Tomomi Nemoto

List of Publications by Year
in descending order

97 papers	4,658 citations	147801 31 h-index	106344 65 g-index
104 all docs	104 docs citations	104 times ranked	5869 citing authors

#	Article	IF	Citations
1	Dendritic spine geometry is critical for AMPA receptor expression in hippocampal CA1 pyramidal neurons. Nature Neuroscience, 2001, 4, 1086-1092.	14.8	1,413
2	Fusion Pore Dynamics and Insulin Granule Exocytosis in the Pancreatic Islet. Science, 2002, 297, 1349-1352.	12.6	247
3	Differential Activity-Dependent Secretion of Brain-Derived Neurotrophic Factor from Axon and Dendrite. Journal of Neuroscience, 2009, 29, 14185-14198.	3.6	226
4	Rational Engineering of XCaMPs, a Multicolor GECI Suite for InÂVivo Imaging of Complex Brain Circuit Dynamics. Cell, 2019, 177, 1346-1360.e24.	28.9	199
5	Sequential-replenishment mechanism of exocytosis in pancreatic acini. Nature Cell Biology, 2001, 3, 253-258.	10.3	166
6	Neuronal Circuit Remodeling in the Contralateral Cortical Hemisphere during Functional Recovery from Cerebral Infarction. Journal of Neuroscience, 2009, 29, 10081-10086.	3.6	144
7	A Rapid Optical Clearing Protocol Using 2,2â€²-Thiodiethanol for Microscopic Observation of Fixed Mouse Brain. PLoS ONE, 2015, 10, e0116280.	2.5	134
8	An ultramarine fluorescent protein with increased photostability and pH insensitivity. Nature Methods, 2009, 6, 351-353.	19.0	126
9	Stabilization of Exocytosis by Dynamic F-actin Coating of Zymogen Granules in Pancreatic Acini. Journal of Biological Chemistry, 2004, 279, 37544-37550.	3.4	125
10	Visualizing hippocampal neurons with in vivo two-photon microscopy using a 1030 nm picosecond pulse laser. Scientific Reports, 2013, 3, 1014.	3.3	117
11	Lateral resolution enhancement of laser scanning microscopy by a higher-order radially polarized mode beam. Optics Express, 2011, 19, 15947.	3.4	105
12	In vivo two-photon imaging of mouse hippocampal neurons in dentate gyrus using a light source based on a high-peak power gain-switched laser diode. Biomedical Optics Express, 2015, 6, 891.	2.9	80
13	Rapid glucose sensing by protein kinase A for insulin exocytosis in mouse pancreatic islets. Journal of Physiology, 2006, 570, 271-282.	2.9	69
14	GABA Regulates the Multidirectional Tangential Migration of GABAergic Interneurons in Living Neonatal Mice. PLoS ONE, 2011, 6, e27048.	2.5	69
15	Switch to Anaerobic Glucose Metabolism with NADH Accumulation in the Î²-Cell Model of Mitochondrial Diabetes. Journal of Biological Chemistry, 2002, 277, 41817-41826.	3.4	68
16	Sensory Input Regulates Spatial and Subtype-Specific Patterns of Neuronal Turnover in the Adult Olfactory Bulb. Journal of Neuroscience, 2011, 31, 11587-11596.	3.6	68
17	Two cAMP-dependent pathways differentially regulate exocytosis of large dense-core and small vesicles in mouse Î²-cells. Journal of Physiology, 2007, 582, 1087-1098.	2.9	62
18	Asymmetric distribution of dynamic calcium signals in the node of mouse embryo during leftâ€"right axis formation. Developmental Biology, 2013, 376, 23-30.	2.0	62

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19	Pancreas-specific aquaporin 12 null mice showed increased susceptibility to caerulein-induced acute pancreatitis. American Journal of Physiology - Cell Physiology, 2009, 297, C1368-C1378.	4.6	53
20	3DeeCellTracker, a deep learning-based pipeline for segmenting and tracking cells in 3D time lapse images. ELife, 2021, 10, .	6.0	53
21	Rap1 controls lymphocyte adhesion cascade and interstitial migration within lymph nodes in RAPL-dependent and -independent manners. Blood, 2010, 115, 804-814.	1.4	49
22	Vacuolar sequential exocytosis of large dense-core vesicles in adrenal medulla. EMBO Journal, 2006, 25, 673-682.	7.8	48
23	Rapid Ca2+-dependent increase in oxygen consumption by mitochondria in single mammalian central neurons. Cell Calcium, 2005, 37, 359-370.	2.4	46
24	7-ps optical pulse generation from a 1064-nm gain-switched laser diode and its application for two-photon microscopy. Optics Express, 2014, 22, 5746.	3.4	45
25	Two-Photon Excitation Imaging of Pancreatic Islets With Various Fluorescent Probes. Diabetes, 2002, 51, S25-S28.	0.6	44
26	Two-photon excitation imaging of exocytosis and endocytosis and determination of their spatial organization. Advanced Drug Delivery Reviews, 2006, 58, 850-877.	13.7	44
27	Sequential compound exocytosis of large dense-core vesicles in PC12 cells studied with TEPIQ (two-photon extracellular polar-tracer imaging-based quantification) analysis. Journal of Physiology, 2005, 568, 905-915.	2.9	43
28	A Novel Katanin-Tethering Machinery Accelerates Cytokinesis. Current Biology, 2019, 29, 4060-4070.e3.	3.9	42
29	Exocytosis and endocytosis of small vesicles in PC12 cells studied with TEPIQ (two-photon) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 917-929.	2.9	41
30	Autophagy Contributes to the Quality Control of Leaf Mitochondria. Plant and Cell Physiology, 2021, 62, 229-247.	3.1	37
31	Maternal separation decreases the stability of mushroom spines in adult mice somatosensory cortex. Brain Research, 2009, 1294, 45-51.	2.2	34
32	Multi-point Scanning Two-photon Excitation Microscopy by Utilizing a High-peak-power 1042-nm Laser. Analytical Sciences, 2015, 31, 307-313.	1.6	31
33	A new quantitative (two-photon extracellular polar-tracer imaging-based quantification (TEPIQ)) analysis for diameters of exocytic vesicles and its application to mouse pancreatic islets. Journal of Physiology, 2005, 568, 891-903.	2.9	30
34	Two-photon microscopic analysis of acetylcholine-induced mucus secretion in guinea pig nasal glands. Cell Calcium, 2005, 37, 349-357.	2.4	28
35	Improvement of lateral resolution and extension of depth of field in two-photon microscopy by a higher-order radially polarized beam. Microscopy (Oxford, England), 2014, 63, 23-32.	1.5	28
36	Living cell functions and morphology revealed by two-photon microscopy in intact neural and secretory organs. Molecules and Cells, 2008, 26, 113-20.	2.6	22

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37	Correcting spherical aberrations in a biospecimen using a transmissive liquid crystal device in two-photon excitation laser scanning microscopy. Journal of Biomedical Optics, 2015, 20, 101204.	2.6	21
38	Opposing roles for SNAP23 in secretion in exocrine and endocrine pancreatic cells. Journal of Cell Biology, 2016, 215, 121-138.	5.2	21
39	Three-Dimensional Analysis of Cell Division Orientation in Epidermal Basal Layer Using Intravital Two-Photon Microscopy. PLoS ONE, 2016, 11, e0163199.	2.5	21
40	STED microscopyâ€"super-resolution bio-imaging utilizing a stimulated emission depletion. Microscopy (Oxford, England), 2015, 64, 227-236.	1.5	20
41	Phospholipase C-related catalytically inactive protein (PRIP) controls KIF5B-mediated insulin secretion. Biology Open, 2014, 3, 463-474.	1.2	19
42	Fluoropolymer Nanosheet as a Wrapping Mount for Highâ€Quality Tissue Imaging. Advanced Materials, 2017, 29, 1703139.	21.0	19
43	Advanced easySTED microscopy based on two-photon excitation by electrical modulations of light pulse wavefronts. Biomedical Optics Express, 2018, 9, 2671.	2.9	19
44	Differential contributions of nonmuscle myosin IIA and IIB to cytokinesis in human immortalized fibroblasts. Experimental Cell Research, 2019, 376, 67-76.	2.6	19
45	Two-photon excitation STED microscopy by utilizing transmissive liquid crystal devices. Optics Express, 2014, 22, 28215.	3.4	17
46	In vivo two-photon microscopic observation and ablation in deeper brain regions realized by modifications of excitation beam diameter and immersion liquid. PLoS ONE, 2020, 15, e0237230.	2.5	17
47	Dynamics and function of <scp>ERM</scp> proteins during cytokinesis in human cells. FEBS Letters, 2017, 591, 3296-3309.	2.8	16
48	Two-photon excitation fluorescence microscopy and its application in functional connectomics. Microscopy (Oxford, England), 2015, 64, 9-15.	1.5	15
49	Transmissive liquid-crystal device for correcting primary coma aberration and astigmatism in biospecimen in two-photon excitation laser scanning microscopy. Journal of Biomedical Optics, 2016, 21, 121503.	2.6	14
50	PEO-CYTOP Fluoropolymer Nanosheets as a Novel Open-Skull Window for Imaging of the Living Mouse Brain. IScience, 2020, 23, 101579.	4.1	13
51	Adaptive Optical Two-Photon Microscopy for Surface-Profiled Living Biological Specimens. ACS Omega, 2021, 6, 438-447.	3.5	12
52	A Novel Function of Noc2 in Agonist-Induced Intracellular Ca2+ Increase during Zymogen-Granule Exocytosis in Pancreatic Acinar Cells. PLoS ONE, 2012, 7, e37048.	2.5	11
53	Real-Time Polarization-Resolved Imaging of Living Tissues Based on Two-Photon Excitation Spinning-Disk Confocal Microscopy. Frontiers in Physics, 2019, 7, .	2.1	11
54	Superâ€resolution structural analysis of dendritic spines using threeâ€dimensional structured illumination microscopy in cleared mouse brain slices. European Journal of Neuroscience, 2018, 47, 1033-1042.	2.6	10

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55	Two-photon STED nanoscopy realizing 100-nm spatial resolution utilizing high-peak-power sub-nanosecond 655-nm pulses. Biomedical Optics Express, 2019, 10, 3104.	2.9	10
56	Ultrasensitive Imaging of Ca2+ Dynamics in Pancreatic Acinar Cells of Yellow Cameleon-Nano Transgenic Mice. International Journal of Molecular Sciences, 2014, 15, 19971-19986.	4.1	9
57	High-peak-power 918-nm laser light source based two-photon spinning-disk microscopy for green fluorophores. Biochemical and Biophysical Research Communications, 2020, 529, 238-242.	2.1	9
58	A Cascade of 2.5D CNN and Bidirectional CLSTM Network for Mitotic Cell Detection in 4D Microscopy Image. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2021, 18, 396-404.	3.0	9
59	Optical clearing of living brains with MAGICAL to extend inÂvivo imaging. IScience, 2021, 24, 101888.	4.1	9
60	Sliding Motion of Magnetizable Beads Coated with Chara Motor Protein in a Magnetic Field. Journal of the Physical Society of Japan, 1998, 67, 345-350.	1.6	8
61	Visualizing in vivo brain neural structures using volume rendered feature spaces. Computers in Biology and Medicine, 2014, 53, 85-93.	7.0	8
62	Focusing new light on brain functions: multiphoton microscopy for deep and super-resolution imaging. Neuroscience Research, 2022, 179, 24-30.	1.9	8
63	Generation of high-peak-power sub-nanosecond 650-nm-band optical pulses based on semiconductor-laser-controlling technologies. Applied Physics Express, 2017, 10, 102701.	2.4	7
64	A Cascade of CNN and LSTM Network with 3D Anchors for Mitotic Cell Detection in 4D Microscopic Image. , 2019, , .		7
65	Absorption, Fluorescence, and Two-Photon Excitation Ability of 5-Phenylisolidolo[2,1-<i>a</i>]quinolines. ACS Omega, 2020, 5, 2473-2479.	3.5	7
66	Protocol for constructing an extensive cranial window utilizing a PEO-CYTOP nanosheet for in vivo wide-field imaging of the mouse brain. STAR Protocols, 2021, 2, 100542.	1.2	7
67	FBP17-mediated finger-like membrane protrusions in cell competition between normal and RasV12-transformed cells. IScience, 2021, 24, 102994.	4.1	6
68	Low-invasive 5D visualization of mitotic progression by two-photon excitation spinning-disk confocal microscopy. Scientific Reports, 2022, 12, 809.	3.3	6
69	New Advances in Nanomedicine: Diagnosis and Preventive Medicine. Medical Clinics of North America, 2007, 91, 871-879.	2.5	5
70	Development of 3D imaging technique of reconstructed human epidermis with immortalized human epidermal cell line. Experimental Dermatology, 2018, 27, 563-570.	2.9	5
71	Nanosheet wrapping-assisted coverslip-free imaging for looking deeper into a tissue at high resolution. PLoS ONE, 2020, 15, e0227650.	2.5	5
72	Characteristics in Sliding Motions of Small Organelles in a Nitella Internodal Cell. Journal of the Physical Society of Japan, 1995, 64, 4959-4963.	1.6	4

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73	Heterogeneous distribution of doublecortinâ€expressing cells surrounding the rostral migratory stream in the juvenile mouse. Journal of Comparative Neurology, 2018, 526, 2631-2646.	1.6	4
74	Single-scan volumetric imaging throughout thick tissue specimens by one-touch installable light-needle creating device. Scientific Reports, 2022, 12, .	3.3	4
75	Development of novel two-photon microscopy for living brain and neuron. Microscopy (Oxford,) Tj ETQq1 1 0.784314 rgBT /Overlock 1(	1.5	3
76	Transmissive liquid crystal device correcting the spherical aberrations in laser scanning microscopy. , 2015, , .		3
77	A 2.5D Cascaded Convolutional Neural Network with Temporal Information for Automatic Mitotic Cell Detection in 4D Microscopic Images. , 2018, , .		3
78	587 nm nanosecond optical pulse generation by synchronously-driven gain-switched laser diodes with optical injection locking. Applied Physics Express, 2019, 12, 082002.	2.4	3
79	Observation of PDLCs by SHG laser scanning microscopy using a liquid crystal vector beam generator. , 2012, , .		2
80	Transmissive liquid-crystal device correcting primary coma aberration and astigmatism in laser scanning microscopy. , 2016, , .		2
81	An end-to-end CNN and LSTM network with 3D anchors for mitotic cell detection in 4D microscopic images and its parallel implementation on multiple GPUs. Neural Computing and Applications, 2020, 32, 5669-5679.	5.6	2
82	Efficient visible/NIR light-driven uncaging of hydroxylated thiazole orange-based caged compounds in aqueous media. Chemical Science, 2022, 13, 7462-7467.	7.4	2
83	Interactive visual exploration of overlapping similar structures for three-dimensional microscope images. BMC Bioinformatics, 2014, 15, 415.	2.6	1
84	In Vivo Imaging of All Cortical Layers and Hippocampal CA1 Pyramidal Cells by Two-Photon Excitation Microscopy. Progress in Optical Science and Photonics, 2019, , 113-122.	0.5	1
85	Accurate and fast mitotic detection using an anchor-free method based on full-scale connection with recurrent deep layer aggregation in 4D microscopy images. BMC Bioinformatics, 2021, 22, 91.	2.6	1
86	Simple adaptive optic device for confocal laser scanning microscopy using liquid crystals. , 2012, , .		1
87	Spatial and Temporal Resolution Improvements on 2-Photon Microscopy. Seibutsu Butsuri, 2022, 62, 131-133.	0.1	1
88	Long term observation of fine structural plasticity of neurons and glias in damaged cerebral cortex of living mice. Neuroscience Research, 2007, 58, S12.	1.9	0
89	In vivo imaging of sensory input-dependent neurogenesis in the adult olfactory bulb. Neuroscience Research, 2009, 65, S54.	1.9	0
90	Visualization and Analysis of Cellular and Biomolecular Dynamics by using Ultra-Short Pulse Laser. Nippon Laser Igakkaishi, 2009, 30, 435-440.	0.0	0

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91	Novel Visualization Technique of Function and Morphology of Cell Membrane Including Exocytosis by Using Laser Beam. Membrane, 2010, 35, 57-62.	0.0	0
92	Improvement in Tissue Penetration Depth and Spatial Resolution of Multi-Photon Laser Excitation Microscopy. The Review of Laser Engineering, 2013, 41, 107.	0.0	0
93	Preface to Special Issue on Cutting Edge of Photo-Manipulation and Imaging for Elucidation of Emergence of Biological Functions. The Review of Laser Engineering, 2013, 41, 84.	0.0	0
94	<i>In Vivo</i> Imaging of Neocortical and Hippocampal CA1 Neurons by Two-photon Microscopy. Seibutsu Butsuri, 2014, 54, 035-038.	0.1	0
95	Improvement of two-photon microscopic imaging in deep regions of living mouse brains by utilizing a light source based on an electrically controllable gain-switched laser diode. , 2018, , .		0
96	Title is missing!. , 2020, 15, e0237230.		0
97	Title is missing!. , 2020, 15, e0237230.		0