

# Hiroshi Kawaguchi

## List of Publications by Year in descending order

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77  
papers

827  
citations

516710

16  
h-index

552781

26  
g-index

77  
all docs

77  
docs citations

77  
times ranked

1391  
citing authors

#	ARTICLE	IF	CITATIONS
1	Reconstruction magnetic resonance neurography in chronic inflammatory demyelinating polyneuropathy. <i>Annals of Neurology</i> , 2015, 77, 333-337.	5.3	103
2	Unveiling astrocytic control of cerebral blood flow with optogenetics. <i>Scientific Reports</i> , 2015, 5, 11455.	3.3	72
3	Voxel-based analysis of the diffusion tensor. <i>Neuroradiology</i> , 2010, 52, 699-710.	2.2	59
4	Hemodynamic changes during somatosensory stimulation in awake and isoflurane-anesthetized mice measured by laser-Doppler flowmetry. <i>Brain Research</i> , 2012, 1472, 107-112.	2.2	32
5	Theoretical evaluation of accuracy in position and size of brain activity obtained by near-infrared topography. <i>Physics in Medicine and Biology</i> , 2004, 49, 2753-2765.	3.0	30
6	Long-Term Adaptation of Cerebral Hemodynamic Response to Somatosensory Stimulation during Chronic Hypoxia in Awake Mice. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2013, 33, 774-779.	4.3	30
7	Effect of probe arrangement on reproducibility of images by near-infrared topography evaluated by a virtual head phantom. <i>Applied Optics</i> , 2007, 46, 1658.	2.1	27
8	Microvascular Sprouting, Extension, and Creation of New Capillary Connections with Adaptation of the Neighboring Astrocytes in Adult Mouse Cortex under Chronic Hypoxia. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2014, 34, 325-331.	4.3	27
9	Principal Component Analysis of Multimodal Neuromelanin MRI and Dopamine Transporter PET Data Provides a Specific Metric for the Nigral Dopaminergic Neuronal Density. <i>PLoS ONE</i> , 2016, 11, e0151191.	2.5	27
10	Pial Arteries Respond Earlier than Penetrating Arterioles to Neural Activation in the Somatosensory Cortex in Awake Mice Exposed to Chronic Hypoxia: An Additional Mechanism to Proximal Integration Signaling?. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2014, 34, 1761-1770.	4.3	25
11	Measuring the Vascular Diameter of Brain Surface and Parenchymal Arteries in Awake Mouse. <i>Advances in Experimental Medicine and Biology</i> , 2013, 789, 419-425.	1.6	23
12	The influence of frontal sinus in brain activation measurements by near-infrared spectroscopy analyzed by realistic head models. <i>Biomedical Optics Express</i> , 2012, 3, 2121.	2.9	22
13	Layer-Specific Dilation of Penetrating Arteries Induced by Stimulation of the Nucleus Basalis of Meynert in the Mouse Frontal Cortex. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2013, 33, 1440-1447.	4.3	22
14	Changes in Cortical Microvasculature during Misery Perfusion Measured by Two-Photon Laser Scanning Microscopy. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2014, 34, 1363-1372.	4.3	22
15	Spatial Frequency-Based Analysis of Mean Red Blood Cell Speed in Single Microvessels: Investigation of Microvascular Perfusion in Rat Cerebral Cortex. <i>PLoS ONE</i> , 2011, 6, e24056.	2.5	22
16	Normative data of dopaminergic neurotransmission functions in substantia nigra measured with MRI and PET: Neuromelanin, dopamine synthesis, dopamine transporters, and dopamine D2 receptors. <i>NeuroImage</i> , 2017, 158, 12-17.	4.2	19
17	Comparison of diffusion-weighted MRI and anti-Stokes Raman scattering (CARS) measurements of the inter-compartmental exchange-time of water in expression-controlled aquaporin-4 cells. <i>Scientific Reports</i> , 2018, 8, 17954.	3.3	18
18	Hemodynamic changes during neural deactivation in awake mice: A measurement by laser-Doppler flowmetry in crossed cerebellar diaschisis. <i>Brain Research</i> , 2013, 1537, 350-355.	2.2	16

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19	Hyperperfusion Counteracted by Transient Rapid Vasoconstriction Followed by Long-Lasting Oligemia Induced by Cortical Spreading Depression in Anesthetized Mice. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2015, 35, 689-698.	4.3	15
20	Relation between Dopamine Synthesis Capacity and Cell-Level Structure in Human Striatum: A Multi-Modal Study with Positron Emission Tomography and Diffusion Tensor Imaging. <i>PLoS ONE</i> , 2014, 9, e87886.	2.5	15
21	Functional near-infrared-spectroscopy-based measurement of changes in cortical activity in macaques during post-infarct recovery of manual dexterity. <i>Scientific Reports</i> , 2020, 10, 6458.	3.3	13
22	Regional heterogeneity and age-related change in sub-regions of internal capsule evaluated by diffusion tensor imaging. <i>Brain Research</i> , 2010, 1354, 30-39.	2.2	12
23	In situ estimation of optical properties of rat and monkey brains using femtosecond time-resolved measurements. <i>Scientific Reports</i> , 2019, 9, 9165.	3.3	12
24	Evaluation of Rho-Kinase Activity in Mice Brain Using N-[ <sup>11</sup> C]Methyl-hydroxyfasudil with Positron Emission Tomography. <i>Molecular Imaging and Biology</i> , 2014, 16, 395-402.	2.6	11
25	Hypoxia-Induced Cerebral Angiogenesis in Mouse Cortex with Two-Photon Microscopy. <i>Advances in Experimental Medicine and Biology</i> , 2013, 789, 15-20.	1.6	11
26	Image-based vessel-by-vessel analysis for red blood cell and plasma dynamics with automatic segmentation. <i>Microvascular Research</i> , 2012, 84, 178-187.	2.5	10
27	Estimation of partial optical path length in the brain in subject-specific head models for near-infrared spectroscopy. <i>Optical Review</i> , 2016, 23, 316-322.	2.0	10
28	Cerebral hemodynamic response to acute hyperoxia in awake mice. <i>Brain Research</i> , 2014, 1557, 155-163.	2.2	9
29	Dynamic Flow Velocity Mapping from Fluorescent Dye Transit Times in the Brain Surface Microcirculation of Anesthetized Rats and Mice. <i>Microcirculation</i> , 2016, 23, 416-425.	1.8	9
30	Diffusion-tensor-based method for robust and practical estimation of axial and radial diffusional kurtosis. <i>European Radiology</i> , 2016, 26, 2559-2566.	4.5	9
31	Fluorescence Imaging of Blood Flow Velocity in the Rodent Brain. <i>Current Topics in Medicinal Chemistry</i> , 2016, 16, 2677-2684.	2.1	8
32	Validation of practical diffusion approximation for virtual near infrared spectroscopy using a digital head phantom. <i>Optical Review</i> , 2009, 16, 153-159.	2.0	7
33	Signal contributions to heavily diffusion-weighted functional magnetic resonance imaging investigated with multi-SE-EPI acquisitions. <i>NeuroImage</i> , 2014, 98, 258-265.	4.2	7
34	A proposal for PET/MRI attenuation correction with $\hat{\mu}$ -values measured using a fixed-position radiation source and MRI segmentation. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 734, 156-161.	1.6	7
35	Magnetic resonance imaging appropriate for construction of subject-specific head models for diffuse optical tomography. <i>Biomedical Optics Express</i> , 2015, 6, 3197.	2.9	7
36	Functional near-infrared spectroscopy for monitoring macaque cerebral motor activity during voluntary movements without head fixation. <i>Scientific Reports</i> , 2018, 8, 11941.	3.3	6

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37	Anatomic dependency of phase shifts in the cerebral venous system of neonates at susceptibility-weighted MRI. <i>Journal of Magnetic Resonance Imaging</i> , 2011, 34, 1031-1036.	3.4	5
38	Reproducibility of measuring cerebral blood flow by laser-Doppler flowmetry in mice. <i>Frontiers in Bioscience - Elite</i> , 2014, E6, 62-68.	1.8	5
39	Targeting brain regions of interest in functional near-infrared spectroscopy: Scalp-cortex correlation using subject-specific light propagation models. <i>Human Brain Mapping</i> , 2021, 42, 1969-1986.	3.6	5
40	Automated Image Analysis for Diameters and Branching Points of Cerebral Penetrating Arteries and Veins Captured with Two-Photon Microscopy. <i>Advances in Experimental Medicine and Biology</i> , 2014, 812, 209-215.	1.6	5
41	Hybrid segmentation-atlas method for PET-MRI attenuation correction. , 2012, , .		4
42	Changes in effective diffusivity for oxygen during neural activation and deactivation estimated from capillary diameter measured by two-photon laser microscope. <i>Journal of Physiological Sciences</i> , 2017, 67, 325-330.	2.1	4
43	Theoretical analysis of crosstalk between oxygenated and deoxygenated haemoglobin in focal brain-activation measurements by near-infrared topography. <i>Opto-electronics Review</i> , 2008, 16, .	2.4	3
44	Correlating functional near-infrared spectroscopy with underlying cortical regions of 0-, 1-, and 2-year-olds using theoretical light propagation analysis. <i>Neurophotonics</i> , 2021, 8, 025009.	3.3	3
45	Dynamic Two-Photon Imaging of Cerebral Microcirculation Using Fluorescently Labeled Red Blood Cells and Plasma. <i>Advances in Experimental Medicine and Biology</i> , 2013, 765, 163-168.	1.6	3
46	Evaluation of image reconstruction algorithm for near infrared topography by virtual head phantom. <i>Proceedings of SPIE</i> , 2007, , .	0.8	2
47	Functional near infrared spectroscopy for awake monkey to accelerate neurorehabilitation study. , 2017, , .		2
48	Visual evaluation of kinetic characteristics of PET probe for neuroreceptors using a two-phase graphic plot analysis. <i>Annals of Nuclear Medicine</i> , 2017, 31, 273-282.	2.2	2
49	Spatiotemporal dynamics of red blood cells in capillaries in layer I of the cerebral cortex and changes in arterial diameter during cortical spreading depression and response to hypercapnia in anesthetized mice. <i>Microcirculation</i> , 2019, 26, e12552.	1.8	2
50	A fNIRS probe positioning system using augmented reality technology. , 2019, , .		2
51	OUP accepted manuscript. <i>Cerebral Cortex Communications</i> , 2022, 3, tgab064.	1.6	2
52	Evaluation of spatial resolution of near-infrared topography using spatial sensitivity profile. , 2003, 5138, 249.		1
53	Phantom experiments for quantitative evaluation of topographic image by mapping algorithm. <i>Proceedings of SPIE</i> , 2011, , .	0.8	1
54	Construction of an Anatomical Neck Model for Diffuse Optical Imaging. , 2016, , .		1

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55	Exclusive detection of cerebral hemodynamics in functional near-infrared spectroscopy by reflectance modulation of the scalp surface. Journal of Biomedical Optics, 2020, 25, 1.	2.6	1
56	Improvement of near-infrared topography by optode arrangement and reconstruction algorithm using spatial sensitivity profile. , 0, , .		0
57	<title>Modeling of light distribution in the brain for topographical imaging</title>. , 2004, 5486, 1.		0
58	Image reconstruction using spatial sensitivity profile with the constraint of spatial frequency in image for near-infrared topography. , 2005, , .		0
59	Virtual Head Phantom for Evaluation of Near Infrared Topography. , 2006, , .		0
60	Segmentation of magnetic resonance images to construct human head model for diffuse optical imaging. Proceedings of SPIE, 2011, , .	0.8	0
61	A MRI-based PET attenuation correction with &#x03BC;-values measured by a fixed-position radiation source. , 2013, , .		0
62	Effect of probe arrangement on reconstruction of optical brain function imaging. , 2013, , .		0
63	Visualization of microvessels and capillary bed associated with brain activation. , 2013, , .		0
64	Technological Trend of Noninvasive Brain-Function Imaging by Near-Infrared Spectroscopy. Nippon Laser Igakkaishi, 2015, 36, 187-194.	0.0	0
65	Design and fabrication of a multi-layered solid dynamic phantom: validation platform on methods for reducing scalp-hemodynamic effect from fNIRS signal. Proceedings of SPIE, 2017, , .	0.8	0
66	Image Reconstruction Using Spatial Sensitivity Profile with the Constraint of Spatial Frequency in Image for Near-Infrared Topography. , 2005, , .		0
67	Normalized Adult Head Model for the Image Reconstruction Algorithm of NIR Topography. , 2008, , .		0
68	A Head Phantom for Use in Near Infrared Topography for Brain Function Measurements. , 2010, , .		0
69	Segmentation of magnetic resonance images to construct human head model for diffuse optical imaging. , 2011, , .		0
70	7D22 Quantitative analysis of micro vascular network structure in the cerebral cortex.. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2012, 2012.24, _7D22-1_-_7D22-2_.	0.0	0
71	Analysis of Light Propagation in a Realistic Head Model Including Frontal Sinus. , 2012, , .		0
72	Path Length Correction in Exposed-Cortex Optical Imaging using 3D Model Obtained by Two-Photon Microscopy. , 2014, , .		0

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73	Vessel Specific Imaging of Glucose Transfer with Fluorescent Glucose Analogue in Anesthetized Mouse Cortex. <i>Advances in Experimental Medicine and Biology</i> , 2014, 812, 241-246.	1.6	0
74	2F44 Development for mapping the flow velocity dynamics with fluorescent imaging techniques. The Proceedings of the Bioengineering Conference Annual Meeting of BED/JSME, 2016, 2016.28, _2F44-1_- _2F44-5_.	0.0	0
75	Estimation of functional areas probed by near-infrared spectroscopy instruments. <i>Proceedings of SPIE</i> , 2017, , .	0.8	0
76	Partial optical path length in the scalp in subject-specific head models for multi-distance probe configuration of near infrared spectroscopy. , 2018, , .		0
77	Time-domain diffuse optical tomography with lp sparsity regularization for thyroid cancer imaging. , 2019, , .		0