

Masashi Kiguchi

List of Publications by Year in descending order

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101
papers

2,698
citations

218677
26
h-index

197818
49
g-index

104
all docs

104
docs citations

104
times ranked

2389
citing authors

#	ARTICLE	IF	CITATIONS
1	A fNIRS investigation of prefrontal cortex activity during a working memory task. <i>NeuroImage</i> , 2013, 83, 158-173.	4.2	290
2	Mental stress assessment using simultaneous measurement of EEG and fNIRS. <i>Biomedical Optics Express</i> , 2016, 7, 3882.	2.9	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.	0.7	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.	2.6	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.	4.2	136
6	Practicality of wavelength selection to improve signal-to-noise ratio in near-infrared spectroscopy. <i>NeuroImage</i> , 2004, 21, 1554-1562.	4.2	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.	2.8	111
8	Intersubject variability of near-infrared spectroscopy signals during sensorimotor cortex activation. <i>Journal of Biomedical Optics</i> , 2005, 10, 044001.	2.6	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.	2.9	86
10	Development of wearable optical topography system for mapping the prefrontal cortex activation. <i>Review of Scientific Instruments</i> , 2009, 80, 043704.	1.3	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.	2.6	65
12	Stress Assessment Based on Decision Fusion of EEG and fNIRS Signals. <i>IEEE Access</i> , 2017, 5, 19889-19896.	4.2	64
13	Mental Stress Quantification Using EEG Signals. <i>IFMBE Proceedings</i> , 2016, , 15-19.	0.3	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.	3.4	57
15	Tutorial on platform for optical topography analysis tools. <i>Neurophotonics</i> , 2016, 3, 010801.	3.3	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.	2.5	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.	2.6	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.	2.6	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. Tetrahedron Letters, 1997, 38, 5009-5012.	1.4	45
20	Extracting task-related activation components from optical topography measurement using independent components analysis. Journal of Biomedical Optics, 2008, 13, 054008.	2.6	44
21	Influence of skin blood flow and source-detector distance on near-infrared spectroscopy-determined cerebral oxygenation in humans. Clinical Physiology and Functional Imaging, 2015, 35, 237-244.	1.2	42
22	Technique for evaluating second-order nonlinear optical materials in powder form. Journal of Applied Physics, 1994, 75, 4332-4339.	2.5	37
23	New method of measuring second harmonic generation efficiency using powder crystals. Applied Physics Letters, 1992, 60, 1933-1935.	3.3	34
24	Biofeedback-based training for stress management in daily hassles: an intervention study. Brain and Behavior, 2014, 4, 566-579.	2.2	33
25	Generation of phase-conjugated vector wave fronts in atomic vapors. Optics Letters, 1982, 7, 555.	3.3	31
26	Application of near-infrared spectroscopy to measurement of hemodynamic signals accompanying stimulated saliva secretion. Journal of Biomedical Optics, 2011, 16, 047002.	2.6	30
27	Note: Wearable near-infrared spectroscopy imager for haired region. Review of Scientific Instruments, 2012, 83, 056101.	1.3	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. Frontiers in Human Neuroscience, 2019, 13, 7.	2.0	22
30	Comparison of light intensity on the brain surface due to laser exposure during optical topography and solar irradiation. Journal of Biomedical Optics, 2007, 12, 062108.	2.6	20
31	Concurrent fNIRS-fMRI measurement to validate a method for separating deep and shallow fNIRS signals by using multidistance optodes. Neurophotonics, 2015, 2, 015003.	3.3	19
32	Near-infrared spectroscopy determined cerebral oxygenation with eliminated skin blood flow in young males. Journal of Clinical Monitoring and Computing, 2016, 30, 243-250.	1.6	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. Neurophotonics, 2014, 1, 025003.	3.3	17
35	Effectiveness Evaluation of Real-Time Scalp Signal Separating Algorithm on Near-Infrared Spectroscopy Neurofeedback. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 1148-1156.	6.3	17
36	A Unified Analytical Framework With Multiple fNIRS Features for Mental Workload Assessment in the Prefrontal Cortex. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2367-2376.	4.9	17

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37	Fluorescence characterization of ablated polymeric materials: Poly(methyl methacrylate) doped with 1-ethylpyrene. Journal of Applied Physics, 1990, 67, 2240-2244.	2.5	16
38	Second-Order Nonlinearity of Mixtures Including p-Nitroaniline Derivatives. Journal of Physical Chemistry B, 1997, 101, 8856-8859.	2.6	16
39	Development of a Multi-channel, Portable Optical Topography System. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 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. Frontiers in Human Neuroscience, 2020, 14, 3.	2.0	16
41	Algorithm for removing scalp signals from functional near-infrared spectroscopy signals in real time using multidistance optodes. Journal of Biomedical Optics, 2014, 19, 110505.	2.6	15
42	Denoising of neuronal signal from mixed systemic low-frequency oscillation using peripheral measurement as noise regressor in near-infrared imaging. Neurophotonics, 2019, 6, 1.	3.3	15
43	Fluorescence characteristics, formation mechanism and chromophore association of 1-(1-pyrenyl) alkanolic acid films prepared by vacuum deposition. Thin Solid Films, 1989, 169, 323-332.	1.8	13
44	Dynamic phantom with two stage-driven absorbers for mimicking hemoglobin changes in superficial and deep tissues. Journal of Biomedical Optics, 2012, 17, 047001.	2.6	13
45	Relationship between wavelength combination and signal-to-noise ratio in measuring hemoglobin concentrations using visible or near-infrared light. Optical Review, 2009, 16, 442-448.	2.0	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. Neurophotonics, 2017, 5, 1.	3.3	11
48	Simultaneous detection of breath and alcohol using breath-alcohol sensor for prevention of drunk driving. IEICE Electronics Express, 2010, 7, 467-472.	0.8	10
49	Noncontact brain activity measurement system based on near-infrared spectroscopy. Applied Physics Letters, 2010, 96, .	3.3	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. Frontiers in Neuroscience, 2019, 13, 1307.	2.8	10
51	Automated Thresholding Method for fNIRS-Based Functional Connectivity Analysis: Validation With a Case Study on Alzheimer's Disease. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1691-1701.	4.9	10
52	Measurement of second-harmonic generation from colored powders. Applied Physics Letters, 1993, 63, 2165-2167.	3.3	9
53	Informal Face-to-Face Interaction Improves Mood State Reflected in Prefrontal Cortex Activity. Frontiers in Human Neuroscience, 2016, 10, 194.	2.0	9
54	Assessing Neural Compensation With Visuospatial Working Memory Load Using Near-Infrared Imaging. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 13-22.	4.9	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.	4.9	9
56	Exploring attentive task-based connectivity for screening attention deficit/hyperactivity disorder children: a functional near-infrared spectroscopy study. Neurophotonics, 2019, 6, 1.	3.3	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.	1.5	8
58	Heat transfer analysis for peripheral blood flow measurement system. Review of Scientific Instruments, 2009, 80, 064902.	1.3	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 AlPO4-5: Effect of isomers on optical second harmonic generations. Journal of Materials Science, 1999, 34, 5509-5512.	3.7	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.	3.3	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.	2.1	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.	3.2	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.	4.9	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.	3.3	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.	2.5	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.	1.3	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.	1.3	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.	4.2	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.	1.5	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.	2.7	2
77	Proposal of layered mental healthcare for mental well-being. Healthcare Technology Letters, 2021, 8, 85-89.	3.3	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.	2.3	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.	2.6	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.	0.9	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.	1.5	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.	2.2	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.	0.7	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.	0.5	1
90	Modified Double-Grating Grazing Incidence Pulsed Dye Laser. Japanese Journal of Applied Physics, 1981, 20, 1339-1340.	1.5	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.	3.6	0
92	Fabrication and observation of a standard sample for near-field optical microscopy. Journal of Microscopy, 1999, 194, 558-560.	1.8	0
93	Near-Field Optical Microscope with Tapping Illumination and Synchronous Detection. Optical Review, 1999, 6, 242-244.	2.0	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.	1.9	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.	0.4	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.	1.5	0
101	Developments, Applications and Subjects of Optical Topography. The Review of Laser Engineering, 2012, 40, 241.	0.0	0