

Robert A Mclaughlin

List of Publications by Year in descending order

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118
papers

4,396
citations

93792

39
h-index

129628

63
g-index

118
all docs

118
docs citations

118
times ranked

3844
citing authors

#	ARTICLE	IF	CITATIONS
1	A Silk-Based Functionalization Architecture for Single Fiber Imaging and Sensing. <i>Advanced Functional Materials</i> , 2022, 32, 2010713.	7.8	6
2	Multimodality Intravascular Imaging of High-Risk Coronary Plaque. <i>JACC: Cardiovascular Imaging</i> , 2022, 15, 145-159.	2.3	35
3	A Handheld Fiber-Optic Probe to Enable Optical Coherence Tomography of Oral Soft Tissue. <i>IEEE Transactions on Biomedical Engineering</i> , 2022, 69, 2276-2282.	2.5	5
4	3D-Printed Micro Lens-in-a-Lens for In Vivo Multimodal Microendoscopy. <i>Small</i> , 2022, 18, e2107032.	5.2	21
5	Requirements and limitations of imaging airway smooth muscle throughout the lung in vivo. <i>Respiratory Physiology and Neurobiology</i> , 2022, 301, 103884.	0.7	5
6	3D-Printed Micro Lens-in-a-Lens for In Vivo Multimodal Microendoscopy (Small 17/2022). <i>Small</i> , 2022, 18, .	5.2	0
7	Multimodal imaging needle combining optical coherence tomography and fluorescence for imaging of live breast cancer cells labeled with a fluorescent analog of tamoxifen. <i>Journal of Biomedical Optics</i> , 2022, 27, .	1.4	0
8	Protein detection enabled using functionalised silk-binding peptides on a silk-coated optical fibre. <i>RSC Advances</i> , 2021, 11, 22334-22342.	1.7	1
9	Adaptation to Exercise Training in Conduit Arteries and Cutaneous Microvessels in Humans: An Optical Coherence Tomography Study. <i>Medicine and Science in Sports and Exercise</i> , 2021, 53, 1945-1957.	0.2	2
10	Optical Fibre-Enabled Photoswitching for Localised Activation of an Anti-Cancer Therapeutic Drug. <i>International Journal of Molecular Sciences</i> , 2021, 22, 10844.	1.8	3
11	Single-fiber-based probe for combined imaging and pH sensing. , 2021, , .		0
12	Diagnostic Accuracy of Confocal Laser Endomicroscopy for the Diagnosis of Oral Squamous Cell Carcinoma: A Systematic Review and Meta-Analysis. <i>International Journal of Environmental Research and Public Health</i> , 2021, 18, 12390.	1.2	6
13	Assessment of the human cutaneous microvasculature using optical coherence tomography: Proving Harvey's proof. <i>Microcirculation</i> , 2020, 27, e12594.	1.0	6
14	Visualizing and quantifying the impact of reactive hyperemia on cutaneous microvessels in humans. <i>Journal of Applied Physiology</i> , 2020, 128, 17-24.	1.2	5
15	Distributed optical fiber sensing of micron-scale particles. <i>Sensors and Actuators A: Physical</i> , 2020, 303, 111762.	2.0	9
16	Visualizing and quantifying cutaneous microvascular reactivity in humans by use of optical coherence tomography: impaired dilator function in diabetes. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2020, 319, E923-E931.	1.8	7
17	Ultrathin monolithic 3D printed optical coherence tomography endoscopy for preclinical and clinical use. <i>Light: Science and Applications</i> , 2020, 9, 124.	7.7	80
18	Optical coherence tomography: a novel imaging approach to visualize and quantify cutaneous microvascular structure and function in patients with diabetes. <i>BMJ Open Diabetes Research and Care</i> , 2020, 8, e001479.	1.2	10

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19	Silk: A bio-derived coating for optical fiber sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2020, 311, 127864.	4.0	24
20	Imaging Genetically-Modified Cells with a Miniaturised Multimodal Optical Coherence Tomography + Fluorescence Probe. , 2019, , .		0
21	Novel Noninvasive Assessment of Microvascular Structure and Function in Humans. <i>Medicine and Science in Sports and Exercise</i> , 2019, 51, 1558-1565.	0.2	13
22	Developing Tamoxifen-Based Chemical Probes for Use with a Dual-Modality Fluorescence and Optical Coherence Tomography Imaging Needle. <i>Australian Journal of Chemistry</i> , 2019, , .	0.5	1
23	Novel concepts for sensing, imaging and mode generation in fibers using high-index glass. , 2019, , .		0
24	Automatic localization of the left ventricular blood pool centroid in short axis cardiac cine MR images. <i>Medical and Biological Engineering and Computing</i> , 2018, 56, 1053-1062.	1.6	6
25	Fully automated segmentation of the left ventricle in cine cardiac MRI using neural network regression. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 48, 140-152.	1.9	66
26	Intraoperative detection of blood vessels with an imaging needle during neurosurgery in humans. <i>Science Advances</i> , 2018, 4, eaav4992.	4.7	46
27	Two-photon polymerisation 3D printed freeform micro-optics for optical coherence tomography fibre probes. <i>Scientific Reports</i> , 2018, 8, 14789.	1.6	50
28	Miniaturized single-fiber-based needle probe for combined imaging and sensing in deep tissue. <i>Optics Letters</i> , 2018, 43, 1682.	1.7	27
29	Imaging-aided Temperature Measurements with a Single Optical Fiber for in-vivo Sensing Applications. , 2018, , .		0
30	Investigation of optical attenuation imaging using optical coherence tomography for monitoring of scars undergoing fractional laser treatment. <i>Journal of Biophotonics</i> , 2017, 10, 511-522.	1.1	21
31	Convolutional neural network regression for short-axis left ventricle segmentation in cardiac cine MR sequences. <i>Medical Image Analysis</i> , 2017, 39, 78-86.	7.0	135
32	In vivo volumetric quantitative micro-elastography of human skin. <i>Biomedical Optics Express</i> , 2017, 8, 2458.	1.5	27
33	Flexible needle with integrated optical coherence tomography probe for imaging during transbronchial tissue aspiration. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	1.4	13
34	Linear-regression convolutional neural network for fully automated coronary lumen segmentation in intravascular optical coherence tomography. <i>Journal of Biomedical Optics</i> , 2017, 22, 1.	1.4	38
35	In vivo label-free lymphangiography of cutaneous lymphatic vessels in human burn scars using optical coherence tomography. <i>Biomedical Optics Express</i> , 2016, 7, 4886.	1.5	32
36	Extracting something from nothing: In vivo imaging of human cutaneous lymphatic vessels using optical coherence tomography. , 2016, , .		0

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37	Deep tissue volume imaging of birefringence through fibre-optic needle probes for the delineation of breast tumour. <i>Scientific Reports</i> , 2016, 6, 28771.	1.6	119
38	A new selective fluorescent probe based on tamoxifen. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2016, 26, 4879-4883.	1.0	13
39	Optical coherence tomography for longitudinal monitoring of vasculature in scars treated with laser fractionation. <i>Journal of Biophotonics</i> , 2016, 9, 626-636.	1.1	42
40	Investigation of optical coherence micro-elastography as a method to visualize micro-architecture in human axillary lymph nodes. <i>BMC Cancer</i> , 2016, 16, 874.	1.1	9
41	Optical coherence tomography in the assessment of acute changes in cutaneous vascular diameter induced by heat stress. <i>Journal of Applied Physiology</i> , 2016, 121, 965-972.	1.2	23
42	Optical coherence tomography angiography for longitudinal monitoring of vascular changes in human cutaneous burns. <i>Experimental Dermatology</i> , 2016, 25, 722-724.	1.4	17
43	Quantitative micro-elastography: imaging of tissue elasticity using compression optical coherence elastography. <i>Scientific Reports</i> , 2015, 5, 15538.	1.6	192
44	Does smooth muscle in an intact airway undergo length adaptation during a sustained change in transmural pressure?. <i>Journal of Applied Physiology</i> , 2015, 118, 533-543.	1.2	11
45	Polarization sensitive OCT with needle probes. , 2015, , .		0
46	Sensitivity and resolution in optical coherence micro-elastography. , 2015, , .		2
47	In vivo optical elastography: stress and strain imaging of human skin lesions. , 2015, , .		2
48	Motion corrected LV quantification based on 3D modelling for improved functional assessment in cardiac MRI. <i>Physics in Medicine and Biology</i> , 2015, 60, 2715-2733.	1.6	24
49	Optical Coherence Tomography in a Needle Format. , 2015, , 2413-2472.		4
50	Parametric imaging of viscoelasticity using optical coherence elastography. <i>Physics in Medicine and Biology</i> , 2015, 60, 2293-2307.	1.6	29
51	Regional assessment of LV wall in infarcted heart using tagged MRI and cardiac modelling. <i>Physics in Medicine and Biology</i> , 2015, 60, 4015-4031.	1.6	17
52	Optical palpation <i>in vivo</i> : imaging human skin lesions using mechanical contrast. <i>Journal of Biomedical Optics</i> , 2015, 20, 016013.	1.4	24
53	Near Video-Rate Optical Coherence Elastography by Acceleration With a Graphics Processing Unit. <i>Journal of Lightwave Technology</i> , 2015, 33, 3481-3485.	2.7	22
54	Molecular imaging needles: dual-modality optical coherence tomography and fluorescence imaging of labeled antibodies deep in tissue. <i>Biomedical Optics Express</i> , 2015, 6, 1767.	1.5	49

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55	Investigation of Optical Coherence Microelastography as a Method to Visualize Cancers in Human Breast Tissue. <i>Cancer Research</i> , 2015, 75, 3236-3245.	0.4	91
56	Three-dimensional compression optical coherence elastography of skeletal muscle tissue. , 2014, , .		0
57	Optofluidic needle probe integrating targeted delivery of fluid with optical coherence tomography imaging. <i>Optics Letters</i> , 2014, 39, 2888.	1.7	18
58	Imaging deep skeletal muscle structure using a high-sensitivity ultrathin side-viewing optical coherence tomography needle probe. <i>Biomedical Optics Express</i> , 2014, 5, 136.	1.5	48
59	Optical coherence micro-elastography: mechanical-contrast imaging of tissue microstructure. <i>Biomedical Optics Express</i> , 2014, 5, 2113.	1.5	132
60	Analysis of image formation in optical coherence elastography using a multiphysics approach. <i>Biomedical Optics Express</i> , 2014, 5, 2913.	1.5	66
61	Three-dimensional optical coherence micro-elastography of skeletal muscle tissue. <i>Biomedical Optics Express</i> , 2014, 5, 3090.	1.5	29
62	Optical palpation: optical coherence tomography-based tactile imaging using a compliant sensor. <i>Optics Letters</i> , 2014, 39, 3014.	1.7	87
63	Optical Coherence Tomography in Respiratory Science and Medicine: From Airways to Alveoli. <i>Physiology</i> , 2014, 29, 369-380.	1.6	27
64	Imaging of skin birefringence for human scar assessment using polarization-sensitive optical coherence tomography aided by vascular masking. <i>Journal of Biomedical Optics</i> , 2014, 19, 126014.	1.4	43
65	A review of optical coherence tomography in breast cancer. <i>Photonics & Lasers in Medicine</i> , 2014, 3, .	0.3	26
66	Dual-modality Imaging Needle for Combined Optical Coherence Tomography and Fluorescence Imaging of Fluorescently Labelled Tissue. , 2014, , .		0
67	Birefringence imaging for optical sensing of tissue damage. , 2013, , .		1
68	Needle Probes in Optical Coherence Tomography. , 2013, , 1065-1102.		5
69	Dual-modality needle probe for combined fluorescence imaging and three-dimensional optical coherence tomography. <i>Optics Letters</i> , 2013, 38, 266.	1.7	72
70	Automated quantification of lung structures from optical coherence tomography images. <i>Biomedical Optics Express</i> , 2013, 4, 2383.	1.5	6
71	Measuring elastic contrast in tissue using OCT needle probes. <i>Proceedings of SPIE</i> , 2013, , .	0.8	1
72	Needle optical coherence elastography for the measurement of microscale mechanical contrast deep within human breast tissues. <i>Journal of Biomedical Optics</i> , 2013, 18, 121510.	1.4	70

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73	<i>En face</i>parametric imaging of tissue birefringence using polarization-sensitive optical coherence tomography. Journal of Biomedical Optics, 2013, 18, 066005.	1.4	31
74	Assessment of human burn scars with optical coherence tomography by imaging the attenuation coefficient of tissue after vascular masking. Journal of Biomedical Optics, 2013, 19, 021111.	1.4	62
75	Quantitative assessment of muscle damage in the mdx mouse model of Duchenne muscular dystrophy using polarization-sensitive optical coherence tomography. Journal of Applied Physiology, 2013, 115, 1393-1401.	1.2	25
76	Fiber-optic needle probes: Applications in deep tissue imaging. , 2013, , .		0
77	In vivoassessment of human burn scars through automated quantification of vascularity using optical coherence tomography. Journal of Biomedical Optics, 2012, 18, 061213.	1.4	82
78	Optical coherence elastography: Strain imaging in tissue using optical coherence tomography. , 2012, , .		0
79	Parametric imaging of the local attenuation coefficient in human axillary lymph nodes assessed using optical coherence tomography. Biomedical Optics Express, 2012, 3, 366.	1.5	74
80	Enabling freehand lateral scanning of optical coherence tomography needle probes with a magnetic tracking system. Biomedical Optics Express, 2012, 3, 1565.	1.5	22
81	Motion correction of in vivo three-dimensional optical coherence tomography of human skin using a fiducial marker. Biomedical Optics Express, 2012, 3, 1774.	1.5	29
82	Strain estimation in phase-sensitive optical coherence elastography. Biomedical Optics Express, 2012, 3, 1865.	1.5	157
83	High-sensitivity anastigmatic imaging needle for optical coherence tomography. Optics Letters, 2012, 37, 5247.	1.7	47
84	Needle optical coherence elastography for tissue boundary detection. Optics Letters, 2012, 37, 2310.	1.7	80
85	A new method of optical biopsy: demonstration of mechanical contrast in deep tissue using an optical coherence elastography needle probe. Proceedings of SPIE, 2012, , .	0.8	2
86	Imaging of Breast Cancer With Optical Coherence Tomography Needle Probes: Feasibility and Initial Results. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1184-1191.	1.9	96
87	Ultrasound-Guided Optical Coherence Tomography Needle Probe for the Assessment of Breast Cancer Tumor Margins. American Journal of Roentgenology, 2012, 199, W520-W522.	1.0	34
88	Static and dynamic imaging of alveoli using optical coherence tomography needle probes. Journal of Applied Physiology, 2012, 113, 967-974.	1.2	50
89	In situ 3D imaging of alveoli with a 30 gauge side-facing optical needle probe. , 2011, , .		0
90	Ultrathin side-viewing needle probe for optical coherence tomography. Optics Letters, 2011, 36, 3894.	1.7	144

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91	3D visualization of tissue microstructures using optical coherence tomography needle probes. , 2011, , .		1
92	Elastic Properties of the Central Airways in Obstructive Lung Diseases Measured Using Anatomical Optical Coherence Tomography. American Journal of Respiratory and Critical Care Medicine, 2011, 183, 612-619.	2.5	108
93	In situ imaging of lung alveoli with an optical coherence tomography needle probe. Journal of Biomedical Optics, 2011, 16, 1.	1.4	70
94	Reduction of image artifacts in three-dimensional optical coherence tomography of skin in vivo. Journal of Biomedical Optics, 2011, 16, 116018.	1.4	27
95	Assessment and correction of imaging artifacts in skin imaging using fibre-based optical coherence tomography. , 2010, , .		0
96	Distribution of airway narrowing responses across generations and at branching points, assessed in vitro by anatomical optical coherence tomography. Respiratory Research, 2010, 11, 9.	1.4	21
97	Clinical applications of fiber-optic probes in optical coherence tomography. Optical Fiber Technology, 2010, 16, 467-475.	1.4	25
98	Airway narrowing assessed by anatomical optical coherence tomography in vitro: dynamic airway wall morphology and function. Journal of Applied Physiology, 2010, 108, 401-411.	1.2	42
99	Fibrin phantom for use in optical coherence tomography. Journal of Biomedical Optics, 2010, 15, 030507.	1.4	32
100	Imaging of Human Lymph Nodes Using Optical Coherence Tomography: Potential for Staging Cancer. Cancer Research, 2010, 70, 2579-2584.	0.4	82
101	Feasibility of Applying Real-time Optical Imaging During Bronchoscopic Interventions for Central Airway Obstruction. Journal of Bronchology and Interventional Pulmonology, 2010, 17, 307-316.	0.8	11
102	Measuring airway dimensions during bronchoscopy using anatomical optical coherence tomography. European Respiratory Journal, 2010, 35, 34-41.	3.1	67
103	Parametric imaging of cancer with optical coherence tomography. Journal of Biomedical Optics, 2010, 15, 046029.	1.4	55
104	Imaging true 3D endoscopic anatomy by incorporating magnetic tracking with optical coherence tomography: proof-of-principle for airways. Optics Express, 2010, 18, 27173.	1.7	28
105	Respiratory gating of anatomical optical coherence tomography images of the human airway. Optics Express, 2009, 17, 6568.	1.7	26
106	In vivo dynamic optical coherence elastography using a ring actuator. Optics Express, 2009, 17, 21762.	1.7	142
107	In vivo 4D imaging of the human lower airway using anatomical optical coherence tomography. , 2009, , .		1
108	Using Optical Coherence Tomography To Improve Diagnostic and Therapeutic Bronchoscopy. Chest, 2009, 136, 272-276.	0.4	62

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109	Mapping Tissue Optical Attenuation to Identify Cancer Using Optical Coherence Tomography. Lecture Notes in Computer Science, 2009, 12, 657-664.	1.0	9
110	Applying anatomical optical coherence tomography to quantitative 3D imaging of the lower airway. Optics Express, 2008, 16, 17521.	1.7	60
111	Respiratory gating of endoscopic OCT images of the upper airway. , 2008, , .		1
112	Extracting Transmission Lines From Airborne LIDAR Data. IEEE Geoscience and Remote Sensing Letters, 2006, 3, 222-226.	1.4	125
113	A comparison of a similarity-based and a feature-based 2-D-3-D registration method for neurointerventional use. IEEE Transactions on Medical Imaging, 2005, 24, 1058-1066.	5.4	53
114	Intensity-based 2-D-3-D registration of cerebral angiograms. IEEE Transactions on Medical Imaging, 2003, 22, 1417-1426.	5.4	114
115	Randomized Hough Transform: Improved ellipse detection with comparison. Pattern Recognition Letters, 1998, 19, 299-305.	2.6	227
116	The Hough transform versus the UpWrite. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1998, 20, 396-400.	9.7	45
117	Inference of structure: hands. Pattern Recognition Letters, 1994, 15, 957-962.	2.6	3
118	Recognising cubes in images. Machine Intelligence and Pattern Recognition, 1994, , 59-73.	0.2	3