

Weijian Yang

List of Publications by Year in descending order

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Version: 2024-02-01

116
papers

11,977
citations

50170

46
h-index

38300

95
g-index

129
all docs

129
docs citations

129
times ranked

11393
citing authors

#	ARTICLE	IF	CITATIONS
1	An increase in spontaneous activity mediates visual habituation. <i>Cell Reports</i> , 2022, 39, 110751.	2.9	5
2	Deep compressed imaging via optimized pattern scanning. <i>Photonics Research</i> , 2021, 9, B57.	3.4	12
3	Cortical ensembles selective for context. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	29
4	GEOMScope: Large Field-of-View 3D Lensless Microscopy with Low Computational Complexity. <i>Laser and Photonics Reviews</i> , 2021, 15, 2100072.	4.4	11
5	Long-term stability of cortical ensembles. <i>ELife</i> , 2021, 10, .	2.8	40
6	Manipulating neuronal circuits, in concert. <i>Science</i> , 2021, 373, 635-635.	6.0	2
7	Holographic Imaging and Stimulation of Neural Circuits. <i>Advances in Experimental Medicine and Biology</i> , 2021, 1293, 613-639.	0.8	2
8	Tracking calcium dynamics from individual neurons in behaving animals. <i>PLoS Computational Biology</i> , 2021, 17, e1009432.	1.5	17
9	Time for NanoNeuro. <i>Nature Methods</i> , 2021, 18, 1287-1293.	9.0	17
10	Reply to "Only negligible deviations from electroneutrality are expected in dendritic spines". <i>Nature Reviews Neuroscience</i> , 2020, 21, 54-55.	4.9	1
11	Intracranial alternating current stimulation facilitates neurogenesis in a mouse model of Alzheimer's disease. <i>Alzheimer's Research and Therapy</i> , 2020, 12, 89.	3.0	15
12	A community-based transcriptomics classification and nomenclature of neocortical cell types. <i>Nature Neuroscience</i> , 2020, 23, 1456-1468.	7.1	183
13	Aberrant Cortical Ensembles and Schizophrenia-like Sensory Phenotypes in <i>Setd1a</i> ^{+/-} Mice. <i>Biological Psychiatry</i> , 2020, 88, 215-223.	0.7	29
14	Playing the piano with the cortex: role of neuronal ensembles and pattern completion in perception and behavior. <i>Current Opinion in Neurobiology</i> , 2020, 64, 89-95.	2.0	56
15	Roadmap on holography. <i>Journal of Optics (United Kingdom)</i> , 2020, 22, 123002.	1.0	54
16	Three-dimensional Imaging with a Single Layer of Random Microlens Array. , 2020, , .		1
17	Controlling Visually Guided Behavior by Holographic Recalling of Cortical Ensembles. <i>Cell</i> , 2019, 178, 447-457.e5.	13.5	254
18	Genetic voltage indicators. <i>BMC Biology</i> , 2019, 17, 71.	1.7	87

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19	Two-Color Volumetric Imaging of Neuronal Activity of Cortical Columns. <i>Cell Reports</i> , 2019, 27, 2229-2240.e4.	2.9	33
20	Optimal Tuning of Memristor Conductance Variation in Spiking Neural Networks for Online Unsupervised Learning. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 2844-2849.	1.6	14
21	Reduced Repertoire of Cortical Microstates and Neuronal Ensembles in Medically Induced Loss of Consciousness. <i>Cell Systems</i> , 2019, 8, 467-474.e4.	2.9	47
22	Brain maps at the nanoscale. <i>Nature Biotechnology</i> , 2019, 37, 378-380.	9.4	4
23	Comparative Evaluation of Genetically Encoded Voltage Indicators. <i>Cell Reports</i> , 2019, 26, 802-813.e4.	2.9	137
24	Holographic imaging and photostimulation of neural activity. <i>Current Opinion in Neurobiology</i> , 2018, 50, 211-221.	2.0	37
25	Deconvolution of Voltage Sensor Time Series and Electro-diffusion Modeling Reveal the Role of Spine Geometry in Controlling Synaptic Strength. <i>Neuron</i> , 2018, 97, 1126-1136.e10.	3.8	38
26	Parvalbumin-Positive Interneurons Regulate Neuronal Ensembles in Visual Cortex. <i>Cerebral Cortex</i> , 2018, 28, 1831-1845.	1.6	65
27	Addendum: A very large-scale microelectrode array for cellular-resolution electrophysiology. <i>Nature Communications</i> , 2018, 9, 4497.	5.8	1
28	Two-Photon Optogenetic Mapping of Excitatory Synaptic Connectivity and Strength. <i>IScience</i> , 2018, 8, 15-28.	1.9	16
29	Simultaneous two-photon imaging and two-photon optogenetics of cortical circuits in three dimensions. <i>ELife</i> , 2018, 7, .	2.8	167
30	Monolithic high-contrast metastructure for beam-shaping VCSELs. <i>Optica</i> , 2018, 5, 10.	4.8	45
31	Recent advances in high-contrast metastructures, metasurfaces, and photonic crystals. <i>Advances in Optics and Photonics</i> , 2018, 10, 180.	12.1	119
32	Role of inhibitory control in modulating focal seizure spread. <i>Brain</i> , 2018, 141, 2083-2097.	3.7	75
33	Toward a Global BRAIN Initiative. <i>Cell</i> , 2017, 168, 956-959.	13.5	44
34	Super-multiplex vibrational imaging. <i>Nature</i> , 2017, 544, 465-470.	13.7	374
35	Altered Cortical Ensembles in Mouse Models of Schizophrenia. <i>Neuron</i> , 2017, 94, 153-167.e8.	3.8	152
36	Non-overlapping Neural Networks in <i>Hydra vulgaris</i> . <i>Current Biology</i> , 2017, 27, 1085-1097.	1.8	162

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37	In vivo imaging of neural activity. <i>Nature Methods</i> , 2017, 14, 349-359.	9.0	364
38	Imaging and Optically Manipulating Neuronal Ensembles. <i>Annual Review of Biophysics</i> , 2017, 46, 271-293.	4.5	90
39	A very large-scale microelectrode array for cellular-resolution electrophysiology. <i>Nature Communications</i> , 2017, 8, 1802.	5.8	114
40	Very high efficiency optical coupler for silicon nanophotonic waveguide and single mode optical fiber. <i>Optics Express</i> , 2017, 25, 18462.	1.7	45
41	Multi-scale approaches for high-speed imaging and analysis of large neural populations. <i>PLoS Computational Biology</i> , 2017, 13, e1005685.	1.5	35
42	moco: Fast Motion Correction for Calcium Imaging. <i>Frontiers in Neuroinformatics</i> , 2016, 10, 6.	1.3	156
43	Somatostatin Interneurons Control a Key Component of Mismatch Negativity in Mouse Visual Cortex. <i>Cell Reports</i> , 2016, 16, 597-604.	2.9	124
44	Cooperative Subnetworks of Molecularly Similar Interneurons in Mouse Neocortex. <i>Neuron</i> , 2016, 90, 86-100.	3.8	173
45	Compact On-Chip Optical Components Based on Multimode Interference Design Using High-Contrast Grating Hollow-Core Waveguides. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2016, 22, 279-287.	1.9	1
46	Imprinting and recalling cortical ensembles. <i>Science</i> , 2016, 353, 691-694.	6.0	263
47	On the Necessity of Ethical Guidelines for Novel Neurotechnologies. <i>Cell</i> , 2016, 167, 882-885.	13.5	61
48	Opening Holes in the Blanket of Inhibition: Localized Lateral Disinhibition by VIP Interneurons. <i>Journal of Neuroscience</i> , 2016, 36, 3471-3480.	1.7	199
49	Calcium imaging of neural circuits with extended depth-of-field light-sheet microscopy. <i>Optics Letters</i> , 2016, 41, 855.	1.7	71
50	Simultaneous Multi-plane Imaging of Neural Circuits. <i>Neuron</i> , 2016, 89, 269-284.	3.8	209
51	Simultaneous Denoising, Deconvolution, and Demixing of Calcium Imaging Data. <i>Neuron</i> , 2016, 89, 285-299.	3.8	843
52	Beam-Shaping Single-Mode VCSEL With A High-Contrast Grating Mirror. , 2016, , .		2
53	Laser optomechanics. <i>Scientific Reports</i> , 2015, 5, 13700.	1.6	31
54	The discovery of dendritic spines by Cajal. <i>Frontiers in Neuroanatomy</i> , 2015, 9, 18.	0.9	46

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55	Endogenous Sequential Cortical Activity Evoked by Visual Stimuli. <i>Journal of Neuroscience</i> , 2015, 35, 8813-8828.	1.7	110
56	Surface-normal coupled four-wave mixing in a high contrast gratings resonator. <i>Optics Express</i> , 2015, 23, 29565.	1.7	17
57	Heterogeneously-integrated VCSEL using high-contrast grating on silicon. , 2015, , .		1
58	From the neuron doctrine to neural networks. <i>Nature Reviews Neuroscience</i> , 2015, 16, 487-497.	4.9	547
59	Temporal dynamics in fMRI resting-state activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 5263-5264.	3.3	9
60	Heterogeneously integrated long-wavelength VCSEL using silicon high contrast grating on an SOI substrate. <i>Optics Express</i> , 2015, 23, 2512.	1.7	67
61	On testing neural network models. <i>Nature Reviews Neuroscience</i> , 2015, 16, 767-767.	4.9	4
62	A National Network of Neurotechnology Centers for the BRAIN Initiative. <i>Neuron</i> , 2015, 88, 445-448.	3.8	15
63	The new nanophysiology: regulation of ionic flow in neuronal subcompartments. <i>Nature Reviews Neuroscience</i> , 2015, 16, 685-692.	4.9	65
64	Broadband Self-Swept High Contrast Grating VCSEL. , 2015, , .		0
65	Simultaneous imaging of neural activity in three dimensions. <i>Frontiers in Neural Circuits</i> , 2014, 8, 29.	1.4	79
66	A 32 Å— 32 optical phased array using polysilicon sub-wavelength high-contrast-grating mirrors. <i>Optics Express</i> , 2014, 22, 19029.	1.7	40
67	High speed optical phased array using high contrast grating all-pass filters. <i>Optics Express</i> , 2014, 22, 20038.	1.7	49
68	Heterogeneously Integrated Long-Wavelength VCSEL using High-Contrast Grating on Silicon. , 2014, , .		1
69	Visual stimuli recruit intrinsically generated cortical ensembles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E4053-61.	3.3	263
70	High-contrast grating MEMS optical phase-shifters for two-dimensional free-space beam steering. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
71	High-speed 32Å—32 MEMS optical phased array. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
72	A blanket of inhibition: functional inferences from dense inhibitory connectivity. <i>Current Opinion in Neurobiology</i> , 2014, 26, 96-102.	2.0	148

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73	Long-Wavelength Tunable Detector Using High-Contrast Grating. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 178-185.	1.9	7
74	Bifunctional 1550-nm Tunable Device and Its Transmission Characteristics. , 2014, , .		1
75	Optical phased array using high contrast gratings for two dimensional beamforming and beamsteering. Optics Express, 2013, 21, 12238.	1.7	66
76	High speed, ultra-compact spectrometer using high contrast grating swept-wavelength detector. , 2013, , .		3
77	Surface-normal second harmonic emission from AlGaAs high-contrast gratings. Applied Physics Letters, 2013, 102, 021102.	1.5	9
78	Experimental and theoretical study of wide hysteresis cycles in 1550 nm VCSELs under optical injection. Optics Express, 2013, 21, 3125.	1.7	24
79	Long-Wavelength VCSEL Using High-Contrast Grating. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 1701311-1701311.	1.9	84
80	Electrical Compartmentalization in Dendritic Spines. Annual Review of Neuroscience, 2013, 36, 429-449.	5.0	157
81	Optical phase modulation based on directly modulated reflection-mode OIL-VCSEL. Optics Express, 2013, 21, 22114.	1.7	11
82	Instantaneous three-dimensional sensing using spatial light modulator illumination with extended depth of field imaging. Optics Express, 2013, 21, 16007.	1.7	90
83	Tunable 1550-nm High Contrast Grating VCSEL Detector. , 2013, , .		1
84	Optical phased array using high-contrast grating all-pass filters for fast beam steering. , 2013, , .		0
85	Ultra-compact Optical Switch Using High Contrast Grating Hollow-core Waveguide. , 2013, , .		1
86	Linewidth Measurement of 1550 nm High Contrast Grating MEMS-VCSELs. , 2013, , .		1
87	Low loss hollow-core waveguide on a silicon substrate. Nanophotonics, 2012, 1, 23-29.	2.9	31
88	High-contrast gratings for integrated optoelectronics. Advances in Optics and Photonics, 2012, 4, 379.	12.1	443
89	An ellipse model for cavity mode behavior of optically injection-locked VCSELs. Optics Express, 2012, 20, 6980.	1.7	8
90	Three-Dimensional Chirped High-Contrast Grating Hollow-Core Waveguide. IEEE Photonics Journal, 2012, 4, 1372-1380.	1.0	2

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91	Two-photon optogenetics of dendritic spines and neural circuits. <i>Nature Methods</i> , 2012, 9, 1202-1205.	9.0	255
92	Two-photon optogenetic toolbox for fast inhibition, excitation and bistable modulation. <i>Nature Methods</i> , 2012, 9, 1171-1179.	9.0	299
93	Experimental characterization on high contrast grating reflectivity. , 2012, , .		1
94	Low-loss slow light inside high contrast grating waveguide. <i>Proceedings of SPIE</i> , 2012, , .	0.8	5
95	RF Down-Conversion Based on Optically Injection-locked VCSEL. , 2012, , .		0
96	Dense Inhibitory Connectivity in Neocortex. <i>Neuron</i> , 2011, 69, 1188-1203.	3.8	491
97	Novel Three-dimensional Hollow-core Waveguide Using High-contrast Sub-wavelength Grating. , 2011, , .		3
98	Two-photon microscopy with diffractive optical elements and spatial light modulators. <i>Frontiers in Neuroscience</i> , 2010, 4, .	1.4	24
99	Fast Nonnegative Deconvolution for Spike Train Inference From Population Calcium Imaging. <i>Journal of Neurophysiology</i> , 2010, 104, 3691-3704.	0.9	404
100	Reflection-mode optical injection locking. <i>Optics Express</i> , 2010, 18, 20887.	1.7	14
101	Performance of a Multi-Gb/s 60 GHz Radio Over Fiber System Employing a Directly Modulated Optically Injection-Locked VCSEL. <i>Journal of Lightwave Technology</i> , 2010, 28, 2436-2444.	2.7	35
102	Wavelet-transform analysis for group delay extraction of white light spectral interferograms. <i>Optics Express</i> , 2009, 17, 6038.	1.7	19
103	Novel Ring Cavity for Ytterbium-Doped Mode-Locked Fiber Laser Incorporated With Both SESAM and Grating Pair. <i>IEEE Photonics Technology Letters</i> , 2009, 21, 3-5.	1.3	6
104	Systematic approach of FinFET based SRAM bitcell design for 32nm node and below. , 2009, , .		4
105	Chromatic dispersion characterization of a chirped mirror with wavelet analysis of white-light spectral interferograms. , 2009, , .		0
106	Group delay dispersion measurement of Yb ³⁺ :YAl ₃ (BO ₃) ₄ crystal with white-light interferometry. <i>Optics Communications</i> , 2008, 281, 679-682.	1.0	2
107	Direct measurement of group delay with joint time-frequency analysis of a white-light spectral interferogram. <i>Optics Letters</i> , 2008, 33, 2855.	1.7	14
108	SLM microscopy: scanless two-photon imaging and photostimulation using spatial light modulators. <i>Frontiers in Neural Circuits</i> , 2008, 2, 5.	1.4	297

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109	Group delay dispersion measurement of Yb:YAB crystal with white-light interferometry. , 2007, , .		0
110	Group delay dispersion measurement of Yb:Gd ₂ SiO ₅ , Yb:GdYSiO ₅ and Yb:LuYSiO ₅ crystal with white-light interferometry. Optics Express, 2007, 15, 8486.	1.7	8
111	Two-photon photostimulation and imaging of neural circuits. Nature Methods, 2007, 4, 943-950.	9.0	240
112	Attractor dynamics of network UP states in the neocortex. Nature, 2003, 423, 283-288.	13.7	581
113	Detecting Action Potentials in Neuronal Populations with Calcium Imaging. Methods, 1999, 18, 215-221.	1.9	271
114	Dendritic spines as basic functional units of neuronal integration. Nature, 1995, 375, 682-684.	13.7	873
115	Control of postsynaptic Ca ²⁺ influx in developing neocortex by excitatory and inhibitory neurotransmitters. Neuron, 1991, 6, 333-344.	3.8	564
116	Hot carriers induced degradation in thin gate oxide MOSFETs. , 1983, , .		11