Keith St Lawrence

List of Publications by Year
in descending order

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64 papers	1,502 citations	236612 25 h-index	360668 35 g-index
64 all docs	64 docs citations	64 times ranked	1143 citing authors

#	Article	IF	Citations
1	Calibration of diffuse correlation spectroscopy with a time-resolved near-infrared technique to yield absolute cerebral blood flow measurements. Biomedical Optics Express, 2011, 2, 2068.	1.5	103
2	Quantifying the cerebral metabolic rate of oxygen by combining diffuse correlation spectroscopy and time-resolved near-infrared spectroscopy. Journal of Biomedical Optics, 2013, 18, 027007.	1.4	58
3	Comparison of time-resolved and continuous-wave near-infrared techniques for measuring cerebral blood flow in piglets. Journal of Biomedical Optics, 2010, 15, 057004.	1.4	56
4	Near-infrared spectroscopy measurements of cerebral blood flow and oxygen consumption following hypoxia-ischemia in newborn piglets. Journal of Applied Physiology, 2006, 100, 850-857.	1.2	51
5	Evidence against pain specificity in the dorsal posterior insula. F1000Research, 2015, 4, 362.	0.8	51
6	Assessment of a multi-layered diffuse correlation spectroscopy method for monitoring cerebral blood flow in adults. Biomedical Optics Express, 2016, 7, 3659.	1.5	47
7	Measurement of Cerebral Oxidative Metabolism with Near-Infrared Spectroscopy: A Validation Study. Journal of Cerebral Blood Flow and Metabolism, 2006, 26, 722-730.	2.4	44
8	Broadband continuous-wave technique to measure baseline values and changes in the tissue chromophore concentrations. Biomedical Optics Express, 2012, 3, 2761.	1.5	44
9	Direct assessment of extracerebral signal contamination on optical measurements of cerebral blood flow, oxygenation, and metabolism. Neurophotonics, 2020, 7, 045002.	1.7	44
10	Single-session communication with a locked-in patient by functional near-infrared spectroscopy. Neurophotonics, 2017, 4, 1.	1.7	42
11	Noninvasive continuous optical monitoring of absolute cerebral blood flow in critically ill adults. Neurophotonics, 2018, 5, 1.	1.7	42
12	Development of a combined broadband near-infrared and diffusion correlation system for monitoring cerebral blood flow and oxidative metabolism in preterm infants. Biomedical Optics Express, 2015, 6, 3907.	1.5	40
13	Simultaneous monitoring of cerebral perfusion and cytochrome c oxidase by combining broadband near-infrared spectroscopy and diffuse correlation spectroscopy. Biomedical Optics Express, 2018, 9, 2588.	1.5	39
14	Detection of Brain Hypoxia Based on Noninvasive Optical Monitoring of Cerebral Blood Flow with Diffuse Correlation Spectroscopy. Neurocritical Care, 2019, 30, 72-80.	1.2	39
15	Quantification of cerebral blood flow in adults by contrast-enhanced near-infrared spectroscopy: Validation against MRI. Journal of Cerebral Blood Flow and Metabolism, 2020, 40, 1672-1684.	2.4	38
16	Can time-resolved NIRS provide the sensitivity to detect brain activity during motor imagery consistently?. Biomedical Optics Express, 2017, 8, 2162.	1.5	35
17	Assessment of the best flow model to characterize diffuse correlation spectroscopy data acquired directly on the brain. Biomedical Optics Express, 2015, 6, 4288.	1.5	34
18	Measurement of the optical properties of a two-layer model of the human head using broadband near-infrared spectroscopy. Applied Optics, 2010, 49, 6324.	2.1	32

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19	Subtraction-based approach for enhancing the depth sensitivity of time-resolved NIRS. Biomedical Optics Express, 2016, 7, 4514.	1.5	32
20	A Noninvasive Method for Quantifying Cerebral Blood Flow by Hybrid PET/MRI. Journal of Nuclear Medicine, 2018, 59, 1329-1334.	2.8	32
21	Assessing Time-Resolved fNIRS for Brain-Computer Interface Applications of Mental Communication. Frontiers in Neuroscience, 2020, 14, 105.	1.4	31
22	Deconvolution method for recovering the photon time-of-flight distribution from time-resolved measurements. Optics Letters, 2012, 37, 2358.	1.7	30
23	Variance of time-of-flight distribution is sensitive to cerebral blood flow as demonstrated by ICG bolus-tracking measurements in adult pigs. Biomedical Optics Express, 2013, 4, 206.	1.5	30
24	Preservation of the metabolic rate of oxygen in preterm infants during indomethacin therapy for closure of the ductus arteriosus. Pediatric Research, 2013, 73, 713-718.	1.1	27
25	Quantifying cerebral blood flow in an adult pig ischemia model by a depth-resolved dynamic contrast-enhanced optical method. NeuroImage, 2014, 94, 303-311.	2.1	27
26	Quantification of blood-brain barrier permeability by dynamic contrast-enhanced NIRS. Scientific Reports, 2017, 7, 1702.	1.6	26
27	Characterizing dynamic cerebral vascular reactivity using a hybrid system combining time-resolved near-infrared and diffuse correlation spectroscopy. Biomedical Optics Express, 2020, 11, 4571.	1.5	26
28	Optical monitoring of cerebral perfusion and metabolism in adults during cardiac surgery with cardiopulmonary bypass. Biomedical Optics Express, 2020, 11, 5967.	1.5	25
29	A broadband continuous-wave multichannel near-infrared system for measuring regional cerebral blood flow and oxygen consumption in newborn piglets. Review of Scientific Instruments, 2009, 80, 054302.	0.6	24
30	Time-resolved subtraction method for measuring optical properties of turbid media. Applied Optics, 2016, 55, 1507.	2.1	24
31	Using near-infrared spectroscopy to measure cerebral metabolic rate of oxygen under multiple levels of arterial oxygenation in piglets. Journal of Applied Physiology, 2010, 109, 878-885.	1.2	23
32	Improved light collection and wavelet de-noising enable quantification of cerebral blood flow and oxygen metabolism by a low-cost, off-the-shelf spectrometer. Journal of Biomedical Optics, 2014, 19, 057007.	1.4	22
33	Structural and Functional Brain Changes at Early and Late Stages of Complex Regional Pain Syndrome. Journal of Pain, 2018, 19, 146-157.	0.7	22
34	The Potential Role of fNIRS in Evaluating Levels of Consciousness. Frontiers in Human Neuroscience, 2021, 15, 703405.	1.0	22
35	Perfusion and Metabolic Neuromonitoring during Ventricular Taps in Infants with Post-Hemorrhagic Ventricular Dilatation. Brain Sciences, 2020, 10, 452.	1.1	20
36	Multimodal Neuroimaging Approach to Variability of Functional Connectivity in Disorders of Consciousness: A PET/MRI Pilot Study. Frontiers in Neurology, 2018, 9, 861.	1.1	19

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37	Continuous monitoring of absolute cerebral blood flow by near-infrared spectroscopy during global and focal temporary vessel occlusion. Journal of Applied Physiology, 2011, 110, 1691-1698.	1.2	18
38	Using fMRI to investigate the potential cause of inverse oxygenation reported in fNIRS studies of motor imagery. Neuroscience Letters, 2020, 714, 134607.	1.0	16
39	Monitoring brain temperature by time-resolved near-infrared spectroscopy: pilot study. Journal of Biomedical Optics, 2014, 19, 057005.	1.4	15
40	Evaluation of hyperspectral NIRS for quantitative measurements of tissue oxygen saturation by comparison to time-resolved NIRS. Biomedical Optics Express, 2019, 10, 4789.	1.5	15
41	Development of a stand-alone DCS system for monitoring absolute cerebral blood flow. Biomedical Optics Express, 2019, 10, 4607.	1.5	13
42	Investigating the effects of cerebrospinal fluid removal on cerebral blood flow and oxidative metabolism in infants with post-hemorrhagic ventricular dilatation. Pediatric Research, 2017, 82, 634-641.	1.1	12
43	Assessing cerebral blood flow, oxygenation and cytochrome c oxidase stability in preterm infants during the first 3Âdays after birth. Scientific Reports, 2022, 12, 181.	1.6	11
44	Prolonged In Vivo Retention of a Cathepsin D Targeted Optical Contrast Agent in a Mouse Model of Alzheimerâ€™s Disease. Journal of Alzheimer's Disease, 2015, 48, 73-87.	1.2	10
45	Preliminary evaluation of MRI-derived input function for quantitative measurement of glucose metabolism in an integrated PET-MRI. EJNMMI Physics, 2015, 2, A80.	1.3	9
46	Sensitivity of Arterial Spin Labeling for Characterization of Longitudinal Perfusion Changes in Frontotemporal Dementia and Related Disorders. NeuroImage: Clinical, 2022, 35, 102853.	1.4	9
47	A Noninvasive Method for Quantifying Cerebral Metabolic Rate of Oxygen by Hybrid PET/MRI: Validation in a Porcine Model. Journal of Nuclear Medicine, 2021, 62, 1789-1796.	2.8	8
48	Coupling of cerebral blood flow and oxygen consumption during hypothermia in newborn piglets as measured by time-resolved near-infrared spectroscopy: a pilot study. Neurophotonics, 2015, 2, 035006.	1.7	7
49	Joint blood flow is more sensitive to inflammatory arthritis than oxyhemoglobin, deoxyhemoglobin, and oxygen saturation. Biomedical Optics Express, 2016, 7, 3843.	1.5	7
50	Assessing the feasibility of time-resolved fNIRS to detect brain activity during motor imagery. , 2016, , .		7
51	Broadband NIRS Cerebral Cytochrome-C-Oxidase Response to Anoxia Before and After Hypoxic-Ischaemic Injury in Piglets. Advances in Experimental Medicine and Biology, 2018, 1072, 151-156.	0.8	7
52	Incorporating early and late-arriving photons to improve the reconstruction of cerebral hemodynamic responses acquired by time-resolved near-infrared spectroscopy. Journal of Biomedical Optics, 2021, 26, .	1.4	6
53	Concordance of regional hypoperfusion by pCASL MRI and 15O-water PET in frontotemporal dementia: Is pCASL an efficacious alternative?. NeuroImage: Clinical, 2022, 33, 102950.	1.4	6
54	Bolus tracking with nanofilter-based multispectral videography for capturing microvasculature hemodynamics. Scientific Reports, 2015, 4, 4737.	1.6	5

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55	A non-invasive reference-based method for imaging the cerebral metabolic rate of oxygen by PET/MR: theory and error analysis. Physics in Medicine and Biology, 2021, 66, 065009.	1.6	5
56	Dynamic tracking of microvascular hemoglobin content for continuous perfusion monitoring in the intensive care unit: pilot feasibility study. Journal of Clinical Monitoring and Computing, 2021, 35, 1453-1465.	0.7	4
57	Dynamic response of cerebral blood flow to insulin-induced hypoglycemia. Scientific Reports, 2020, 10, 21300.	1.6	3
58	Multimodal Measurements of Brain Tissue Metabolism and Perfusion in a Neonatal Model of Hypoxic-Ischaemic Injury. Advances in Experimental Medicine and Biology, 2021, 1269, 203-208.	0.8	2
59	Quantification of Cerebral Blood Flow in Adults by Dynamic Contrast-Enhanced NIRS: Validation against MRI. , 2018, , .		2
60	Validation protocol for current good manufacturing practices production of [15O]water for hybrid PET/MR studies. Nuclear Medicine Communications, 2020, 41, 1100-1105.	0.5	2
61	Noninvasive Quantification of Cerebral Blood Flow Using Hybrid <scp>PET</scp>/<scp>MR</scp> Imaging to Extract the [<scp>¹⁵O</scp>]<scp>H₂O</scp> Imageâ€Derived Input Function Free of Partial Volume Errors. Journal of Magnetic Resonance Imaging, 2022, 56, 1243-1255.	1.9	2
62	Simultaneous Monitoring of the Cerebral and Skeletomuscular Microcirculation using Hyperspectral Near Infrared Spectroscopy and Intravital Video Microscopy. FASEB Journal, 2021, 35, .	0.2	0
63	Hybrid hsNIRS/DCS system for assessing cerebral blood flow and cytochrome c oxidase stability in preterm infants. , 2022, , .		0
64	Assessing the sensitivity of multi-distance hsNIRS for measuring changes in oxCCO in the brain. , 2022, , .		0