imaging catheter. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2007, 54, 978-986.	1.7	159
4	A focused air-pulse system for optical-coherence-tomography-based measurements of tissue elasticity. <i>Laser Physics Letters</i> , 2013, 10, 075605.	0.6	146
5	Environmentâ€Dependent Generation of Photoacoustic Waves from Plasmonic Nanoparticles. <i>Small</i> , 2012, 8, 47-52.	5.2	97
6	Optical coherence elastography assessment of corneal viscoelasticity with a modified Rayleigh-Lamb wave model. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 66, 87-94.	1.5	94
7	Assessing Age-Related Changes in the Biomechanical Properties of Rabbit Lens Using a Coaligned Ultrasound and Optical Coherence Elastography System. <i>Investigative Ophthalmology and Visual Science</i> , 2015, 56, 1292-1300.	3.3	93
8	Spatial characterization of corneal biomechanical properties with optical coherence elastography after UV cross-linking. <i>Biomedical Optics Express</i> , 2014, 5, 1419.	1.5	85
9	Quantitative assessment of corneal viscoelasticity using optical coherence elastography and a modified Rayleighâ€Lamb equation. <i>Journal of Biomedical Optics</i> , 2015, 20, 020501.	1.4	84
10	Quantitative methods for reconstructing tissue biomechanical properties in optical coherence elastography: a comparison study. <i>Physics in Medicine and Biology</i> , 2015, 60, 3531-3547.	1.6	83
11	Adaptive beamforming for photoacoustic imaging. <i>Optics Letters</i> , 2008, 33, 1291.	1.7	79
12	Combined ultrasound and photoacoustic imaging to detect and stage deep vein thrombosis: phantom and ex vivo studies. <i>Journal of Biomedical Optics</i> , 2008, 13, 054061.	1.4	77
13	Sonographic Elasticity Imaging of Acute and Chronic Deep Venous Thrombosis in Humans. <i>Journal of Ultrasound in Medicine</i> , 2006, 25, 1179-1186.	0.8	71
14	Motion of a solid sphere in a viscoelastic medium in response to applied acoustic radiation force: Theoretical analysis and experimental verification. <i>Journal of the Acoustical Society of America</i> , 2007, 122, 1927-1936.	0.5	69
15	Dynamic optical coherence tomography measurements of elastic wave propagation in tissue-mimicking phantoms and mouse corneain vivo. <i>Journal of Biomedical Optics</i> , 2013, 18, 121503.	1.4	67
16	Correspondence of ultrasound elasticity imaging to direct mechanical measurement in aging DVT in rats. <i>Ultrasound in Medicine and Biology</i> , 2005, 31, 1351-1359.	0.7	66
17	Staging deep venous thrombosis using ultrasound elasticity imaging: Animal model. <i>Ultrasound in Medicine and Biology</i> , 2004, 30, 1385-1396.	0.7	65
18	In vivoestimation of elastic wave parameters using phase-stabilized swept source optical coherence elastography. <i>Journal of Biomedical Optics</i> , 2012, 17, 1005011.	1.4	52

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19	Assessment of shear modulus of tissue using ultrasound radiation force acting on a spherical acoustic inhomogeneity. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2009, 56, 2380-2387.	1.7	49
20	Estimation of shear wave velocity in gelatin phantoms utilizing PhS-SSOCT. Laser Physics, 2012, 22, 1439-1444.	0.6	49
21	Investigating Elastic Anisotropy of the Porcine Cornea as a Function of Intraocular Pressure With Optical Coherence Elastography. Journal of Refractive Surgery, 2016, 32, 562-567.	1.1	47
22	Clinical Application of Sonographic Elasticity Imaging for Aging of Deep Venous Thrombosis. Journal of Ultrasound in Medicine, 2003, 22, 443-448.	0.8	46
23	Combined ultrasound, optoacoustic, and elasticity imaging. , 2004, , .		45
24	Ultrasound imaging to monitor photothermal therapy " Feasibility study. Optics Express, 2008, 16, 3776.	1.7	45
25	Analysis of the effects of curvature and thickness on elastic wave velocity in cornea-like structures by finite element modeling and optical coherence elastography. Applied Physics Letters, 2015, 106, 233702.	1.5	45
26	Remote Temperature Estimation in Intravascular Photoacoustic Imaging. Ultrasound in Medicine and Biology, 2008, 34, 299-308.	0.7	44
27	Noncontact Elastic Wave Imaging Optical Coherence Elastography for Evaluating Changes in Corneal Elasticity Due to Crosslinking. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 266-276.	1.9	41
28	Evaluating the Effects of Riboflavin/UV-A and Rose-Bengal/Green Light Cross-Linking of the Rabbit Cornea by Noncontact Optical Coherence Elastography. , 2016, 57, OCT112.		40
29	Quantifying tissue viscoelasticity using optical coherence elastography and the Rayleigh wave model. Journal of Biomedical Optics, 2016, 21, 090504.	1.4	38
30	Assessing the effects of riboflavin/UV-A crosslinking on porcine corneal mechanical anisotropy with optical coherence elastography. Biomedical Optics Express, 2017, 8, 349.	1.5	37
31	The Mechanical Properties of Ex Vivo Bovine and Porcine Crystalline Lenses: Age-Related Changes and Location-Dependent Variations. Ultrasound in Medicine and Biology, 2013, 39, 1120-1127.	0.7	36
32	Multimodal quantitative optical elastography of the crystalline lens with optical coherence elastography and Brillouin microscopy. Biomedical Optics Express, 2020, 11, 2041.	1.5	36
33	Model-based reconstructive elasticity imaging of deep venous thrombosis. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 521-531.	1.7	35
34	Pulsed magneto-acoustic imaging. , 2009, 2009, 4771-4.		34
35	In Vivo Human Corneal Shear-wave Optical Coherence Elastography. Optometry and Vision Science, 2021, 98, 58-63.	0.6	34
36	Adaptive beamforming for photoacoustic imaging using linear array transducer. , 2008, , .		33

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37	Elasticity Imaging Using Conventional and High-Frame Rate Ultrasound Imaging: Experimental Study. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 2246-2256.	1.7	32
38	Quantifying the effects of hydration on corneal stiffness with noncontact optical coherence elastography. Journal of Cataract and Refractive Surgery, 2018, 44, 1023-1031.	0.7	32
39	Ultrasound measurements of cavitation bubble radius for femtosecond laser-induced breakdown in water. Optics Letters, 2008, 33, 1357.	1.7	31
40	Assessment of wave propagation on surfaces of crystalline lens with phase sensitive optical coherence tomography. Laser Physics Letters, 2011, 8, 164-168.	0.6	30
41	Biomechanical assessment of myocardial infarction using optical coherence elastography. Biomedical Optics Express, 2018, 9, 728.	1.5	29
42	1E-5 Synergy and Applications of Combined Ultrasound, Elasticity, and Photoacoustic Imaging (Invited). , 2006, , .		28
43	Strain imaging using conventional and ultrafast ultrasound imaging: numerical analysis. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 987-995.	1.7	28
44	Confocal air-coupled ultrasonic optical coherence elastography probe for quantitative biomechanics. Optics Letters, 2020, 45, 6567.	1.7	28
45	Assessing the mechanical properties of tissue-mimicking phantoms at different depths as an approach to measure biomechanical gradient of crystalline lens. Biomedical Optics Express, 2013, 4, 2769.	1.5	27
46	Nanobomb optical coherence elastography. Optics Letters, 2018, 43, 2006.	1.7	27
47	Sensitivity enhanced nanothermal sensors for photoacoustic temperature mapping. Journal of Biophotonics, 2013, 6, 534-542.	1.1	26
48	The dynamic deformation of a layered viscoelastic medium under surface excitation. Physics in Medicine and Biology, 2015, 60, 4295-4312.	1.6	26
49	Heartbeat OCE: corneal biomechanical response to simulated heartbeat pulsation measured by optical coherence elastography. Journal of Biomedical Optics, 2020, 25, 1.	1.4	26
50	Assessing the biomechanical properties of the porcine crystalline lens as a function of intraocular pressure with optical coherence elastography. Biomedical Optics Express, 2018, 9, 6455.	1.5	26
51	Model-Based Reconstructive Elasticity Imaging Using Ultrasound. International Journal of Biomedical Imaging, 2007, 2007, 1-11.	3.0	25
52	Translational optical coherence elastography for assessment of systemic sclerosis. Journal of Biophotonics, 2019, 12, e201900236.	1.1	22
53	Photoacoustics of core-shell nanospheres using comprehensive modeling and analytical solution approach. Communications Physics, 2019, 2, .	2.0	22
54	Estimation of mechanical properties of a viscoelastic medium using a laser-induced microbubble interrogated by an acoustic radiation force. Journal of the Acoustical Society of America, 2011, 130, 2241-2248.	0.5	20

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55	The impact of intraocular pressure on elastic wave velocity estimates in the crystalline lens. <i>Physics in Medicine and Biology</i> , 2017, 62, N45-N57.	1.6	20
56	Heartbeat optical coherence elastography: corneal biomechanics in vivo. <i>Journal of Biomedical Optics</i> , 2021, 26, .	1.4	20
57	Characterization of natural frequencies from nanoscale tissue oscillations using dynamic optical coherence elastography. <i>Biomedical Optics Express</i> , 2020, 11, 3301.	1.5	20
58	Compressional Optical Coherence Elastography of the Cornea. <i>Photonics</i> , 2021, 8, 111.	0.9	19
59	Optical coherence elastography of cold cataract in porcine lens. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	1.4	19
60	An autocorrelation-based method for improvement of sub-pixel displacement estimation in ultrasound strain imaging. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2011, 58, 838-843.	1.7	18
61	A high pulse repetition frequency ultrasound system for the ex vivo measurement of mechanical properties of crystalline lenses with laser-induced microbubbles interrogated by acoustic radiation force. <i>Physics in Medicine and Biology</i> , 2012, 57, 4871-4884.	1.6	18
62	Dynamic Optical Coherence Elastography of the Anterior Eye: Understanding the Biomechanics of the Limbus. , 2020, 61, 7.		18
63	Longitudinal elastic wave imaging using nanobomb optical coherence elastography. <i>Optics Letters</i> , 2019, 44, 3162.	1.7	18
64	Photoacoustic imaging using array transducer. , 2007, , .		17
65	Muscle as a molecular machine for protecting joints and bones by absorbing mechanical impacts. <i>Medical Hypotheses</i> , 2014, 83, 6-10.	0.8	17
66	Effects of Thickness on Corneal Biomechanical Properties Using Optical Coherence Elastography. <i>Optometry and Vision Science</i> , 2018, 95, 299-308.	0.6	17
67	In vivo human corneal natural frequency quantification using dynamic optical coherence elastography: Repeatability and reproducibility. <i>Journal of Biomechanics</i> , 2021, 121, 110427.	0.9	16
68	Quantitative ultrasound method to detect and monitor laser-induced cavitation bubbles. <i>Journal of Biomedical Optics</i> , 2008, 13, 034011.	1.4	15
69	Multimodal imaging system combining optical coherence tomography and Brillouin microscopy for neural tube imaging. <i>Optics Letters</i> , 2022, 47, 1347.	1.7	14
70	In vivo assessment of corneal biomechanics under a localized cross-linking treatment using confocal air-coupled optical coherence elastography. <i>Biomedical Optics Express</i> , 2022, 13, 2644.	1.5	14
71	Development of a combined intravascular ultrasound and photoacoustic imaging system. , 2006, 6086, 108.		13
72	Assessing colitis ex vivo using optical coherence elastography in a murine model. <i>Quantitative Imaging in Medicine and Surgery</i> , 2019, 9, 1429-1440.	1.1	13

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73	Functional and morphological ultrasonic biomicroscopy for tissue engineers. , 2006, , .		12
74	Elasticity Imaging and Sensing Using Targeted Motion: From Macro to Nano. Current Medical Imaging, 2012, 8, 3-15.	0.4	10
75	Quantitative contrast-enhanced ultrasound measurement of cerebrospinal fluid flow for the diagnosis of ventricular shunt malfunction. Journal of Neurosurgery, 2015, 123, 1420-1426.	0.9	10
76	Laser-induced elastic wave classification: thermoelastic versus ablative regimes for all-optical elastography applications. Journal of Biomedical Optics, 2020, 25, 1.	1.4	10
77	Intravascular photoacoustic imaging of atherosclerotic plaques: ex-vivo study using a rabbit model of atherosclerosis. , 2007, , .		9
78	Correspondence: spatial variations of viscoelastic properties of porcine vitreous humors. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 2453-2460.	1.7	9
79	Ultrasound Shear Wave Elastography and Transient Optical Coherence Elastography: Side-by-Side Comparison of Repeatability and Accuracy. IEEE Open Journal of Engineering in Medicine and Biology, 2021, 2, 179-186.	1.7	9
80	Model-based reconstructive elasticity imaging of deep venous thrombosis. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 521-31.	1.7	9
81	Longitudinal assessment of the effect of alkali burns on corneal biomechanical properties using optical coherence elastography. Journal of Biophotonics, 2022, 15, e202200022.	1.1	9
82	Ultra-fast dynamic line-field optical coherence elastography. Optics Letters, 2021, 46, 4742.	1.7	8
83	Integrated system for ultrasonic, photoacoustic and elasticity imaging. , 2006, , .		7
84	10A-5 Beamforming for Photoacoustic Imaging Using Linear Array Transducer. Proceedings IEEE Ultrasonics Symposium, 2007, , .	0.0	7
85	Micro Air-Pulse Spatial Deformation Spreading Characterizes Degree of Anisotropy in Tissues. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-10.	1.9	7
86	Repetitive optical coherence elastography measurements with blinking nanobombs. Biomedical Optics Express, 2020, 11, 6659.	1.5	7
87	Feasibility and safety of antepartum tactile imaging. International Urogynecology Journal, 2021, 32, 1785-1791.	0.7	6
88	Elasticity Changes in the Crystalline Lens during Oxidative Damage and the Antioxidant Effect of Alpha-Lipoic Acid Measured by Optical Coherence Elastography. Photonics, 2021, 8, 207.	0.9	6
89	Mapping the spatial variation of mitral valve elastic properties using air-pulse optical coherence elastography. Journal of Biomechanics, 2019, 93, 52-59.	0.9	5
90	Multimodal Heartbeat and Compression Optical Coherence Elastography for Mapping Corneal Biomechanics. Frontiers in Medicine, 2022, 9, 833597.	1.2	5

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91	Combined ultrasonic and photoacoustic imaging to age deep vein thrombosis: preliminary studies. , 0, , .		4
92	Intravascular photoacoustic imaging to detect and differentiate atherosclerotic plaques. , 0, , .		4
93	Measurement of blood perfusion using photoacoustic, ultrasound, and strain imaging. , 2007, , .		4
94	Photoacoustic and ultrasound imaging to guide photothermal therapy: ex vivo study. , 2008, , .		4
95	Dual-Phase Transmit Focusing for Multiangle Compound Shear-Wave Elasticity Imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 1439-1449.	1.7	3
96	Young's modulus reconstruction for elasticity imaging of deep venous thrombosis: animal studies. , 2004, , .		2
97	3D assessment of mechanical wave propagation in the crystalline eye lens using PhS-SSOCT. Proceedings of SPIE, 2011, , .	0.8	2
98	Dynamic OCE measurement of the biomechanical properties of gelatin phantom and mouse corneain vivo. , 2013, , .		2
99	Model-based optical coherence elastography using acoustic radiation force. Proceedings of SPIE, 2014, , .	0.8	2
100	Noncontact optical coherence elastography of the posterior porcine sclera in situ as a function of IOP. , 2017, , .		2
101	Longitudinal elastic wave imaging using nanobomb optical coherence elastography: erratum. Optics Letters, 2020, 45, 3296.	1.7	2
102	Micron-scale hysteresis measurement using dynamic optical coherence elastography. Biomedical Optics Express, 2022, 13, 3021.	1.5	2
103	6G-3 Temperature Monitoring in Intravascular Photoacoustic Imaging. , 2006, , .		1
104	6F-2 Elasticity Imaging Using High Frame Rate Ultrasound Imaging. , 2006, , .		1
105	Development of ultrasound technique to detect and characterize laser-induced microbubbles. , 2007, , .		1
106	Display pixel-based synthetic aperture focusing method for intravascular ultrasound imaging. , 2009, 2009, 475-8.		1
107	Measurements of young's modulus of viscoelastic medium using a laser-induced microbubble under acoustic radiation force. , 2010, , .		1
108	Estimation of surface wave propagation in mouse cornea. , 2012, , .		1

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109	Quantitative assessment of the mechanical properties of tissue-mimicking agar phantoms by optical coherence elastography and numerical analyses. Proceedings of SPIE, 2015, , .	0.8	1
110	A three-dimensional solution for laser-induced thermoelastic deformation of the layered medium. Proceedings of SPIE, 2016, , .	0.8	1
111	Biomechanical properties of crystalline lens as a function of intraocular pressure assessed noninvasively by optical coherence elastography. , 2017, , .		1
112	Assessing the effects of storage medium on the biomechanical properties of porcine lens with optical coherence elastography. , 2019, , .		1
113	4K-4 Estimation of Viscoelastic Properties of Tissue using Acoustic Radiation Force. , 2006, , .		0
114	Ultrasound characterization of cavitation microbubbles produced by femtosecond laser pulses. Proceedings of SPIE, 2009, , .	0.8	0
115	Measurement of vibrations induced on the surface of crystalline eye lens using PhS-SDOCT. Proceedings of SPIE, 2010, , .	0.8	0
116	Dynamic OCT measurements of corneal biomechanical properties after UV cross-linking in the rabbit. Proceedings of SPIE, 2013, , .	0.8	0
117	Assessment of the depth-dependence of the mechanical parameters of a layered medium using surface excitation and motion measurements on the surface. , 2013, , .		0
118	Ultrasound visualization of internal crystalline lens deformation using laser-induced microbubbles. Proceedings of SPIE, 2014, , .	0.8	0
119	Combining optical coherence tomography with acoustic radiation force for depth-dependent biomechanics of crystalline lens. Proceedings of SPIE, 2014, , .	0.8	0
120	Co-focused ultrasound and optical coherence elastography system for the study of age-related changes of biomechanical properties of crystalline lens in rabbit eyes. Proceedings of SPIE, 2015, , .	0.8	0
121	Evaluation of dermal fillers with noncontact optical coherence elastography. Proceedings of SPIE, 2017, , .	0.8	0
122	Optical coherence tomography for image-guided dermal filler injection and biomechanical evaluation. Proceedings of SPIE, 2017, , .	0.8	0
123	Notice of Removal: Combination of acoustic radiation force impulse technique and optical coherence tomography to measure elastic properties of the crystalline lens as a function of intraocular pressure. , 2017, , .		0
124	Notice of Removal: Time-shifted multi-tracking of shear waves for the characterization of scleral biomechanics. , 2017, , .		0
125	The governing theory of elasticity imaging. , 2020, , 17-43.		0
126	Age-related viscoelasticity changes in rabbit lens measured by optical coherence elastography. , 2022, , .		0