

# Manmohan Singh

## List of Publications by Year in descending order

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148  
papers

2,004  
citations

218677

26  
h-index

276875

41  
g-index

148  
all docs

148  
docs citations

148  
times ranked

1077  
citing authors

#	ARTICLE	IF	CITATIONS
1	Phase-sensitive optical coherence elastography at 15 million A-Lines per second. Optics Letters, 2015, 40, 2588.	3.3	94
2	Optical coherence elastography assessment of corneal viscoelasticity with a modified Rayleigh-Lamb wave model. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 66, 87-94.	3.1	94
3	Assessing Age-Related Changes in the Biomechanical Properties of Rabbit Lens Using a Coaligned Ultrasound and Optical Coherence Elastography System. Investigative Ophthalmology and Visual Science, 2015, 56, 1292-1300.	3.3	93
4	Spatial characterization of corneal biomechanical properties with optical coherence elastography after UV cross-linking. Biomedical Optics Express, 2014, 5, 1419.	2.9	85
5	Quantitative assessment of corneal viscoelasticity using optical coherence elastography and a modified Rayleigh-Lamb equation. Journal of Biomedical Optics, 2015, 20, 020501.	2.6	84
6	Quantitative methods for reconstructing tissue biomechanical properties in optical coherence elastography: a comparison study. Physics in Medicine and Biology, 2015, 60, 3531-3547.	3.0	83
7	Dynamic optical coherence tomography measurements of elastic wave propagation in tissue-mimicking phantoms and mouse corneain vivo. Journal of Biomedical Optics, 2013, 18, 121503.	2.6	67
8	Direct four-dimensional structural and functional imaging of cardiovascular dynamics in mouse embryos with 15MHz optical coherence tomography. Optics Letters, 2015, 40, 4791.	3.3	57
9	Air-pulse OCE for assessment of age-related changes in mouse cornea in vivo. Laser Physics Letters, 2014, 11, 065601.	1.4	56
10	Optical coherence tomography for embryonic imaging: a review. Journal of Biomedical Optics, 2016, 21, 1.	2.6	53
11	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.	2.3	47
12	Evaluating biomechanical properties of murine embryos using Brillouin microscopy and optical coherence tomography. Journal of Biomedical Optics, 2017, 22, 1.	2.6	46
13	Differentiating untreated and cross-linked porcine corneas of the same measured stiffness with optical coherence elastography. Journal of Biomedical Optics, 2014, 19, 110502.	2.6	45
14	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.	3.3	45
15	Common-path phase-sensitive optical coherence tomography provides enhanced phase stability and detection sensitivity for dynamic elastography. Biomedical Optics Express, 2017, 8, 5253.	2.9	45
16	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.	2.9	41
17	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
18	Quantifying tissue viscoelasticity using optical coherence elastography and the Rayleigh wave model. Journal of Biomedical Optics, 2016, 21, 090504.	2.6	38

#	ARTICLE	IF	CITATIONS
19	Assessing the effects of riboflavin/UV-A crosslinking on porcine corneal mechanical anisotropy with optical coherence elastography. <i>Biomedical Optics Express</i> , 2017, 8, 349.	2.9	37
20	Multimodal quantitative optical elastography of the crystalline lens with optical coherence elastography and Brillouin microscopy. <i>Biomedical Optics Express</i> , 2020, 11, 2041.	2.9	36
21	Optical coherence elastography for evaluating customized riboflavin/UV-A corneal collagen crosslinking. <i>Journal of Biomedical Optics</i> , 2017, 22, 091504.	2.6	35
22	Quantifying the effects of hydration on corneal stiffness with noncontact optical coherence elastography. <i>Journal of Cataract and Refractive Surgery</i> , 2018, 44, 1023-1031.	1.5	32
23	Measurement of the temperature dependence of Young's modulus of cartilage by phase-sensitive optical coherence elastography. <i>Quantum Electronics</i> , 2014, 44, 751-756.	1.0	29
24	Biomechanical assessment of myocardial infarction using optical coherence elastography. <i>Biomedical Optics Express</i> , 2018, 9, 728.	2.9	29
25	Confocal air-coupled ultrasonic optical coherence elastography probe for quantitative biomechanics. <i>Optics Letters</i> , 2020, 45, 6567.	3.3	28
26	Nanobomb optical coherence elastography. <i>Optics Letters</i> , 2018, 43, 2006.	3.3	27
27	Heartbeat OCE: corneal biomechanical response to simulated heartbeat pulsation measured by optical coherence elastography. <i>Journal of Biomedical Optics</i> , 2020, 25, 1.	2.6	26
28	Assessing the biomechanical properties of the porcine crystalline lens as a function of intraocular pressure with optical coherence elastography. <i>Biomedical Optics Express</i> , 2018, 9, 6455.	2.9	26
29	Rapid, noninvasive quantitation of skin disease in systemic sclerosis using optical coherence elastography. <i>Journal of Biomedical Optics</i> , 2016, 21, 1.	2.6	25
30	Applicability, usability, and limitations of murine embryonic imaging with optical coherence tomography and optical projection tomography. <i>Biomedical Optics Express</i> , 2016, 7, 2295.	2.9	23
31	Ultra-fast line-field low coherence holographic elastography using spatial phase shifting. <i>Biomedical Optics Express</i> , 2017, 8, 993.	2.9	22
32	Translational optical coherence elastography for assessment of systemic sclerosis. <i>Journal of Biophotonics</i> , 2019, 12, e201900236.	2.3	22
33	Non-contact single shot elastography using line field low coherence holography. <i>Biomedical Optics Express</i> , 2016, 7, 3021.	2.9	21
34	Heartbeat optical coherence elastography: corneal biomechanics in vivo. <i>Journal of Biomedical Optics</i> , 2021, 26, .	2.6	20
35	Rotational imaging optical coherence tomography for full-body mouse embryonic imaging. <i>Journal of Biomedical Optics</i> , 2016, 21, 1.	2.6	19
36	Evaluating the effects of maternal alcohol consumption on murine fetal brain vasculature using optical coherence tomography. <i>Journal of Biophotonics</i> , 2018, 11, e201700238.	2.3	19

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37	Compressional Optical Coherence Elastography of the Cornea. <i>Photonics</i> , 2021, 8, 111.	2.0	19
38	Optical coherence elastography of cold cataract in porcine lens. <i>Journal of Biomedical Optics</i> , 2019, 24, 1.	2.6	19
39	Classifying murine glomerulonephritis using optical coherence tomography and optical coherence elastography. <i>Journal of Biophotonics</i> , 2016, 9, 781-791.	2.3	18
40	Dynamic Optical Coherence Elastography of the Anterior Eye: Understanding the Biomechanics of the Limbus. , 2020, 61, 7.		18
41	Neural network-based image reconstruction in swept-source optical coherence tomography using undersampled spectral data. <i>Light: Science and Applications</i> , 2021, 10, 155.	16.6	18
42	Longitudinal elastic wave imaging using nanobomb optical coherence elastography. <i>Optics Letters</i> , 2019, 44, 3162.	3.3	18
43	Effects of Thickness on Corneal Biomechanical Properties Using Optical Coherence Elastography. <i>Optometry and Vision Science</i> , 2018, 95, 299-308.	1.2	17
44	Analysis of the effect of the fluid-structure interface on elastic wave velocity in cornea-like structures by OCE and FEM. <i>Laser Physics Letters</i> , 2016, 13, 035602.	1.4	16
45	Comparison and combination of rotational imaging optical coherence tomography and selective plane illumination microscopy for embryonic study. <i>Biomedical Optics Express</i> , 2017, 8, 4629.	2.9	16
46	Introduction to optical coherence elastography: tutorial. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2022, 39, 418.	1.5	16
47	Applanation optical coherence elastography: noncontact measurement of intraocular pressure, corneal biomechanical properties, and corneal geometry with a single instrument. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	2.6	14
48	Multimodal imaging system combining optical coherence tomography and Brillouin microscopy for neural tube imaging. <i>Optics Letters</i> , 2022, 47, 1347.	3.3	14
49	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.	2.9	14
50	Optical coherence tomography as a tool for real-time visual feedback and biomechanical assessment of dermal filler injections: preliminary results in a pig skin model. <i>Experimental Dermatology</i> , 2016, 25, 475-476.	2.9	13
51	Assessing colitis ex vivo using optical coherence elastography in a murine model. <i>Quantitative Imaging in Medicine and Surgery</i> , 2019, 9, 1429-1440.	2.0	13
52	Dose-response analysis of microvasculature changes in the murine fetal brain and the maternal extremities due to prenatal ethanol exposure. <i>Journal of Biomedical Optics</i> , 2020, 25, .	2.6	13
53	Modified wavelength scanning interferometry for simultaneous tomography and topography of the cornea with Fourier domain optical coherence tomography. <i>Biomedical Optics Express</i> , 2018, 9, 4443.	2.9	11
54	Assessing the acute effects of prenatal synthetic cannabinoid exposure on murine fetal brain vasculature using optical coherence tomography. <i>Journal of Biophotonics</i> , 2019, 12, e201900050.	2.3	11

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55	Characterization of retinal biomechanical properties using Brillouin microscopy. Journal of Biomedical Optics, 2020, 25, .	2.6	11
56	Lorentz force optical coherence elastography. Journal of Biomedical Optics, 2016, 21, 1.	2.6	9
57	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.	2.3	9
58	Longitudinal assessment of the effect of alkali burns on corneal biomechanical properties using optical coherence elastography. Journal of Biophotonics, 2022, 15, e202200022.	2.3	9
59	Ultra-fast dynamic line-field optical coherence elastography. Optics Letters, 2021, 46, 4742.	3.3	8
60	Micro Air-Pulse Spatial Deformation Spreading Characterizes Degree of Anisotropy in Tissues. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-10.	2.9	7
61	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.	2.0	6
62	Quantitative Assessment of Hyaline Cartilage Elasticity During Optical Clearing Using Optical Coherence Elastography. Sovremennye Tehnologii V Medicine, 2015, 7, 44-51.	1.1	6
63	Revealing anisotropic properties of cornea at different intraocular pressures using optical coherence elastography. , 2016, , .		5
64	Mapping the spatial variation of mitral valve elastic properties using air-pulse optical coherence elastography. Journal of Biomechanics, 2019, 93, 52-59.	2.1	5
65	Can We Improve Vaginal Tissue Healing Using Customized Devices: 3D Printing and Biomechanical Changes in Vaginal Tissue. Gynecologic and Obstetric Investigation, 2019, 84, 145-153.	1.6	5
66	Optical coherence tomography angiography to evaluate murine fetal brain vasculature changes caused by prenatal exposure to nicotine. Biomedical Optics Express, 2020, 11, 3618.	2.9	5
67	Assessing Porcine Iris Elasticity and Mechanical Anisotropy with Optical Coherence Elastography. Journal of Biomedical Photonics and Engineering, 2021, 7, 040304.	0.7	5
68	Multimodal Heartbeat and Compression Optical Coherence Elastography for Mapping Corneal Biomechanics. Frontiers in Medicine, 2022, 9, 833597.	2.6	5
69	Comparison of optical projection tomography and optical coherence tomography for assessment of murine embryonic development. Proceedings of SPIE, 2015, , .	0.8	3
70	Dynamic OCE measurement of the biomechanical properties of gelatin phantom and mouse corneain vivo. , 2013, , .		2
71	Air-puff OCE for assessment of mouse corneain vivo. , 2014, , .		2
72	Quantitative assessment of hyaline cartilage elasticity during optical clearing using optical coherence elastography. , 2015, , .		2

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73	Quantitative assessment of corneal biomechanical properties using optical coherence elastography and a modified Rayleigh Lamb-frequency model. Proceedings of SPIE, 2015, , .	0.8	2
74	Comparison of rotational imaging optical coherence tomography and selective plane illumination microscopy for embryonic study. Proceedings of SPIE, 2016, , .	0.8	2
75	Noncontact optical coherence elastography of the posterior porcine sclera in situ as a function of IOP. , 2017, , .		2
76	Quantifying lens elastic properties with optical coherence elastography as a function of intraocular pressure. , 2019, , .		2
77	Optical coherence elastography reveals the changes in cardiac tissue biomechanical properties after myocardial infarction in a mouse model. , 2019, , .		2
78	Longitudinal elastic wave imaging using nanobomb optical coherence elastography: erratum. Optics Letters, 2020, 45, 3296.	3.3	2
79	Ultra-Fast Line-Field Optical Coherence Elastography at 11.5 MHz. , 2022, , .		2
80	Assessing the changes in the biomechanical properties of the crystalline lens induced by cold cataract with air-pulse OCE. AIP Conference Proceedings, 2015, , .	0.4	1
81	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
82	Magnetic force Optical Coherence Elastography at 1.5 million a-lines per second. , 2016, , .		1
83	Corneal elastic anisotropy and hysteresis as a function of IOP assessed by optical coherence elastography. Proceedings of SPIE, 2016, , .	0.8	1
84	Influence of corneal hydration on optical coherence elastography. Proceedings of SPIE, 2016, , .	0.8	1
85	Biomechanical properties of crystalline lens as a function of intraocular pressure assessed noninvasively by optical coherence elastography. , 2017, , .		1
86	Multimodal high-resolution embryonic imaging with light sheet fluorescence microscopy and optical coherence tomography. Optics Letters, 2021, 46, 4180.	3.3	1
87	Evaluating changes in brain vasculature of murine embryos in utero due to maternal alcohol consumption using optical coherence tomography. , 2017, , .		1
88	Imaging of Shear Wave Propagation in Cornea Using Optical Coherence Elastography. , 2014, , .		1
89	Quantifying changes in lens biomechanical properties due to cold cataract with optical coherence elastography. , 2018, , .		1
90	Optical elastography using dye nanoparticles (Conference Presentation). , 2018, , .		1

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91	Correlation of optical coherence elastography with clinical evaluation of systemic sclerosis. , 2019, , .		1
92	In utero optical coherence tomography reveals changes in murine embryonic brain vasculature after prenatal cannabinoid exposure. , 2019, , .		1
93	Differentiation of murine colon pathology by optical and mechanical contrast using optical coherence tomography and elastography. , 2019, , .		1
94	Assessment of the biomechanical changes in cardiac tissue after myocardial infarction with optical coherence elastography. , 2019, , .		1
95	Assessing the effects of storage medium on the biomechanical properties of porcine lens with optical coherence elastography. , 2019, , .		1
96	Accuracy of Common Motion Estimators in Wave-Based Optical Coherence Elastography. Journal of Biomedical Photonics and Engineering, 2021, 7, 040303.	0.7	1
97	Transient Optical Coherence Elastography. , 2021, , 8-1-8-44.		1
98	Single-shot dynamic line-field optical coherence elastography at 11.5 MHz. , 2022, , .		1
99	Dynamic OCT measurements of corneal biomechanical properties after UV cross-linking in the rabbit. Proceedings of SPIE, 2013, , .	0.8	0
100	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
101	Three-dimensional mapping of corneal elasticity using optical coherence elastography. Proceedings of SPIE, 2015, , .	0.8	0
102	Assessment of the biomechanical properties of porcine cornea after UV cross-linking at different intraocular pressures. , 2015, , .		0
103	Noninvasive 3D elasticity mapping using phase-stabilized optical coherence elastography. , 2015, , .		0
104	Spatial mapping of the biomechanical properties of rabbit cornea after cross-linking using optical coherence elastography. , 2015, , .		0
105	Elasticity measurement of nasal cartilage as a function of temperature using optical coherence elastography. , 2015, , .		0
106	Detection of dermal systemic sclerosis using noncontact optical coherence elastography. , 2016, , .		0
107	Multimodal embryonic imaging using optical coherence tomography, selective plane illumination microscopy, and optical projection tomography. , 2016, 2016, 3922-3925.		0
108	Noncontact phase-sensitive dynamic optical coherence elastography at megahertz rate. , 2016, , .		0

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109	Lorentz force megahertz optical coherence elastography. Proceedings of SPIE, 2016, , .	0.8	0
110	Live dynamic OCT imaging of cardiac structure and function in mouse embryos with 43 Hz direct volumetric data acquisition. Proceedings of SPIE, 2016, , .	0.8	0
111	Single shot line-field optical coherence elastography. Proceedings of SPIE, 2016, , .	0.8	0
112	Assessing the viscoelasticity of green light induced CXL in the rabbit cornea by noncontact OCE and FEM. , 2016, , .		0
113	A comparison study of Riboflavin/UV-A and Rose-Bengal/Green light cross-linking of the rabbit corneas using optical coherence elastography. Proceedings of SPIE, 2016, , .	0.8	0
114	Effect of curvature and thickness on elastic wave velocity in cornea-like structures by FEM and OCE. Proceedings of SPIE, 2016, , .	0.8	0
115	A comparison study of optical coherence elastography and laser Michelson vibrometry. Proceedings of SPIE, 2016, , .	0.8	0
116	Combined optical coherence tomography and optical coherence elastography for glomerulonephritis classification. , 2016, , .		0
117	Dynamic phase-sensitive optical coherence elastography at a true kilohertz frame-rate. Proceedings of SPIE, 2016, , .	0.8	0
118	Assessing the elasticity change of cataract lens with OCE. , 2016, , .		0
119	A dual-modality optical coherence tomography and selective plane illumination microscopy system for mouse embryonic imaging. Proceedings of SPIE, 2017, , .	0.8	0
120	Assessing the mechanical anisotropy and hysteresis while cycling IOP of porcine eyes before and after CXL by noncontact optical coherence elastography. , 2017, , .		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	Line-field low coherence holography for ultra-fast assessment of tissue biomechanical properties. , 2017, , .		0
124	Quantifying the effects of UV-A/riboflavin crosslinking on the elastic anisotropy and hysteresis of the porcine cornea by noncontact optical coherence elastography. , 2017, , .		0
125	Assessing corneal viscoelasticity after crosslinking at different IOP by noncontact OCE and a modified Lamb wave model. , 2017, , .		0
126	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



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127	A dual-modality optical coherence tomography and selective plane illumination microscopy system for mouse embryonic imaging. , 2017, 2017, 4038-4040.		0
128	In utero Optical Coherence Tomography to Evaluate Vasculature Changes in the Murine Embryonic Brain Due to Prenatal Alcohol and Nicotine exposure. , 2018, , .		0
129	Heartbeat optical coherence elastography: using heartbeat to measure corneal biomechanical properties. , 2021, , .		0
130	Multimodal high-resolution system for embryonic imaging combining optical coherence tomography and light sheet fluorescence microscopy. , 2021, , .		0
131	Optical coherence angiography to assess the combined effects of alcohol and nicotine on fetal brain vasculature. , 2021, , .		0
132	Assessing mechanical properties of tissue phantoms with non-contact optical coherence elastography and Michelson interferometric vibrometry. Journal of Biomedical Photonics and Engineering, 0, , 229-235.	0.7	0
133	Detection of Glomerulonephritis in the Murine Kidney by Optical Coherence Elastography. , 2015, , .		0
134	Assessing the changes in the spatial stiffness of the posterior sclera as a function of IOP with air-pulse OCE. , 2017, , .		0
135	Assessing the viscoelasticity of chicken liver by OCE and a Rayleigh wave model. Proceedings of SPIE, 2017, , .	0.8	0
136	Evaluation of posterior porcine sclera elasticity in situ as a function of IOP. , 2018, , .		0
137	Quantifying the effects of hydration on corneal stiffness with optical coherence elastography. , 2018, , .		0
138	Ultra-high speed OCT allows measurement of intraocular pressure, corneal geometry, and corneal stiffness using a single instrument. , 2018, , .		0
139	Quantifying changes in lenticular stiffness with optical coherence elastography. , 2019, , .		0
140	Heartbeat OCE: Corneal biomechanical response to simulated heartbeat pulsation. , 2020, , .		0
141	Quantifying changes in murine fetal brain vasculature due to prenatal exposure to teratogens with in utero optical coherence tomography. , 2020, , .		0
142	Age-related viscoelasticity changes in rabbit lens measured by optical coherence elastography. , 2022, , .		0
143	Assessment of the influence of lens capsule on lens biomechanical properties with optical coherence elastography. , 2022, , .		0
144	Mapping corneal stiffness with compressional optical coherence elastography. , 2022, , .		0

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145	Combined optical coherence tomography and light sheet fluorescence microscopy for embryonic imaging. , 2022, , .		0
146	Heartbeat optical coherence elastography to measure corneal stiffness in vivo. , 2021, , .		0
147	Quantitative Compression Elastography With an Uncalibrated Stress Sensor. Frontiers in Physics, 0, 10, .	2.1	0
148	In-vivo Assessment of Corneal Biomechanics Under Localized Cross-linking Treatment Using Wave-based Optical Coherence Elastography. , 2022, , .		0