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List of Publications by Year in descending order

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Version: 2024-02-01

70
papers

3,439
citations

201575

27
h-index

155592

55
g-index

78
all docs

78
docs citations

78
times ranked

4006
citing authors

#	ARTICLE	IF	CITATIONS
1	Two-photon high-resolution measurement of partial pressure of oxygen in cerebral vasculature and tissue. <i>Nature Methods</i> , 2010, 7, 755-759.	9.0	415
2	Pericyte degeneration leads to neurovascular uncoupling and limits oxygen supply to brain. <i>Nature Neuroscience</i> , 2017, 20, 406-416.	7.1	383
3	Quantifying the Microvascular Origin of BOLD-fMRI from First Principles with Two-Photon Microscopy and an Oxygen-Sensitive Nanoprobe. <i>Journal of Neuroscience</i> , 2015, 35, 3663-3675.	1.7	196
4	Dendritic Phosphorescent Probes for Oxygen Imaging in Biological Systems. <i>ACS Applied Materials & Interfaces</i> , 2009, 1, 1292-1304.	4.0	194
5	Cell type specificity of neurovascular coupling in cerebral cortex. <i>ELife</i> , 2016, 5, .	2.8	176
6	“Overshoot” of O_2 Is Required to Maintain Baseline Tissue Oxygenation at Locations Distal to Blood Vessels. <i>Journal of Neuroscience</i> , 2011, 31, 13676-13681.	1.7	175
7	Large arteriolar component of oxygen delivery implies a safe margin of oxygen supply to cerebral tissue. <i>Nature Communications</i> , 2014, 5, 5734.	5.8	165
8	Supply-Demand Mismatch Transients in Susceptible Peri-infarct Hot Zones Explain the Origins of Spreading Injury Depolarizations. <i>Neuron</i> , 2015, 85, 1117-1131.	3.8	154
9	Establishing the diffuse correlation spectroscopy signal relationship with blood flow. <i>Neurophotonics</i> , 2016, 3, 031412.	1.7	131
10	Potential circadian effects on translational failure for neuroprotection. <i>Nature</i> , 2020, 582, 395-398.	13.7	85
11	Dynamic capillary stalls in reperfused ischemic penumbra contribute to injury: A hyperacute role for neutrophils in persistent traffic jams. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2021, 41, 236-252.	2.4	73
12	More homogeneous capillary flow and oxygenation in deeper cortical layers correlate with increased oxygen extraction. <i>ELife</i> , 2019, 8, .	2.8	68
13	Effect of electrical forepaw stimulation on capillary transit-time heterogeneity (CTH). <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2016, 36, 2072-2086.	2.4	64
14	Modeling of Cerebral Oxygen Transport Based on In vivo Microscopic Imaging of Microvascular Network Structure, Blood Flow, and Oxygenation. <i>Frontiers in Computational Neuroscience</i> , 2016, 10, 82.	1.2	60
15	Fluorescence lifetime microscopy of NADH distinguishes alterations in cerebral metabolism in vivo. <i>Biomedical Optics Express</i> , 2017, 8, 2368.	1.5	60
16	Optical monitoring of oxygen tension in cortical microvessels with confocal microscopy. <i>Optics Express</i> , 2009, 17, 22341.	1.7	58
17	Simultaneous imaging of cerebral partial pressure of oxygen and blood flow during functional activation and cortical spreading depression. <i>Applied Optics</i> , 2009, 48, D169.	2.1	58
18	Awake Mouse Imaging: From Two-Photon Microscopy to Blood Oxygen Level-Dependent Functional Magnetic Resonance Imaging. <i>Biological Psychiatry: Cognitive Neuroscience and Neuroimaging</i> , 2019, 4, 533-542.	1.1	49

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19	Multi-photon microscopy with a low-cost and highly efficient Cr:LiCAF laser. <i>Optics Express</i> , 2008, 16, 20848.	1.7	46
20	The roadmap for estimation of cell-type-specific neuronal activity from non-invasive measurements. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2016, 371, 20150356.	1.8	41
21	Two-photon microscopy measurement of cerebral metabolic rate of oxygen using periarteriolar oxygen concentration gradients. <i>Neurophotonics</i> , 2016, 3, 045005.	1.7	39
22	Two-photon microscopic imaging of capillary red blood cell flux in mouse brain reveals vulnerability of cerebral white matter to hypoperfusion. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2020, 40, 501-512.	2.4	38
23	Circadian Biology and Stroke. <i>Stroke</i> , 2021, 52, 2180-2190.	1.0	38
24	High-resolution in vivo optical imaging of stroke injury and repair. <i>Brain Research</i> , 2015, 1623, 174-192.	1.1	36
25	CD200 restrains macrophage attack on oligodendrocyte precursors via toll-like receptor 4 downregulation. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2016, 36, 781-793.	2.4	35
26	Determinants of Optogenetic Cortical Spreading Depolarizations. <i>Cerebral Cortex</i> , 2019, 29, 1150-1161.	1.6	35
27	Intrinsic optical signal imaging of the blood volume changes is sufficient for mapping the resting state functional connectivity in the rodent cortex. <i>Journal of Neural Engineering</i> , 2018, 15, 035003.	1.8	34
28	Differential effects of anesthetics on resting state functional connectivity in the mouse. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2020, 40, 875-884.	2.4	32
29	Multimodal optical imaging system for in vivo investigation of cerebral oxygen delivery and energy metabolism. <i>Biomedical Optics Express</i> , 2015, 6, 4994.	1.5	31
30	Real-time non-invasive in vivo visible light detection of cortical spreading depolarizations in mice. <i>Journal of Neuroscience Methods</i> , 2018, 309, 143-146.	1.3	30
31	Multimodal reconstruction of microvascular-flow distributions using combined two-photon microscopy and Doppler optical coherence tomography. <i>Neurophotonics</i> , 2015, 2, 015008.	1.7	28
32	Shear-induced diffusion of red blood cells measured with dynamic light scattering—optical coherence tomography. <i>Journal of Biophotonics</i> , 2018, 11, e201700070.	1.1	28
33	Validation and optimization of hypercapnic-calibrated fMRI from oxygen-sensitive two-photon microscopy. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2016, 371, 20150359.	1.8	27
34	Simulation of oxygen transport and estimation of tissue perfusion in extensive microvascular networks: Application to cerebral cortex. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2021, 41, 656-669.	2.4	25
35	Optical measurement of microvascular oxygenation and blood flow responses in awake mouse cortex during functional activation. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2022, 42, 510-525.	2.4	24
36	Interferometric diffuse correlation spectroscopy improves measurements at long source-detector separation and low photon count rate. <i>Journal of Biomedical Optics</i> , 2020, 25, .	1.4	21

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37	Phasor analysis of NADH FLIM identifies pharmacological disruptions to mitochondrial metabolic processes in the rodent cerebral cortex. PLoS ONE, 2018, 13, e0194578.	1.1	20
38	<i>In vivo</i> deep-tissue microscopy with UCNP/Janus-dendrimers as imaging probes: resolution at depth and feasibility of ratiometric sensing. Nanoscale, 2020, 12, 2657-2672.	2.8	18
39	Subarachnoid hemorrhage leads to early and persistent functional connectivity and behavioral changes in mice. Journal of Cerebral Blood Flow and Metabolism, 2021, 41, 975-985.	2.4	18
40	Cerebral Blood Oxygenation Measurement Based on Oxygen-dependent Quenching of Phosphorescence. Journal of Visualized Experiments, 2011, .	0.2	17
41	Magnetic resonance fingerprinting based on realistic vasculature in mice. NeuroImage, 2017, 149, 436-445.	2.1	17
42	Neurovascular coupling during optogenetic functional activation: Local and remote stimulus-response characteristics, and uncoupling by spreading depression. Journal of Cerebral Blood Flow and Metabolism, 2020, 40, 808-822.	2.4	17
43	Neurophotonic Tools for Microscopic Measurements and Manipulation: Status Report. Neurophotonics, 2022, 9, 013001.	1.7	17
44	Cerebral metabolism in a mouse model of Alzheimer's disease characterized by two-photon fluorescence lifetime microscopy of intrinsic NADH. Neurophotonics, 2018, 5, 1.	1.7	16
45	Characterization of continuous wave ultrasound for acousto-optic modulated diffuse correlation spectroscopy (AOM-DCS). Biomedical Optics Express, 2020, 11, 3071.	1.5	14
46	The mass transfer coefficient for oxygen transport from blood to tissue in cerebral cortex. Journal of Cerebral Blood Flow and Metabolism, 2020, 40, 1634-1646.	2.4	13
47	Intracranial pressure spikes trigger spreading depolarizations. Brain, 2022, 145, 194-207.	3.7	13
48	Atherosclerosis is associated with a decrease in cerebral microvascular blood flow and tissue oxygenation. PLoS ONE, 2019, 14, e0221547.	1.1	12
49	Dependence of the MR signal on the magnetic susceptibility of blood studied with models based on real microvascular networks. Magnetic Resonance in Medicine, 2019, 81, 3865-3874.	1.9	12
50	Model-based inference from microvascular measurements: Combining experimental measurements and model predictions using a Bayesian probabilistic approach. Microcirculation, 2017, 24, e12343.	1.0	8
51	cGMP-dependent protein kinase I in vascular smooth muscle cells improves ischemic stroke outcome in mice. Journal of Cerebral Blood Flow and Metabolism, 2019, 39, 2379-2391.	2.4	8
52	Peri-Infarct Hot-Zones Have Higher Susceptibility to Optogenetic Functional Activation-Induced Spreading Depolarizations. Stroke, 2020, 51, 2526-2535.	1.0	7
53	Anatomical Modeling of Brain Vasculature in Two-Photon Microscopy by Generalizable Deep Learning. BME Frontiers, 2020, 2020, .	2.2	7
54	Rapid hematoma growth triggers spreading depolarizations in experimental intracortical hemorrhage. Journal of Cerebral Blood Flow and Metabolism, 2021, 41, 1264-1276.	2.4	6

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55	A suite of neurophotonic tools to underpin the contribution of internal brain states in fMRI. <i>Current Opinion in Biomedical Engineering</i> , 2021, 18, 100273.	1.8	6
56	Two-photon phosphorescence lifetime microscopy of retinal capillary plexus oxygenation in mice. <i>Journal of Biomedical Optics</i> , 2018, 23, 1.	1.4	6
57	Quantification of Capillary Perfusion in an Animal Model of Acute Intracranial Hypertension. <i>Journal of Neurotrauma</i> , 2021, 38, 446-454.	1.7	5
58	Cortical Spreading Depolarizations in a Mouse Model of Subarachnoid Hemorrhage. <i>Neurocritical Care</i> , 2022, 37, 123-132.	1.2	5
59	CADASIL mutations sensitize the brain to ischemia via spreading depolarizations and abnormal extracellular potassium homeostasis. <i>Journal of Clinical Investigation</i> , 2022, 132, .	3.9	5
60	Spatially resolved estimation of metabolic oxygen consumption from optical measurements in cortex. <i>Neurophotonics</i> , 2020, 7, 035005.	1.7	4
61	Quantitation of cerebral oxygen tension using phasor analysis and phosphorescence lifetime imaging microscopy (PLIM). <i>Biomedical Optics Express</i> , 2021, 12, 4192.	1.5	2
62	At Long Last, PAT Hats for the Lab Rats. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2015, 35, 1223-1223.	2.4	1
63	Focal Subcortical White Matter Lesions Disrupt Resting State Cortical Interhemispheric Functional Connectivity in Mice. <i>Cerebral Cortex</i> , 2021, 31, 4958-4969.	1.6	1
64	Rho-Kinase Inhibition Improves the Outcome of Focal Subcortical White Matter Lesions. <i>Stroke</i> , 2022, 53, 2369-2376.	1.0	1
65	Recent advances in Cr: Colquiriite laser technology. , 2009, , .		0
66	Quantifying Intestinal Capillary Oxygenation Using Two-photon Phosphorescence Lifetime Microscopy. <i>FASEB Journal</i> , 2021, 35, .	0.2	0
67	The Problem of Estimating Tissue Perfusion from Observations of Microvascular Flow. <i>FASEB Journal</i> , 2020, 34, 1-1.	0.2	0
68	Fourier-Based Quantification of Cerebral Oxygen Pressure Using Phosphorescence Lifetime Microscopy. , 2021, , .		0
69	Long-Term Monitoring of Capillary Flow to Measure Hypoxic Effects of Capillary Flow Disruptions. , 2020, , .		0
70	Effects of voluntary exercise on cerebral microcirculation and oxygenation in aged mice. , 2022, , .		0