Kyle P Quinn

List of Publications by Year
in descending order

88 papers	2,866 citations	159585 30 h-index	189892 50 g-index
88 all docs	88 docs citations	88 times ranked	3149 citing authors

#	Article	IF	Citations
1	Optical Imaging Using Endogenous Contrast to Assess Metabolic State. Annual Review of Biomedical Engineering, 2012, 14, 351-367.	12.3	257
2	Quantitative metabolic imaging using endogenous fluorescence to detect stem cell differentiation. Scientific Reports, 2013, 3, 3432.	3.3	215
3	Evaluating Cell Metabolism Through Autofluorescence Imaging of NAD(P)H and FAD. Antioxidants and Redox Signaling, 2019, 30, 875-889.	5.4	171
4	Young developmental age cardiac extracellular matrix promotes the expansion of neonatal cardiomyocytes in vitro. Acta Biomaterialia, 2014, 10, 194-204.	8.3	168
5	Endogenous Two-Photon Fluorescence Imaging Elucidates Metabolic Changes Related to Enhanced Glycolysis and Glutamine Consumption in Precancerous Epithelial Tissues. Cancer Research, 2014, 74, 3067-3075.	0.9	129
6	Mapping metabolic changes by noninvasive, multiparametric, high-resolution imaging using endogenous contrast. Science Advances, 2018, 4, eaap9302.	10.3	128
7	Skin Structure–Function Relationships and the Wound Healing Response to Intrinsic Aging. Advances in Wound Care, 2020, 9, 127-143.	5.1	87
8	Imaging mitochondrial dynamics in human skin reveals depth-dependent hypoxia and malignant potential for diagnosis. Science Translational Medicine, 2016, 8, 367ra169.	12.4	82
9	Characterization of metabolic changes associated with the functional development of 3D engineered tissues by non-invasive, dynamic measurement of individual cell redox ratios. Biomaterials, 2012, 33, 5341-5348.	11.4	77
10	Optical redox ratio identifies metastatic potential-dependent changes in breast cancer cell metabolism. Biomedical Optics Express, 2016, 7, 4364.	2.9	76
11	Altered collagen fiber kinematics define the onset of localized ligament damage during loading. Journal of Applied Physiology, 2008, 105, 1881-1888.	2.5	65
12	Neuronal hyperexcitability in the dorsal horn after painful facet joint injury. Pain, 2010, 151, 414-421.	4.2	62
13	Cervical facet capsular ligament yield defines the threshold for injury and persistent joint-mediated neck pain. Journal of Biomechanics, 2007, 40, 2299-2306.	2.1	60
14	Glutamine Metabolism Controls Stem Cell Fate Reversibility and Long-Term Maintenance in the Hair Follicle. Cell Metabolism, 2020, 32, 629-642.e8.	16.2	60
15	In vivo multiphoton microscopy detects longitudinal metabolic changes associated with delayed skin wound healing. Communications Biology, 2018, 1, 198.	4.4	58
16	Automated quantification of three-dimensional organization of fiber-like structures in biological tissues. Biomaterials, 2017, 116, 34-47.	11.4	55
17	Rapid quantification of pixel-wise fiber orientation data in micrographs. Journal of Biomedical Optics, 2013, 18, 046003.	2.6	53
18	Rapid three-dimensional quantification of voxel-wise collagen fiber orientation. Biomedical Optics Express, 2015, 6, 2294.	2.9	52

#	Article	IF	Citations
19	Preconditioning is Correlated With Altered Collagen Fiber Alignment in Ligament. Journal of Biomechanical Engineering, 2011, 133, 064506.	1.3	51
20	Skin Rejuvenation with Non-Invasive Pulsed Electric Fields. Scientific Reports, 2015, 5, 10187.	3.3	45
21	From Single Cells to Tissues: Interactions between the Matrix and Human Breast Cells in Real Time. PLoS ONE, 2014, 9, e93325.	2.5	39
22	Noninvasive Metabolic Imaging of Engineered 3D Human Adipose Tissue in a Perfusion Bioreactor. PLoS ONE, 2013, 8, e55696.	2.5	38
23	Improved Fourier-based characterization of intracellular fractal features. Optics Express, 2012, 20, 23442.	3.4	37
24	Noninvasive assessment of mitochondrial organization in three-dimensional tissues reveals changes associated with cancer development. International Journal of Cancer, 2015, 136, 322-332.	5.1	36
25	Non-invasive monitoring of cell metabolism and lipid production in 3D engineered human adipose tissues using label-free multiphoton microscopy. Biomaterials, 2013, 34, 8607-8616.	11.4	35
26	Optical metrics of the extracellular matrix predict compositional and mechanical changes after myocardial infarction. Scientific Reports, 2016, 6, 35823.	3.3	35
27	Vector correlation technique for pixel-wise detection of collagen fiber realignment during injurious tensile loading. Journal of Biomedical Optics, 2009, 14, 054010.	2.6	34
28	An automated image processing method to quantify collagen fibre organization within cutaneous scar tissue. Experimental Dermatology, 2015, 24, 78-80.	2.9	34
29	Quantitative characterization of mineralized silk film remodeling during long-term osteoblast–osteoclast co-culture. Biomaterials, 2014, 35, 3794-3802.	11.4	33
30	Structural changes in the cervical facet capsular ligament: potential contributions to pain following subfailure loading. Stapp Car Crash Journal, 2007, 51, 169-87.	1.1	33
31	Valve interstitial cell contractile strength and metabolic state are dependent on its shape. Integrative Biology (United Kingdom), 2016, 8, 1079-1089.	1.3	32
32	Endogenous Two-Photon Excited Fluorescence Imaging Characterizes Neuron and Astrocyte Metabolic Responses to Manganese Toxicity. Scientific Reports, 2017, 7, 1041.	3.3	32
33	Anomalous fiber realignment during tensile loading of the rat facet capsular ligament identifies mechanically induced damage and physiological dysfunction. Journal of Biomechanics, 2010, 43, 1870-1875.	2.1	30
34	Diabetic Wounds Exhibit Distinct Microstructural and Metabolic Heterogeneity through Label-Free Multiphoton Microscopy. Journal of Investigative Dermatology, 2016, 136, 342-344.	0.7	29
35	Non-destructive two-photon excited fluorescence imaging identifies early nodules in calcific aortic-valve disease. Nature Biomedical Engineering, 2017, 1, 914-924.	22.5	29
36	3D organizational mapping of collagen fibers elucidates matrix remodeling in a hormone-sensitive 3D breast tissue model. Biomaterials, 2018, 179, 96-108.	11.4	28

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37	Head-Turned Postures Increase the Risk of Cervical Facet Capsule Injury During Whiplash. Spine, 2008, 33, 1643-1649.	2.0	27
38	Full field strain measurements of collagenous tissue by tracking fiber alignment through vector correlation. Journal of Biomechanics, 2010, 43, 2637-2640.	2.1	24
39	Hormonal Regulation of Epithelial Organization in a Three-Dimensional Breast Tissue Culture Model. Tissue Engineering - Part C: Methods, 2014, 20, 42-51.	2.1	23
40	Detection of Altered Collagen Fiber Alignment in the Cervical Facet Capsule After Whiplash-Like Joint Retraction. Annals of Biomedical Engineering, 2011, 39, 2163-2173.	2.5	22
41	Preventing Scars after Injury with Partial Irreversible Electroporation. Journal of Investigative Dermatology, 2016, 136, 2297-2304.	0.7	22
42	Skin regeneration with all accessory organs following ablation with irreversible electroporation. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 98-113.	2.7	22
43	Characterizing differences in the collagen fiber organization of skin wounds using quantitative polarized light imaging. Wound Repair and Regeneration, 2019, 27, 711-714.	3.0	22
44	Cell‐Tethered Ligands Modulate Bone Remodeling by Osteoblasts and Osteoclasts. Advanced Functional Materials, 2014, 24, 472-479.	14.9	21
45	Optical imaging of radiation-induced metabolic changes in radiation-sensitive and resistant cancer cells. Journal of Biomedical Optics, 2017, 22, 060502.	2.6	19
46	A Radiosensitizing Inhibitor of HIF-1 alters the Optical Redox State of Human Lung Cancer Cells In Vitro. Scientific Reports, 2018, 8, 8815.	3.3	18
47	The role of graded nerve root compression on axonal damage, neuropeptide changes, and pain-related behaviors. Stapp Car Crash Journal, 2008, 52, 33-58.	1.1	18
48	Quantifying Age-Related Changes in Skin Wound Metabolism Using *In Vivo* Multiphoton Microscopy. Advances in Wound Care, 2020, 9, 90-102.	5.1	17
49	Membrane potential depolarization causes alterations in neuron arrangement and connectivity in cocultures. Brain and Behavior, 2015, 5, 24-38.	2.2	15
50	Quantitative differentiation of normal and scarred tissues using second‐harmonic generation microscopy. Scanning, 2016, 38, 684-693.	1.5	13
51	Three-Dimensional Quantification of Collagen Microstructure During Tensile Mechanical Loading of Skin. Frontiers in Bioengineering and Biotechnology, 2021, 9, 642866.	4.1	13
52	Equine model for soft‐tissue regeneration. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2015, 103, 1217-1227.	3.4	11
53	Rapid quantification of mitochondrial fractal dimension in individual cells. Biomedical Optics Express, 2018, 9, 5269.	2.9	9
54	Rejuvenation of aged rat skin with pulsed electric fields. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 2309-2318.	2.7	8

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55	Biocompatible, Injectable Anionic Hydrogels Based on Poly(Oligo Ethylene Glycol) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 742	3.2	8
56	Differences in colonic crypt morphology of spontaneous and colitis-associated murine models via second harmonic generation imaging to quantify colon cancer development. BMC Cancer, 2019, 19, 428.	2.6	7
57	Label-free metabolic biomarkers for assessing valve interstitial cell calcific progression. Scientific Reports, 2020, 10, 10317.	3.3	7
58	Non-invasive Assessments of Adipose Tissue Metabolism In Vitro. Annals of Biomedical Engineering, 2016, 44, 725-732.	2.5	6
59	Automated Extraction of Skin Wound Healing Biomarkers From In Vivo Labelâ€Free Multiphoton Microscopy Using Convolutional Neural Networks. Lasers in Surgery and Medicine, 2021, 53, 1086-1095.	2.1	4
60	Efficacy of Combined in-vivo Electroporation-Mediated Gene Transfer of VEGF, HGF, and IL-10 on Skin Flap Survival, Monitored by Label-Free Optical Imaging: A Feasibility Study. Frontiers in Surgery, 2021, 8, 639661.	1.4	4
61	Multiscale Computational Model Predicts Mouse Skin Kinematics Under Tensile Loading. Journal of Biomechanical Engineering, 2022, 144, .	1.3	4
62	Label-free optical biomarkers detect early calcific aortic valve disease in a wild-type mouse model. BMC Cardiovascular Disorders, 2020, 20, 521.	1.7	3
63	Label-Free Multiphoton Microscopy for the Detection and Monitoring of Calcific Aortic Valve Disease. Frontiers in Cardiovascular Medicine, 2021, 8, 688513.	2.4	3
64	Single Dose of N-Acetylcysteine in Local Anesthesia Increases Expression of HIF1Î±, MAPK1, TGFÎ²1 and Growth Factors in Rat Wound Healing. International Journal of Molecular Sciences, 2021, 22, 8659.	4.1	3
65	Autocorrelation method for fractal analysis in nonrectangular image domains. Optics Letters, 2013, 38, 4477.	3.3	2
66	N-Acetylcysteine Added to Local Anesthesia Reduces Scar Area and Width in Early Wound Healingâ€"An Animal Model Study. International Journal of Molecular Sciences, 2021, 22, 7549.	4.1	2
67	Characterizing diabetic wound metabolism and microstructure using multi-photon microscopy. , 2014, , .		1
68	Automated Quantitative Analysis of Wound Histology Using Deep-Learning Neural Networks. Journal of Investigative Dermatology, 2021, 141, 1367-1370.	0.7	1
69	Tissue Imaging and Quantification Relying on Endogenous Contrast. Advances in Experimental Medicine and Biology, 2021, 3233, 257-288.	1.6	1
70	Functional Imaging of Wound Metabolism. Frontiers in Nanobiomedical Research, 2017, , 201-230.	0.1	1
71	Non-invasive Optical Detection of Cell Differentiation Status Using Endogenous Sources of Optical Contrast. , 2012, , .		0
72	Non-destructive, label-free metabolic mapping during stem cell differentiation. , 2013, , .		0

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73	Quantitative optical biomarkers for non-invasive detection of cancerous transformation in live, 3D squamous epithelia. , 2014, , .		0
74	Joint Distractions Sufficient to Produce Pain Increase Collagen Fiber Undulation in the Cervical Facet Capsular Ligament in the Rat. , 2008, , .		0
75	The Onset of Structural Yield During Tensile Loading Increases With Age in the Pediatric PMHS Cervical Spine. , 2009, , .		0
76	Force at Damage and Failure Decreases With Age in the Human Cadaveric Facet Capsular Ligament During Tension. , 2009, , .		0
77	Microstructural Modeling of Fiber Kinematics and Biomechanics of the Human Facet Capsular Ligament During Subfailure Loading. , 2010, , .		0
78	Localizing Damage in the Cervical Facet Capsular Ligament With Image-Based Multiscale Models. , 2010, , .		0
79	Imaging Approaches to Quantify Tissue Structure and Function from the Microscale to the Macroscale. , 2012, , 485-512.		0
80	Quantitative, Functional Biomarkers of Stem Cell Differentiation in 3D Using Multi-modal Non-linear Imaging with Endogenous Contrast. , 2013, , .		0
81	Monitoring Osteoblastic Differentiation with Multivariate Analysis of Fluorescence Lifetime Imaging. , 2013, , .		0
82	Rapid quantification of pixel-wise fiber orientation data in micrographs. Journal of Biomedical Optics, 2013, 18, 040102.	2.6	0
83	Label-free assessment of mitochondrial organization in three-dimensional tissues. , 2014, , .		0
84	Non-linear optical characterization of extracellular matrix changes following myocardial infarction. , 2015, , .		0
85	In vivo label-free multiphoton microscopy for monitoring delayed skin wound healing. , 2019, , .		0
86	Quantifying 3D tissue kinematics though second harmonic generation microscopy of skin during mechanical loading. , 2021, , .		0
87	Optical Imaging of Metabolic Changes in Human Lung Tumor-Adjacent Normal Tissue. , 2020, , .		0
88	Segmenting Cutaneous Wounds from Tissue Sections and In Vivo Images using Deep Learning. , 2020, , .		0