Hanli Liu

List of Publications by Year
in descending order

130	3,178	136950	197818
papers	citations	32 h-index	49 g-index

134	134	134	3120
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Interplay between up-regulation of cytochrome-c-oxidase and hemoglobin oxygenation induced by near-infrared laser. Scientific Reports, 2016, 6, 30540.	3.3	144
2	Up-regulation of cerebral cytochrome-c-oxidase and hemodynamics by transcranial infrared laser stimulation: A broadband near-infrared spectroscopy study. Journal of Cerebral Blood Flow and Metabolism, 2017, 37, 3789-3802.	4.3	133
3	Transcranial laser stimulation improves human cerebral oxygenation. Lasers in Surgery and Medicine, 2016, 48, 343-349.	2.1	116
4	Noninvasive investigation of blood oxygenation dynamics of tumors by near-infrared spectroscopy. Applied Optics, 2000, 39, 5231.	2.1	114
5	Determination of reduced scattering coefficient of biological tissue from a needle-like probe. Optics Express, 2005, 13, 4828.	3.4	104
6	Comparison of neural correlates of risk decision making between genders: An exploratory fNIRS study of the Balloon Analogue Risk Task (BART). NeuroImage, 2012, 62, 1896-1911.	4.2	103
7	Wavelet coherence analysis of dynamic cerebral autoregulation in neonatal hypoxicâ€“ischemic encephalopathy. NeuroImage: Clinical, 2016, 11, 124-132.	2.7	94
8	Testâ€“retest assessment of independent component analysis-derived resting-state functional connectivity based on functional near-infrared spectroscopy. NeuroImage, 2011, 55, 607-615.	4.2	87
9	Interplay of tumor vascular oxygenation and tumor pO[sub 2] observed using near-infrared spectroscopy, an oxygen needle electrode, and [sup 19]F MR pO[sub 2] mapping. Journal of Biomedical Optics, 2003, 8, 53.	2.6	70
10	Tumour oxygen dynamics measured simultaneously by near-infrared spectroscopy and19F magnetic resonance imaging in rats. Physics in Medicine and Biology, 2006, 51, 45-60.	3.0	68
11	Extinction coefficients of hemoglobin for near-infrared spectroscopy of tissue. IEEE Engineering in Medicine and Biology Magazine, 2005, 24, 118-121.	0.8	64
12	Using simultaneous repetitive Transcranial Magnetic Stimulation/functional Near Infrared Spectroscopy (rTMS/fNIRS) to measure brain activation and connectivity. NeuroImage, 2009, 47, 1177-1184.	4.2	61
13	Tutorial on use of intraclass correlation coefficients for assessing intertest reliability and its application in functional near-infrared spectroscopyâ€“based brain imaging. Journal of Biomedical Optics, 2015, 20, 050801.	2.6	59
14	Development of a compensation algorithm for accurate depth localization in diffuse optical tomography. Optics Letters, 2010, 35, 429.	3.3	58
15	Sparsity enhanced spatial resolution and depth localization in diffuse optical tomography. Biomedical Optics Express, 2012, 3, 943.	2.9	52
16	Prefrontal responses to digit span memory phases in patients with post-traumatic stress disorder (PTSD): A functional near infrared spectroscopy study. NeuroImage: Clinical, 2014, 4, 808-819.	2.7	52
17	Impact of heat on metabolic and hemodynamic changes in transcranial infrared laser stimulation measured by broadband near-infrared spectroscopy. Neurophotonics, 2017, 5, 1.	3.3	52
18	Auto-fluorescence lifetime and light reflectance spectroscopy for breast cancer diagnosis: potential tools for intraoperative margin detection. Biomedical Optics Express, 2012, 3, 1825.	2.9	49

#	Article	IF	Citations
19	Resting-state functional connectivity assessed with two diffuse optical tomographic systems. Journal of Biomedical Optics, 2011, 16, 046006.	2.6	45
20	Exploring brain functional connectivity in rest and sleep states: a fNIRS study. Scientific Reports, 2018, 8, 16144.	3.3	45
21	Dynamic response of breast tumor oxygenation to hyperoxic respiratory challenge monitored with three oxygen-sensitive parameters. Applied Optics, 2003, 42, 2960.	2.1	44
22	Enhanced Functional Brain Imaging by Using Adaptive Filtering and a Depth Compensation Algorithm in Diffuse Optical Tomography. IEEE Transactions on Medical Imaging, 2011, 30, 1239-1251.	8.9	44
23	Depth-compensated diffuse optical tomography enhanced by general linear model analysis and an anatomical atlas of human head. NeuroImage, 2014, 85, 166-180.	4.2	43
24	Comprehensive investigation of three-dimensional diffuse optical tomography with depth compensation algorithm. Journal of Biomedical Optics, 2010, 15, 046005.	2.6	42
25	A stereotactic near-infrared probe for localization during functional neurosurgical procedures: further experience. Journal of Neurosurgery, 2009, 110, 263-273.	1.6	41
26	Cognitive Enhancement by Transcranial Photobiomodulation Is Associated With Cerebrovascular Oxygenation of the Prefrontal Cortex. Frontiers in Neuroscience, 2019, 13, 1129.	2.8	40
27	Transcranial photobiomodulation with 1064-nm laser modulates brain electroencephalogram rhythms. Neurophotonics, 2019, 6, 1.	3.3	40
28	Dynamic functional connectivity revealed by resting-state functional near-infrared spectroscopy. Biomedical Optics Express, 2015, 6, 2337.	2.9	39
29	Look-Ahead Distance of a fiber probe used to assist neurosurgery: Phantom and Monte Carlo study. Optics Express, 2003, 11, 1844.	3.4	38
30	Quantification of functional near infraredâ€¨spectroscopy to assess cortical reorganization â€¨in children with cerebral palsy. Optics Express, 2010, 18, 25973.	3.4	37
31	An fNIRS investigation of associative recognition in the prefrontal cortex with a rapid event-related design. Journal of Neuroscience Methods, 2014, 235, 308-315.	2.5	37
32	Transcranial Photobiomodulation (tPBM) With 1,064â€nm Laser to Improve Cerebral Metabolism of the Human Brain In Vivo. Lasers in Surgery and Medicine, 2020, 52, 807-813.	2.1	34
33	Use of an intracranial near-infrared probe for localization during stereotactic surgery for movement disorders. Journal of Neurosurgery, 2000, 93, 498-505.	1.6	33
34	An effective classification procedure for diagnosis of prostate cancer in near infrared spectra. Expert Systems With Applications, 2010, 37, 3863-3869.	7.6	33
35	Test-retest assessment of cortical activation induced by repetitive transcranial magnetic stimulation with brain atlas-guided optical topography. Journal of Biomedical Optics, 2012, 17, 116020.	2.6	32
36	Prefrontal responses to Stroop tasks in subjects with post-traumatic stress disorder assessed by functional near infrared spectroscopy. Scientific Reports, 2016, 6, 30157.	3.3	32

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37	A cost-efficient frequency-domain photoacoustic imaging system. American Journal of Physics, 2013, 81, 712-717.	0.7	31
38	Evaluation of cortical plasticity in children with cerebral palsy undergoing constraint-induced movement therapy based on functional near-infrared spectroscopy. Journal of Biomedical Optics, 2015, 20, 046009.	2.6	31
39	Multiregional functional near-infrared spectroscopy reveals globally symmetrical and frequency-specific patterns of superficial interference. Biomedical Optics Express, 2015, 6, 2786.	2.9	31
40	Investigation of the prefrontal cortex in response to duration-variable anagram tasks using functional near-infrared spectroscopy. Journal of Biomedical Optics, 2009, 14, 054016.	2.6	28
41	Anticipatory alpha oscillation predicts attentional selection and hemodynamic response. Human Brain Mapping, 2019, 40, 3606-3619.	3.6	28
42	Cortical activity in fineâ€motor tasks in children with Developmental Coordination Disorder: A preliminary fNIRS study. International Journal of Developmental Neuroscience, 2018, 65, 83-90.	1.6	27
43	Transcranial photobiomodulation and thermal stimulation induce distinct topographies of EEG alpha and beta power changes in healthy humans. Scientific Reports, 2021, 11, 18917.	3.3	26
44	Near-Infrared Spectroscopy and Imaging of Tumor Vascular Oxygenation. Methods in Enzymology, 2004, 386, 349-378.	1.0	24
45	Impairment of cerebral autoregulation in pediatric extracorporeal membrane oxygenation associated with neuroimaging abnormalities. Neurophotonics, 2017, 4, 1.	3.3	23
46	Embolic middle cerebral artery occlusion model using thrombin and fibrinogen composed clots in rat. Journal of Neuroscience Methods, 2012, 211, 296-304.	2.5	22
47	Determination of Hemoglobin Oxygen Saturation from Turbid Media Using Reflectance Spectroscopy with Small Source-Detector Separations. Applied Spectroscopy, 2001, 55, 1686-1694.	2.2	21
48	Atlas-guided volumetric diffuse optical tomography enhanced by generalized linear model analysis to image risk decision-making responses in young adults. Human Brain Mapping, 2014, 35, 4249-4266.	3.6	21
49	Are there gender differences in young vs. aging brains under risk decision-making? An optical brain imaging study. Brain Imaging and Behavior, 2017, 11, 1085-1098.	2.1	21
50	Transcranial photobiomodulation-induced changes in human brain functional connectivity and network metrics mapped by whole-head functional near-infrared spectroscopy in vivo. Biomedical Optics Express, 2020, 11, 5783.	2.9	21
51	Directional changes in information flow between human brain cortical regions after application of anodal transcranial direct current stimulation (tDCS) over Brocaâ€™s area. Biomedical Optics Express, 2018, 9, 5296.	2.9	21
52	Algorithmic depth compensation improves quantification and noise suppression in functional diffuse optical tomography. Biomedical Optics Express, 2010, 1, 441.	2.9	20
53	Prostate cancer detection using combined auto-fluorescence and light reflectance spectroscopy: ex vivo study of human prostates. Biomedical Optics Express, 2014, 5, 1512.	2.9	19
54	Effect of Photothermal Therapy on Breast Tumor Vascular Contents: Noninvasive Monitoring by Near-infrared SpectroscopyÂ¶. Photochemistry and Photobiology, 2005, 81, 1002.	2.5	19

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55	Hierarchical Clustering Method to Improve Transrectal Ultrasound-guided Diffuse Optical Tomography for Prostate Cancer Imaging. Academic Radiology, 2014, 21, 250-262.	2.5	18
56	On the optimization of imaging protocol for the mapping of cerebrovascular reactivity. Journal of Magnetic Resonance Imaging, 2016, 43, 661-668.	3.4	17
57	Mapping cortical network effects of fatigue during a handgrip task by functional near-infrared spectroscopy in physically active and inactive subjects. Neurophotonics, 2019, 6, 1.	3.3	17
58	Photobiomodulation at Different Wavelengths Boosts Mitochondrial Redox Metabolism and Hemoglobin Oxygenation: Lasers vs. Light-Emitting Diodes In Vivo. Metabolites, 2022, 12, 103.	2.9	17
59	Unified analysis of the sensitivities of reflectance and path length to scattering variations in a diffusive medium. Applied Optics, 2001, 40, 1742.	2.1	16
60	Quantification of light reflectance spectroscopy and its application: Determination of hemodynamics on the rat spinal cord and brain induced by electrical stimulation. NeuroImage, 2011, 56, 1316-1328.	4.2	16
61	Prefrontal hemodynamic mapping by functional near-infrared spectroscopy in response to thermal stimulations over three body sites. Neurophotonics, 2016, 3, 045008.	3.3	16
62	Light scattering from rat nervous system measured intraoperatively by near-infrared reflectance spectroscopy. Journal of Biomedical Optics, 2005, 10, 051405.	2.6	15
63	Predicting N2pc from anticipatory HbO activity during sustained visuospatial attention: A concurrent fNIRSâ€“ERP study. NeuroImage, 2015, 113, 225-234.	4.2	15
64	Dimensionality Reduction Based Optimization Algorithm for Sparse 3-D Image Reconstruction in Diffuse Optical Tomography. Scientific Reports, 2016, 6, 22242.	3.3	15
65	Concurrent measurement of skeletal muscle blood flow during exercise with diffuse correlation spectroscopy and Doppler ultrasound. Biomedical Optics Express, 2018, 9, 131.	2.9	15
66	Interleaved imaging of cerebral hemodynamics and blood flow index to monitor ischemic stroke and treatment in rat by volumetric diffuse optical tomography. NeuroImage, 2014, 85, 566-582.	4.2	14
67	Estimated fraction of tumor vascular blood contents sampled by near infrared spectroscopy and ^19F magnetic resonance spectroscopy. Optics Express, 2005, 13, 1724.	3.4	13
68	A globally convergent numerical method for an inverse elliptic problem of optical tomography. Applicable Analysis, 2010, 89, 861-891.	1.3	13
69	Light Reflectance Spectroscopy to Detect Positive Surgical Margins on Prostate Cancer Specimens. Journal of Urology, 2016, 195, 479-484.	0.4	13
70	Differences in Net Information Flow and Dynamic Connectivity Metrics Between Physically Active and Inactive Subjects Measured by Functional Near-Infrared Spectroscopy (fNIRS) During a Fatiguing Handgrip Task. Frontiers in Neuroscience, 2020, 14, 167.	2.8	13
71	Whole-cortical graphical networks at wakeful rest in young and older adults revealed by functional near-infrared spectroscopy. Neurophotonics, 2018, 5, 1.	3.3	13
72	Wavelet-based neurovascular coupling can predict brain abnormalities in neonatal encephalopathy. NeuroImage: Clinical, 2021, 32, 102856.	2.7	13

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73	Noninvasive monitoring of estrogen effects against ischemic stroke in rats by near-infrared spectroscopy. Applied Optics, 2007, 46, 8315.	2.1	12
74	Near infrared and visible spectroscopic measurements to detect changes in light scattering and hemoglobin oxygen saturation from rat spinal cord during peripheral stimulationâ˜†. NeuroImage, 2008, 40, 217-227.	4.2	12
75	Investigation of rat breast tumour oxygen consumption by near-infrared spectroscopy. Journal Physics D: Applied Physics, 2005, 38, 2682-2690.	2.8	11
76	Learning Hemodynamic Effect of Transcranial Infrared Laser Stimulation Using Longitudinal Data Analysis. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 1772-1779.	6.3	11
77	Modulating the resting-state functional connectivity patterns of language processing areas in the human brain with anodal transcranial direct current stimulation applied over the Brocaâ€™s area. Neurophotonics, 2018, 5, 1.	3.3	11
78	EasyTopo: A toolbox for rapid diffuse optical topography based on a standard template of brain atlas. Proceedings of SPIE, 2013, , .	0.8	10
79	Automated voxel classification used with atlas-guided diffuse optical tomography for assessment of functional brain networks in young and older adults. Neurophotonics, 2016, 3, 045002.	3.3	10
80	Metabolic Connectivity and Hemodynamic-Metabolic Coherence of Human Prefrontal Cortex at Rest and Post Photobiomodulation Assessed by Dual-Channel Broadband NIRS. Metabolites, 2022, 12, 42.	2.9	10
81	Hemodynamic and Light-Scattering Changes of Rat Spinal Cord and Primary Somatosensory Cortex in Response to Innocuous and Noxious Stimuli. Brain Sciences, 2015, 5, 400-418.	2.3	9
82	Simultaneous multiâ€slice (SMS) acquisition enhances the sensitivity of hemodynamic mapping using gas challenges. NMR in Biomedicine, 2016, 29, 1511-1518.	2.8	9
83	Neurovascular coupling (NVC) in newborns using processed EEG versus amplitude-EEG. Scientific Reports, 2021, 11, 9426.	3.3	9
84	Combination of Group Singular Value Decomposition and eLORETA Identifies Human EEG Networks and Responses to Transcranial Photobiomodulation. Frontiers in Human Neuroscience, 2022, 16, .	2.0	9
85	Experimental validation of a backpropagation algorithm for three-dimensional breast tumor localization. IEEE Journal of Selected Topics in Quantum Electronics, 1999, 5, 1049-1057.	2.9	8
86	A DUAL-MODALITY OPTICAL BIOPSY APPROACH FOR IN VIVO DETECTION OF PROSTATE CANCER IN RAT MODEL. Journal of Innovative Optical Health Sciences, 2011, 04, 269-277.	1.0	8
87	Detecting positive surgical margins: utilisation of lightâ€reflectance spectroscopy on ex vivo prostate specimens. BJU International, 2016, 118, 885-889.	2.5	8
88	Elevated cranial ultrasound resistive indices are associated with improved neurodevelopmental outcomes one year after pediatric cardiac surgery: A single center pilot study. Heart and Lung: Journal of Acute and Critical Care, 2017, 46, 251-257.	1.6	8
89	EEG Spectral Power: A Proposed Physiological Biomarker to Classify the Hypoxic-Ischemic Encephalopathy Severity in Real Time. Pediatric Neurology, 2021, 122, 7-14.	2.1	8
90	Detection of degeneration in rat sciatic nerve by in vivo near infrared spectroscopy. Brain Research Protocols, 2005, 14, 119-125.	1.6	7

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91	Cerebrovascular responses of the rat brain to noxious stimuli as examined by functional near-infrared whole brain imaging. Journal of Neurophysiology, 2012, 107, 2853-2865.	1.8	6
92	Quantification and normalization of noise variance with sparsity regularization to enhance diffuse optical tomography. Biomedical Optics Express, 2015, 6, 2961.	2.9	6
93	Alterted Adipogenesis of Human Mesenchymal Stem Cells by Photobiomodulation Using 1064â€‰nm Laser Light. Lasers in Surgery and Medicine, 2021, 53, 263-274.	2.1	6
94	Alterations of Cerebral Hemodynamics and Network Properties Induced by Newsvendor Problem in the Human Prefrontal Cortex. Frontiers in Human Neuroscience, 2020, 14, 598502.	2.0	6
95	EEG phase-amplitude coupling to stratify encephalopathy severity in the developing brain. Computer Methods and Programs in Biomedicine, 2022, 214, 106593.	4.7	6
96	Enhancement of Frequency-Specific Hemodynamic Power and Functional Connectivity by Transcranial Photobiomodulation in Healthy Humans. Frontiers in Neuroscience, 0, 16, .	2.8	6
97	Effect of Photothermal Therapy on Breast Tumor Vascular Contents: Noninvasive Monitoring by Nearâ€infrared Spectroscopy^{Â¶}. Photochemistry and Photobiology, 2005, 81, 1002-1009.	2.5	5
98	Characterization of the functional nearâ€infrared spectroscopy response to nociception in a pediatric population. Paediatric Anaesthesia, 2018, 28, 103-111.	1.1	5
99	Regional heterogeneity of cerebral hemodynamics in mild neonatal encephalopathy measured with multichannel near-infrared spectroscopy. Pediatric Research, 2021, 89, 882-888.	2.3	5
100	Limited possibility for quantifying mean particle size by logarithmic light-scattering spectroscopy. Applied Optics, 2003, 42, 2968.	2.1	4
101	Investigation of bi-phasic tumor oxygen dynamics induced by hyperoxic gas intervention: A numerical study. Optics Express, 2005, 13, 4465.	3.4	4
102	Simultaneous absolute measures of glabrous skin hemodynamic and light-scattering change in response to formalin injection in rats. Neuroscience Letters, 2011, 492, 59-63.	2.1	4
103	A Preliminary Investigation of Human Frontal Cortex Under Noxious Thermal Stimulation Over the Temporomandibular Joint Using Functional Near Infrared Spectroscopy. Journal of Applied Biobehavioral Research, 2013, 18, 134-155.	2.0	4
104	Application of Near Infrared Multi-spectral CCD Imager to Determine the Hemodynamic Changes in Prostate Tumor. , 2006, , .		4
105	Influence of the Signal-To-Noise Ratio on Variance of Chromophore Concentration Quantification in Broadband Near-Infrared Spectroscopy. Frontiers in Photonics, 0, 3, .	2.4	4
106	Preclinical studies of transcranial photobiomodulation in the neurological diseases. Translational Biophotonics, 2021, 3, e202000024.	2.7	3
107	Feasibility of EEG Phase-Amplitude Coupling to Stratify Encephalopathy Severity in Neonatal HIE Using Short Time Window. Brain Sciences, 2022, 12, 854.	2.3	3
108	Determination of hemoglobin oxygen saturation in rat sciatic nerve by in vivo near infrared spectroscopy. Brain Research, 2006, 1098, 86-93.	2.2	2

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109	A globally convergent numerical method for coefficient inverse problems for thermal tomography. Applicable Analysis, 2011, 90, 1573-1594.	1.3	2
110	Is EEG causal to fNIRs?. , 2016, , .		2
111	Commentaries on Viewpoint: Managing the power grid: How myoglobin can regulate Po2 and energy distribution in skeletal muscle. Journal of Applied Physiology, 2019, 126, 791-794.	2.5	2
112	A recursive partitioning approach for subgroup identification in brainâ€“behaviour correlation analysis. Pattern Analysis and Applications, 2020, 23, 161-177.	4.6	2
113	Correlation of NIR spectroscopy with BOLD MR imaging of assessing breast tumor vascular oxygen status. , 2004, , .		2
114	Investigation of Prefrontal Hemodynamics of PTSD Patients While Performing Stroop Task Using fNIRS. , 2014, , .		2
115	Hierarchical clustering method for improved prostate cancer imaging in diffuse optical tomography. , 2013, , .		1
116	2D diffuse optical imaging using clustered sparsity. , 2014, , .		1
117	Diffuse correlation spectroscopy (DCS) study of blood flow changes during low level laser therapy (LLLT): a preliminary report. , 2017, , .		1
118	Pilot examination of functional Near-Infrared spectroscopy (fNIRS) to quantify chemobrain.. Journal of Clinical Oncology, 2015, 33, e20680-e20680.	1.6	1
119	Investigation of breast tumor hemodynamics using tumor vascular phantoms and FEM simulations. , 2004, , .		1
120	Acute Effects of Combreatastatin A4 Phosphate on Breast Tumor Hemodynamics Monitored by Near Infrared Spectroscopy. , 2006, , .		1
121	The Scalp Confounds Near-Infrared Signal from Rat Brain Following Innocuous and Noxious Stimulation. Brain Sciences, 2015, 5, 387-399.	2.3	0
122	Correlation between total hemoglobin concentration and blood volume of breast tumors measured by NIR spectroscopy and 19F MRS of PFOB. , 2002, , .		0
123	Investigation of tumor oxygen consumption and tumor vascular oxygen dynamics in response to pharmacological interventions by NIRS. , 2002, , .		0
124	Tumor oxygen dynamics measured simultaneously by nearinfrared spectroscopy and 19F MR EPI imaging. , 2004, , .		0
125	Application of Near Infrared Spectroscopy to Study Hot Flashes in Women. , 2006, , .		0
126	Optical properties of ex-vivo prostate tissues and the design of trans-rectal ultrasound coupled optical probe. , 2014, , .		0

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127	Dependance of variance in estimation of hemoglobin concentration changes on system noise and two wavelengths chosen. , 2021, , .		0
128	Functional connectivity changes from transcranial infrared laser stimulation measured by functional near-infrared spectroscopy. , 2020, , .		0
129	Topography of alpha rhythms evoked by transcranial laser neuromodulation and thermal stimulation. , 2020, , .		0
130	Reversal of Stem Cellâ€derived Hypertrophic Adipocytes Mediated by Photobiomodulation (1064 nm). Translational Biophotonics, 0, , e202100006.	2.7	0