

Masashi Kiguchi

List of Publications by Year in descending order

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101
papers

2,698
citations

218592

26
h-index

197736

49
g-index

104
all docs

104
docs citations

104
times ranked

2389
citing authors

#	ARTICLE	IF	CITATIONS
1	A NIRS-fMRI investigation of prefrontal cortex activity during a working memory task. <i>NeuroImage</i> , 2013, 83, 158-173.	2.1	290
2	Mental stress assessment using simultaneous measurement of EEG and fNIRS. <i>Biomedical Optics Express</i> , 2016, 7, 3882.	1.5	177
3	A Communication Means for Totally Locked-in ALS Patients Based on Changes in Cerebral Blood Volume Measured with Near-Infrared Light. <i>IEICE Transactions on Information and Systems</i> , 2007, E90-D, 1028-1037.	0.4	176
4	Synchronous activity of two people's prefrontal cortices during a cooperative task measured by simultaneous near-infrared spectroscopy. <i>Journal of Biomedical Optics</i> , 2011, 16, 077011.	1.4	162
5	Quantitative evaluation of deep and shallow tissue layers' contribution to fNIRS signal using multi-distance optodes and independent component analysis. <i>NeuroImage</i> , 2014, 85, 150-165.	2.1	136
6	Practicality of wavelength selection to improve signal-to-noise ratio in near-infrared spectroscopy. <i>NeuroImage</i> , 2004, 21, 1554-1562.	2.1	118
7	Towards multilevel mental stress assessment using SVM with ECOC: an EEG approach. <i>Medical and Biological Engineering and Computing</i> , 2018, 56, 125-136.	1.6	111
8	Intersubject variability of near-infrared spectroscopy signals during sensorimotor cortex activation. <i>Journal of Biomedical Optics</i> , 2005, 10, 044001.	1.4	95
9	Assessment of mental stress effects on prefrontal cortical activities using canonical correlation analysis: an fNIRS-EEG study. <i>Biomedical Optics Express</i> , 2017, 8, 2583.	1.5	86
10	Development of wearable optical topography system for mapping the prefrontal cortex activation. <i>Review of Scientific Instruments</i> , 2009, 80, 043704.	0.6	75
11	Noninvasive imaging of prefrontal activation during attention-demanding tasks performed while walking using a wearable optical topography system. <i>Journal of Biomedical Optics</i> , 2010, 15, 046002.	1.4	65
12	Stress Assessment Based on Decision Fusion of EEG and fNIRS Signals. <i>IEEE Access</i> , 2017, 5, 19889-19896.	2.6	64
13	Mental Stress Quantification Using EEG Signals. <i>IFMBE Proceedings</i> , 2016, , 15-19.	0.2	60
14	Visualizing Hyperactivation in Neurodegeneration Based on Prefrontal Oxygenation: A Comparative Study of Mild Alzheimer's Disease, Mild Cognitive Impairment, and Healthy Controls. <i>Frontiers in Aging Neuroscience</i> , 2017, 9, 287.	1.7	57
15	Tutorial on platform for optical topography analysis tools. <i>Neurophotonics</i> , 2016, 3, 010801.	1.7	54
16	Highly efficient probe with a wedge-shaped metallic plate for high density near-field optical recording. <i>Journal of Applied Physics</i> , 2004, 95, 3901-3906.	1.1	51
17	Within-subject reproducibility of near-infrared spectroscopy signals in sensorimotor activation after 6 months. <i>Journal of Biomedical Optics</i> , 2006, 11, 014021.	1.4	51
18	Large second-harmonic generation coefficients of bis(benzylidene) cycloalkanones estimated by the second-harmonic wave generated with the evanescent wave technique. <i>Chemical Physics Letters</i> , 1996, 249, 29-34.	1.2	45

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19	Preparation, structure and discrimination of a chiral bimolecular crystal by the self-assembly of 3-indolepropionic acid and phenanthridine. <i>Tetrahedron Letters</i> , 1997, 38, 5009-5012.	0.7	45
20	Extracting task-related activation components from optical topography measurement using independent components analysis. <i>Journal of Biomedical Optics</i> , 2008, 13, 054008.	1.4	44
21	Influence of skin blood flow and source-detector distance on near-infrared spectroscopy-determined cerebral oxygenation in humans. <i>Clinical Physiology and Functional Imaging</i> , 2015, 35, 237-244.	0.5	42
22	Technique for evaluating second-order nonlinear optical materials in powder form. <i>Journal of Applied Physics</i> , 1994, 75, 4332-4339.	1.1	37
23	New method of measuring second harmonic generation efficiency using powder crystals. <i>Applied Physics Letters</i> , 1992, 60, 1933-1935.	1.5	34
24	Biofeedback-based training for stress management in daily hassles: an intervention study. <i>Brain and Behavior</i> , 2014, 4, 566-579.	1.0	33
25	Generation of phase-conjugated vector wave fronts in atomic vapors. <i>Optics Letters</i> , 1982, 7, 555.	1.7	31
26	Application of near-infrared spectroscopy to measurement of hemodynamic signals accompanying stimulated saliva secretion. <i>Journal of Biomedical Optics</i> , 2011, 16, 047002.	1.4	30
27	Note: Wearable near-infrared spectroscopy imager for haired region. <i>Review of Scientific Instruments</i> , 2012, 83, 056101.	0.6	23
28	Mental stress grading based on fNIRS signals. , 2016, 2016, 5140-5143.		23
29	Distinct Methylphenidate-Evoked Response Measured Using Functional Near-Infrared Spectroscopy During Go/No-Go Task as a Supporting Differential Diagnostic Tool Between Attention-Deficit/Hyperactivity Disorder and Autism Spectrum Disorder Comorbid Children. <i>Frontiers in Human Neuroscience</i> , 2019, 13, 7.	1.0	22
30	Comparison of light intensity on the brain surface due to laser exposure during optical topography and solar irradiation. <i>Journal of Biomedical Optics</i> , 2007, 12, 062108.	1.4	20
31	Concurrent fNIRS-fMRI measurement to validate a method for separating deep and shallow fNIRS signals by using multidistance optodes. <i>Neurophotonics</i> , 2015, 2, 015003.	1.7	19
32	Near-infrared spectroscopy determined cerebral oxygenation with eliminated skin blood flow in young males. <i>Journal of Clinical Monitoring and Computing</i> , 2016, 30, 243-250.	0.7	19
33	Simultaneous measurement of EEG-fNIRS in classifying and localizing brain activation to mental stress. , 2015, , .		18
34	Greater contribution of cerebral than extracerebral hemodynamics to near-infrared spectroscopy signals for functional activation and resting-state connectivity in infants. <i>Neurophotonics</i> , 2014, 1, 025003.	1.7	17
35	Effectiveness Evaluation of Real-Time Scalp Signal Separating Algorithm on Near-Infrared Spectroscopy Neurofeedback. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2018, 22, 1148-1156.	3.9	17
36	A Unified Analytical Framework With Multiple fNIRS Features for Mental Workload Assessment in the Prefrontal Cortex. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020, 28, 2367-2376.	2.7	17

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37	Fluorescence characterization of ablated polymeric materials: Poly(methyl methacrylate) doped with 1-ethylpyrene. <i>Journal of Applied Physics</i> , 1990, 67, 2240-2244.	1.1	16
38	Second-Order Nonlinearity of Mixtures Including p-Nitroaniline Derivatives. <i>Journal of Physical Chemistry B</i> , 1997, 101, 8856-8859.	1.2	16
39	Development of a Multi-channel, Portable Optical Topography System. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007, 2007, 3362-4.	0.5	16
40	Atypical Dynamic-Connectivity Recruitment in Attention-Deficit/Hyperactivity Disorder Children: An Insight Into Task-Based Dynamic Connectivity Through an fNIRS Study. <i>Frontiers in Human Neuroscience</i> , 2020, 14, 3.	1.0	16
41	Algorithm for removing scalp signals from functional near-infrared spectroscopy signals in real time using multidistance optodes. <i>Journal of Biomedical Optics</i> , 2014, 19, 110505.	1.4	15
42	Denosing of neuronal signal from mixed systemic low-frequency oscillation using peripheral measurement as noise regressor in near-infrared imaging. <i>Neurophotonics</i> , 2019, 6, 1.	1.7	15
43	Fluorescence characteristics, formation mechanism and chromophore association of 1-(1-pyrenyl) alkanolic acid films prepared by vacuum deposition. <i>Thin Solid Films</i> , 1989, 169, 323-332.	0.8	13
44	Dynamic phantom with two stage-driven absorbers for mimicking hemoglobin changes in superficial and deep tissues. <i>Journal of Biomedical Optics</i> , 2012, 17, 047001.	1.4	13
45	Relationship between wavelength combination and signal-to-noise ratio in measuring hemoglobin concentrations using visible or near-infrared light. <i>Optical Review</i> , 2009, 16, 442-448.	1.2	11
46	Mental stress assessment based on feature level fusion of fNIRS and EEG signals. , 2016, , .		11
47	Rearrangeable and exchangeable optical module with system-on-chip for wearable functional near-infrared spectroscopy system. <i>Neurophotonics</i> , 2017, 5, 1.	1.7	11
48	Simultaneous detection of breath and alcohol using breath-alcohol sensor for prevention of drunk driving. <i>IEICE Electronics Express</i> , 2010, 7, 467-472.	0.3	10
49	Noncontact brain activity measurement system based on near-infrared spectroscopy. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	10
50	Multiple-Time-Scale Analysis of Attention as Revealed by EEG, NIRS, and Pupil Diameter Signals During a Free Recall Task: A Multimodal Measurement Approach. <i>Frontiers in Neuroscience</i> , 2019, 13, 1307.	1.4	10
51	Automated Thresholding Method for fNIRS-Based Functional Connectivity Analysis: Validation With a Case Study on Alzheimer's Disease. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020, 28, 1691-1701.	2.7	10
52	Measurement of second-harmonic generation from colored powders. <i>Applied Physics Letters</i> , 1993, 63, 2165-2167.	1.5	9
53	Informal Face-to-Face Interaction Improves Mood State Reflected in Prefrontal Cortex Activity. <i>Frontiers in Human Neuroscience</i> , 2016, 10, 194.	1.0	9
54	Assessing Neural Compensation With Visuospatial Working Memory Load Using Near-Infrared Imaging. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020, 28, 13-22.	2.7	9

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55	Detection of Emotional Sensitivity Using fNIRS Based Dynamic Functional Connectivity. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 894-904.	2.7	9
56	Exploring attentive task-based connectivity for screening attention deficit/hyperactivity disorder children: a functional near-infrared spectroscopy study. Neurophotonics, 2019, 6, 1.	1.7	9
57	Wavelength Dependence of Effective Pathlength Factor in Noninvasive Optical Measurements of Human Brain Functions. Japanese Journal of Applied Physics, 2006, 45, L361-L363.	0.8	8
58	Heat transfer analysis for peripheral blood flow measurement system. Review of Scientific Instruments, 2009, 80, 064902.	0.6	7
59	Second-order nonlinear optical susceptibility measurement of crystal with a glass prism in total-reflection geometry. Applied Optics, 1994, 33, 4776.	2.1	6
60	A New Measurement of Second-Harmonic Generation Efficiency. Molecular Crystals and Liquid Crystals, 1993, 227, 133-142.	0.3	5
61	Encapsulation of nitrophenol into AlPO ₄ -5: Effect of isomers on optical second harmonic generations. Journal of Materials Science, 1999, 34, 5509-5512.	1.7	5
62	fNIRS-based functional connectivity estimation using semi-metric analysis to study decision making by nursing students and registered nurses. Scientific Reports, 2020, 10, 22041.	1.6	5
63	Comparison of error properties of techniques used for measuring second-order nonlinear optical coefficients with least-squares fitting. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 871.	0.9	4
64	Effect of Hydrogen Bond on Second-Order Nonlinear Optical Property of 2-Alkylcarboxamido-4-methoxy-4-nitrotolan Derivatives. Bulletin of the Chemical Society of Japan, 1997, 70, 583-585.	2.0	4
65	Synthesis and structural study of a novel nonlinear optical material: the tolane derivative ethyl 2-(4-benzyloxyphenylethynyl)-5-nitrobenzene-1-carbamate. Journal of Materials Chemistry, 1997, 7, 705-711.	6.7	4
66	Optimizing Mental Workload Estimation by Detecting Baseline State Using Vector Phase Analysis Approach. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 597-606.	2.7	4
67	Adaptive algorithm utilizing acceptance rate for eliminating noisy epochs in block-design functional near-infrared spectroscopy data: application to study in attention deficit/hyperactivity disorder children. Neurophotonics, 2018, 5, 1.	1.7	4
68	Combination of Maker fringe and total reflection technique: Nonlinear optical properties of 4-nitro-2-ethoxyamide-4-benzyloxytolane. Journal of Applied Physics, 1997, 81, 550-553.	1.1	3
69	Development of Portable Optical Topography System. , 2007, , .		3
70	Optical scanning system for light-absorption measurement of deep biological tissue. Review of Scientific Instruments, 2011, 82, 093101.	0.6	3
71	A novel measurand independent of the distance between the source and detector for continuous wave near-infrared spectroscopy. Review of Scientific Instruments, 2017, 88, 064301.	0.6	3
72	Functional Near-Infrared Spectroscopy Adaptive Cognitive Training System (FACTS) for Cognitive Underload and Overload Prevention: A Feasibility Study. IEEE Access, 2020, 8, 172939-172950.	2.6	3

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73	Self-consistent boundary condition for photon diffusion calculation. , 2004, 2004, 1207-9.		2
74	Noncontact Optical Brain Activity Measurement System Using Phosphor Placed on Skin. Japanese Journal of Applied Physics, 2011, 50, 077001.	0.8	2
75	Near-infrared spectroscopy system with non-contact source and detector for in vivo multi-distance measurement of deep biological tissue. , 2013, , .		2
76	Mental Condition Monitoring Based on Multimodality Biometry. Frontiers in Public Health, 2020, 8, 479431.	1.3	2
77	Proposal of layered mental healthcare for mental well-being. Healthcare Technology Letters, 2021, 8, 85-89.	1.9	2
78	Working Memory Performance under a Negative Affect Is More Susceptible to Higher Cognitive Workloads with Different Neural Haemodynamic Correlates. Brain Sciences, 2021, 11, 935.	1.1	2
79	Prefrontal cortex activation of return-to-work trainees in remission of mental disorders with depressive symptoms compared to that of healthy controls. Journal of Biomedical Optics, 2019, 24, 1.	1.4	2
80	Effects of Shape Characteristics on Tactile Sensing Recognition and Brain Activation. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2019, 23, 1080-1088.	0.5	2
81	Observation of Third-Harmonic Generation in Polydiacetylene Films Using Internal Reflection Geometry. Molecular Crystals and Liquid Crystals, 1995, 267, 101-106.	0.3	1
82	Observation of Color Image Using Near-Field Optical Microscope. Japanese Journal of Applied Physics, 1997, 36, L611-L612.	0.8	1
83	Synthesis, structure and second-order nonlinear optical properties of highly functionalized 6-aminopentafulvenes. Journal of Materials Chemistry, 1998, 8, 619-627.	6.7	1
84	Dependence on the sample width of signals from a near-field optical microscope. Applied Optics, 2001, 40, 3684.	2.1	1
85	Near-field optical microscopy using an integrating sphere. Applied Physics B: Lasers and Optics, 2001, 73, 727-730.	1.1	1
86	Assessment of brain haemodynamic responses using optical topography modality. , 2015, , .		1
87	Characterization of homogeneous tissue phantoms for performance tests in diffuse optics. Proceedings of SPIE, 2016, , .	0.8	1
88	Synthesis and Spectroscopic Properties of Ferrocenyl Derivative Containing Donor and Acceptor Groups. International Journal of Organic Chemistry, 2017, 07, 284-294.	0.3	1
89	Evaluating the Attention Devoted to Memory Storage Using Simultaneous Measurement of the Brain Activity and Eye Movements. Communications in Computer and Information Science, 2013, , 447-449.	0.4	1
90	Modified Double-Grating Grazing Incidence Pulsed Dye Laser. Japanese Journal of Applied Physics, 1981, 20, 1339-1340.	0.8	0

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91	The structure and nonlinear optical properties of 3-n-propylamide-4-(4-hexyloxyphenylethynyl)-nitrobenzene. Journal of Molecular Structure, 1998, 471, 139-143.	1.8	0
92	Fabrication and observation of a standard sample for near-field optical microscopy. Journal of Microscopy, 1999, 194, 558-560.	0.8	0
93	Near-Field Optical Microscope with Tapping Illumination and Synchronous Detection. Optical Review, 1999, 6, 242-244.	1.2	0
94	Calculation of error propagation by use of total reflection geometry for evaluating third-order nonlinear optical materials. Applied Optics, 1999, 38, 5795.	2.1	0
95	Multi-wavelength measurement of cytochrome oxidase and water in biomedical tissues using optical topography system. , 2009, , .		0
96	The Future Created by Optical Topography. Trends in the Sciences, 2010, 15, 82-87.	0.0	0
97	Within-individual fluctuation of depressed mood is correlated with prefrontal cortex activity during working memory task: An optical topography study. Neuroscience Research, 2011, 71, e73.	1.0	0
98	A Novel Algorithm For Nirs-determined Cerebral Oxygenation That Suppresses Influence Of Skin Blood Flow. Medicine and Science in Sports and Exercise, 2014, 46, 748.	0.2	0
99	A semi-learning algorithm for noise rejection: an fNIRS study on ADHD children. , 2017, , .		0
100	Noncontact Optical Brain Activity Measurement System Using Phosphor Placed on Skin. Japanese Journal of Applied Physics, 2011, 50, 077001.	0.8	0
101	Developments, Applications and Subjects of Optical Topography. The Review of Laser Engineering, 2012, 40, 241.	0.0	0