Chris Xu

List of Publications by Year in Descending Order

161 papers	10,548 citations	42 h-index	101 g-index
265 ext. papers	12,869 ext. citations	5 avg, IF	6.22 L-index

#	Paper	IF	Citations
161	Multiphoton imaging of neural structure and activity in through the intact cuticle.. *ELife*, **2022**, 11,	8.9	1
160	Synchronized time-lens source for coherent Raman scattering microscopy **2022**, 257-271		
159	Imaging deeper than the transport mean free path with multiphoton microscopy.. *Biomedical Optics Express*, **2022**, 13, 452-463	3.5	3
158	Spatially resolved measurements of ballistic and total transmission in microscale tissue samples from 450 nm to 1624 nm.. *Biomedical Optics Express*, **2022**, 13, 438-451	3.5	2
157	Neurophotonic tools for microscopic measurements and manipulation: status report.. *Neurophotonics*, **2022**, 9, 013001	3.9	0
156	Label-free Map of Adult Danionella dracula Brain for in vivo Navigation Using Third Harmonic Generation Microscopy **2021**,		1
155	Joint Optimization of Hadamard Sensing and Reconstruction in Compressed Sensing Fluorescence Microscopy. *Lecture Notes in Computer Science*, **2021**, 129-139	0.9	
154	Shot noise limits on binary detection in multiphoton imaging. *Biomedical Optics Express*, **2021**, 12, 7033-7048	3.5	2
153	Multicolor three-photon fluorescence imaging with single-wavelength excitation deep in mouse brain. *Science Advances*, **2021**, 7,	14.3	29
152	Closed-loop wavefront sensing and correction in the mouse brain with computed optical coherence microscopy. *Biomedical Optics Express*, **2021**, 12, 4934-4954	3.5	0
151	Short-Wave Infrared Confocal Fluorescence Imaging of Deep Mouse Brain with a Superconducting Nanowire Single-Photon Detector. *ACS Photonics*, **2021**, 8, 2800-2810	6.3	7
150	GHz Ultrasonic Chip-Scale Device Induces Ion Channel Stimulation in Human Neural Cells. *Scientific Reports*, **2020**, 10, 3075	4.9	3
149	Deep three-photon imaging of the brain in intact adult zebrafish. *Nature Methods*, **2020**, 17, 605-608	21.6	32
148	Microscopic sensors using optical wireless integrated circuits. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 9173-9179	11.5	26
147	Three-photon neuronal imaging in deep mouse brain. *Optica*, **2020**, 7, 947	8.6	41
146	Quantitative analysis of 1300-nm three-photon calcium imaging in the mouse brain. *ELife*, **2020**, 9,	8.9	31
145	Whole Brain Optical Access in Adult Vertebrates: Two- and Three-Photon Imaging in a Miniature Fish, Danionella priapus **2020**,		2

144	An adaptive excitation source for high-speed multiphoton microscopy. *Nature Methods*, **2020**, 17, 163-166	21.6	38
143	Fabrication of Injectable Micro-Scale Opto-Electronically Transduced Electrodes (MOTEs) for Physiological Monitoring. *Journal of Microelectromechanical Systems*, **2020**, 29, 720-726	2.5	10
142	Multiphoton imaging provides a superior optical biopsy to that of confocal laser endomicroscopy imaging for colorectal lesions. *Endoscopy*, **2019**, 51, 174-178	3.4	6
141	Impact of the emission wavelengths on multiphoton imaging of mouse brains. *Biomedical Optics Express*, **2019**, 10, 1905-1918	3.5	17
140	GCaMP6 ΔF/F dependence on the excitation wavelength in 3-photon and 2-photon microscopy of mouse brain activity. *Biomedical Optics Express*, **2019**, 10, 3343-3352	3.5	9
139	Simultaneous Two- and Three-photon Imaging of Multilayer Neural Activities with Remote Focusing **2019**,		2
138	Real-time in vivo optical biopsy using confocal laser endomicroscopy to evaluate distal margin in situ and determine surgical procedure in low rectal cancer. *Surgical Endoscopy and Other Interventional Techniques*, **2019**, 33, 2332-2338	5.2	6
137	Dynamic visualization of the recovery of mouse hepatobiliary metabolism to acetaminophen-overdose damage. *Journal of Biophotonics*, **2019**, 12, e201800296	3.1	
136	Multiple Regions of Interest on Multiparametric Magnetic Resonance Imaging are Not Associated with Increased Detection of Clinically Significant Prostate Cancer on Fusion Biopsy. *Journal of Urology*, **2018**, 200, 559-563	2.5	2
135	Correcting the limited view in optical-resolution photoacoustic microscopy. *Journal of Biophotonics*, **2018**, 11, e201700196	3.1	12
134	Rapid volumetric imaging with Bessel-Beam three-photon microscopy. *Biomedical Optics Express*, **2018**, 9, 1992-2000	3.5	31
133	Investigation of the long wavelength limit of soliton self-frequency shift in a silica fiber. *Optics Express*, **2018**, 26, 19637-19647	3.3	23
132	Fiber-based tunable repetition rate source for deep tissue two-photon fluorescence microscopy. *Biomedical Optics Express*, **2018**, 9, 2304-2311	3.5	32
131	Comparing the effective attenuation lengths for long wavelength imaging of the mouse brain. *Biomedical Optics Express*, **2018**, 9, 3534-3543	3.5	45
130	The Role of Systematic and Targeted Biopsies in Light of Overlap on Magnetic Resonance Imaging Ultrasound Fusion Biopsy. *European Urology Oncology*, **2018**, 1, 263-267	6.7	11
129	label-free confocal imaging of the deep mouse brain with long-wavelength illumination. *Biomedical Optics Express*, **2018**, 9, 6545-6555	3.5	21
128	Multi-color background-free coherent anti-Stokes Raman scattering microscopy using a time-lens source. *Optics Express*, **2018**, 26, 34474-34483	3.3	3
127	Three-photon imaging of mouse brain structure and function through the intact skull. *Nature Methods*, **2018**, 15, 789-792	21.6	146

126	In vivo three-photon imaging of activity of GCaMP6-labeled neurons deep in intact mouse brain. *Nature Methods*, **2017**, 14, 388-390	21.6	265
125	Nonlinear adaptive optics: aberration correction in three photon fluorescence microscopy for mouse brain imaging **2017**,		2
124	Quantitative Comparison of Two-photon and Three-photon Activity Imaging of GCaMP6s-labeled Neurons in vivo in the Mouse Brain **2017**,		2
123	Characterization and adaptive compression of a multi-soliton laser source. *Optics Express*, **2017**, 25, 320-329	3.5	1
122	Two-photon Shack-Hartmann wavefront sensor. *Optics Letters*, **2017**, 42, 1141-1144	3	5
121	Three-Photon Fluorescence Adaptive Optics for In-Vivo Mouse Brain Imaging **2016**,		1
120	Direct visualization of functional heterogeneity in hepatobiliary metabolism using 6-CFDA as model compound. *Biomedical Optics Express*, **2016**, 7, 3574-3584	3.5	5
119	Nonresonant background suppression for coherent anti-Stokes Raman scattering microscopy using a multi-wavelength time-lens source. *Optics Express*, **2016**, 24, 26687-26695	3.3	10
118	Generation of intense 100 fs solitons tunable from 2 to 43 μm in fluoride fiber. *Optica*, **2016**, 3, 948	8.6	87
117	Erythrocytes Are Oxygen-Sensing Regulators of the Cerebral Microcirculation. *Neuron*, **2016**, 91, 851-862	13.9	101
116	Multiphoton excitation of fluorescent probes. *Cold Spring Harbor Protocols*, **2015**, 2015, 250-8	1.2	13
115	Femtosecond laser bone ablation with a high repetition rate fiber laser source. *Biomedical Optics Express*, **2015**, 6, 32-42	3.5	25
114	Dispersion compensation in three-photon fluorescence microscopy at 1,700 nm. *Biomedical Optics Express*, **2015**, 6, 1392-7	3.5	30
113	Introduction to the bio-optics: design and application. *Biomedical Optics Express*, **2015**, 6, 4899-900	3.5	2
112	In vivo Three Photon Imaging of Neuronal Activities from Hippocampus in Intact Mouse Brain. *Microscopy and Microanalysis*, **2015**, 21, 1721-1722	0.5	
111	Adaptive optics in multiphoton microscopy: comparison of two, three and four photon fluorescence. *Optics Express*, **2015**, 23, 31472-83	3.3	46
110	Adaptive Optics in Three-Photon Fluorescence Microscopy **2015**,		2
109	Advanced Fiber Soliton Sources for Nonlinear Deep Tissue Imaging in Biophotonics. *IEEE Journal of Selected Topics in Quantum Electronics*, **2014**, 20, 50-60	3.8	48

108	Experimental Demonstration of Soliton Cascade in Higher-Order-Mode Fibers. *IEEE Photonics Technology Letters*, **2014**, 26, 301-304	2.2	
107	In Vivo Three-photon Calcium Imaging of Brain Activity from Layer 6 Neurons in Mouse Brain **2014**,		10
106	Wavefront sensorless adaptive optics temporal focusing-based multiphoton microscopy. *Biomedical Optics Express*, **2014**, 5, 1768-77	3.5	17
105	Nonlinear structured-illumination enhanced temporal focusing multiphoton excitation microscopy with a digital micromirror device. *Biomedical Optics Express*, **2014**, 5, 2526-36	3.5	33
104	Measurements of multiphoton action cross sections for multiphoton microscopy. *Biomedical Optics Express*, **2014**, 5, 3427-33	3.5	99
103	Multiphoton gradient index endoscopy for evaluation of diseased human prostatic tissue ex vivo. *Journal of Biomedical Optics*, **2014**, 19, 116011	3.5	12
102	Intravital Multiphoton Endoscopy **2014**, 305-370		1
101	Frequency Multiplexed Multiphoton Phosphorescence Lifetime Microscopy. *Nature Photonics*, **2013**, 7, 33-37	33.9	75
100	Multiphoton microscopy to identify and characterize the transition zone in a mouse model of Hirschsprung disease. *Journal of Pediatric Surgery*, **2013**, 48, 1288-93	2.6	4
99	Transverse Field Dispersion in the Generalized Nonlinear Schr□inger Equation: Four Wave Mixing in a Higher Order Mode Fiber. *Journal of Lightwave Technology*, **2013**, 31, 3425-3431	4	6
98	three-photon microscopy of subcortical structures within an intact mouse brain. *Nature Photonics*, **2013**, 7,	33.9	830
97	Nanotools for neuroscience and brain activity mapping. *ACS Nano*, **2013**, 7, 1850-66	16.7	248
96	Higher-order-mode fiber optimized for energetic soliton propagation: erratum. *Optics Letters*, **2013**, 38, 3185	3	
95	Three-photon excited fluorescence imaging of unstained tissue using a GRIN lens endoscope. *Biomedical Optics Express*, **2013**, 4, 652-8	3.5	31
94	Dual modality endomicroscope with optical zoom capability. *Biomedical Optics Express*, **2013**, 4, 1494-503	3.5	16
93	Miniature varifocal objective lens for endomicroscopy. *Optics Letters*, **2013**, 38, 3103-6	3	13
92	Two-photon fluorescence imaging of intracellular hydrogen peroxide with chemoselective fluorescent probes. *Journal of Biomedical Optics*, **2013**, 18, 106002	3.5	14
91	Time-lens based hyperspectral stimulated Raman scattering imaging and quantitative spectral analysis. *Journal of Biophotonics*, **2013**, 6, 815-20	3.1	13

90	**2013**,		4
89	Multi-color femtosecond source for simultaneous excitation of multiple fluorescent proteins in two-photon fluorescence microscopy **2013**,		1
88	Spectroscopic SRS imaging with a time-lens source synchronized to a femtosecond pulse shaper **2013**,		1
87	Tunable megawatt soliton pulse generation covering the optimum wavelength window for tissue penetration **2013**,		1
86	In Vivo Deep Penetration Three-Photon Imaging of Mouse Brain through an Unthinned, Intact Skull **2013**,		1
85	A Miniature Endomicroscope with Optical Zoom Capability **2013**,		1
84	Multiphoton tomographic imaging: a potential optical biopsy tool for detecting gastrointestinal inflammation and neoplasia. *Cancer Prevention Research*, **2012**, 5, 1280-90	3.2	25
83	Multifocal multiphoton endoscope. *Optics Letters*, **2012**, 37, 1349-51	3	31
82	In vivo imaging of unstained tissues using a compact and flexible multiphoton microendoscope. *Journal of Biomedical Optics*, **2012**, 17, 040505	3.5	60
81	Higher-order-mode fiber optimized for energetic soliton propagation. *Optics Letters*, **2012**, 37, 3459-61	3	22
80	In vivo imaging of unstained tissues using long gradient index lens multiphoton endoscopic systems. *Biomedical Optics Express*, **2012**, 3, 1077-85	3.5	86
79	Three-color femtosecond source for simultaneous excitation of three fluorescent proteins in two-photon fluorescence microscopy. *Biomedical Optics Express*, **2012**, 3, 1972-7	3.5	47
78	Spatiotemporal focusing-based widefield multiphoton microscopy for fast optical sectioning. *Optics Express*, **2012**, 20, 8939-48	3.3	61
77	Time-domain multimode dispersion measurement in a higher-order-mode fiber. *Optics Letters*, **2012**, 37, 347-9	3	33
76	Use of a lensed fiber for a large-field-of-view, high-resolution, fiber-scanning microendoscope. *Optics Letters*, **2012**, 37, 881-3	3	20
75	Intermodal Čerenkov radiation in a higher-order-mode fiber. *Optics Letters*, **2012**, 37, 4410-2	3	18
74	Fiber delivered two-color picosecond source through nonlinear spectral transformation for coherent Raman scattering imaging. *Applied Physics Letters*, **2012**, 100, 71106-711063	3.4	3
73	Intermodal four-wave mixing in a higher-order-mode fiber. *Applied Physics Letters*, **2012**, 101, 161106	3.4	28

72	Fiber delivered two-color picosecond source for coherent Raman scattering imaging **2012**,		1
71	Dual Modality Microendoscope with Optical Zoom Capability **2012**,		2
70	Generation of Cerenkov radiation at 850 nm in higher-order-mode fiber. *Optics Express*, **2011**, 19, 8774-80	3.3	8
69	Wavelength-tunable high-energy soliton pulse generation from a large-mode-area fiber pumped by a time-lens source. *Optics Letters*, **2011**, 36, 942-4	3	31
68	High sensitivity third-order autocorrelation measurement by intensity modulation and third harmonic detection. *Optics Letters*, **2011**, 36, 2372-4	3	10
67	Fiber-delivered picosecond source for coherent Raman scattering imaging. *Optics Letters*, **2011**, 36, 4233-5	3.5	16
66	Identification of spermatogenesis with multiphoton microscopy: an evaluation in a rodent model. *Journal of Urology*, **2011**, 186, 2487-92	2.5	31
65	Miniaturized fiber raster scanner for endoscopy **2011**,		2
64	Multiphoton microscopy for structure identification in human prostate and periprostatic tissue: implications in prostate cancer surgery. *BJU International*, **2011**, 108, 1421-9	5.6	46
63	Compact and flexible raster scanning multiphoton endoscope capable of imaging unstained tissue. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 17598-603	11.5	194
62	Tunable high-energy soliton pulse generation from a large-mode-area fiber and its application to third harmonic generation microscopy. *Applied Physics Letters*, **2011**, 99, 071112	3.4	52
61	All fiber 1064-nm time-lens source for coherent anti-Stokes Raman scattering and stimulated Raman scattering microscopy **2011**,		1
60	Instrumentation for exact packet timings in networks **2011**,		1
59	In vivo two-photon microscopy to 1.6-mm depth in mouse cortex. *Journal of Biomedical Optics*, **2011**, 16, 106014	3.5	264
58	In vivo two-photon imaging of cortical vasculature in mice to 1.5-mm depth with 1280-nm excitation **2011**,		1
57	High speed multiphoton axial scanning through an optical fiber in a remotely scanned temporal focusing setup. *Biomedical Optics Express*, **2010**, 2, 80-8	3.5	24
56	All-fiber, versatile picosecond time-lens light source and its application to Cerenkov radiation generation in higher order mode fiber **2010**,		2
55	In vivo deep tissue imaging with long wavelength multiphoton excitation **2010**,		1

54	Synchronized time-lens source for coherent Raman scattering microscopy. *Optics Express*, **2010**, 18, 24019-24	3.3	38
53	Endoscope lens with dual fields of view and resolutions for multiphoton imaging. *Optics Letters*, **2010**, 35, 2735-7	3	9
52	Ultralong continuously tunable parametric delays via a cascading discrete stage. *Optics Express*, **2010**, 18, 333-9	3.3	22
51	Multiphoton Modulation Microscopy for High-Speed Deep Biological Imaging **2010**,		2
50	Tunable dispersion compensation by a rotating cylindrical lens. *Optics Letters*, **2009**, 34, 1195-7	3	15
49	Enhanced axial confinement of sum-frequency generation in a temporal focusing setup. *Optics Letters*, **2009**, 34, 1786-8	3	14
48	Generation of high repetition rate femtosecond pulses from a CW laser by a time-lens loop. *Optics Express*, **2009**, 17, 6584-90	3.3	15
47	1 micros tunable delay using parametric mixing and optical phase conjugation in Si waveguides. *Optics Express*, **2009**, 17, 7004-10	3.3	28
46	Deep tissue multiphoton microscopy using longer wavelength excitation. *Optics Express*, **2009**, 17, 13354-64	3.3	391
45	1 □ tunable delay using parametric mixing and optical phase conjugation in Si waveguides: reply. *Optics Express*, **2009**, 17, 16029	3.3	1
44	Soliton Self-Frequency Shift: Experimental Demonstrations and Applications. *IEEE Journal of Selected Topics in Quantum Electronics*, **2008**, 14, 713-723	3.8	90
43	Fiber-array-based detection scheme for single-shot pulse contrast characterization. *Optics Letters*, **2008**, 33, 1969-71	3	13
42	Large tunable delays using parametric mixing and phase conjugation in Si nanowaveguides. *Optics Express*, **2008**, 16, 10349-57	3.3	30
41	Experimental and theoretical analysis of core-to-core coupling on fiber bundle imaging. *Optics Express*, **2008**, 16, 21598-607	3.3	76
40	Background Reduction with Two-Color Two-Beam Multiphoton Excitation **2008**,		3
39	Demonstration of soliton self-frequency shift below 1300 nm in higher-order mode, solid silica-based fiber. *Optics Letters*, **2007**, 32, 340-2	3	51
38	Generation of femtosecond pulses at 1350 nm by Cerenkov radiation in higher-order-mode fiber. *Optics Letters*, **2007**, 32, 1053-5	3	20
37	Generation of 3.5 nJ femtosecond pulses from a continuous-wave laser without mode locking. *Optics Letters*, **2007**, 32, 1408-10	3	38

36	Numerical analysis of light propagation in image fibers or coherent fiber bundles. *Optics Express*, **2007**, 15, 2151-65	3.3	66
35	Nonlinear distortion free fiber-based chirped pulse amplification with self-phase modulation up to 2pi. *Optics Express*, **2007**, 15, 2530-4	3.3	9
34	Compensation of self-phase modulation in fiber-based chirped-pulse amplification systems. *Optics Letters*, **2006**, 31, 1756-8	3	19
33	Large tunable optical delays via self-phase modulation and dispersion. *Optics Express*, **2006**, 14, 12022-7	3.3	60
32	Simultaneous spatial and temporal focusing for axial scanning. *Optics Express*, **2006**, 14, 12243-54	3.3	86
31	Application of telecom technologies to optical instrumentation **2006**, 6388, 203		
30	Ultrafast optical delay line using soliton propagation between a time-prism pair. *Optics Express*, **2005**, 13, 1138-43	3.3	22
29	Simultaneous spatial and temporal focusing of femtosecond pulses. *Optics Express*, **2005**, 13, 2153-9	3.3	309
28	The effects of randomly occurring nonuniformities on propagation in photonic crystal fibers. *Optics Express*, **2005**, 13, 2799-807	3.3	29
27	All-optical, wavelength and bandwidth preserving, pulse delay based on parametric wavelength conversion and dispersion. *Optics Express*, **2005**, 13, 7872-7	3.3	110
26	Independent core propagation in two-core photonic crystal fibers resulting from structural nonuniformities. *Optics Express*, **2005**, 13, 10336-48	3.3	14
25	Ultrafast optical delay line by use of a time-prism pair. *Optics Letters*, **2005**, 30, 99-101	3	28
24	Multiwavelength pulse generator using time-lens compression. *Optics Letters*, **2004**, 29, 1470-2	3	60
23	Photonic analog-to-digital converter using soliton self-frequency shift and interleaving spectral filters. *Optics Letters*, **2003**, 28, 986-8	3	77
22	Multiphoton Excitation of Molecular Fluorophores and Nonlinear Laser Microscopy **2002**, 471-540		28
21	Suppression of intrachannel four-wave-mixing induced ghost pulses in high-speed transmissions by phase inversion between adjacent marker blocks. *Optics Letters*, **2002**, 27, 1177-9	3	48
20	Analysis of soliton collisions in a wavelength-division- multiplexed dispersion-managed soliton transmission system. *Optics Letters*, **2002**, 27, 1303-5	3	15
19	Postnonlinearity compensation with data-driven phase modulators in phase-shift keying transmission. *Optics Letters*, **2002**, 27, 1619-21	3	84

18	Ultrasensitive and high-dynamic-range two-photon absorption in a GaAs photomultiplier tube. *Optics Letters*, **2002**, 27, 2076-8	3	69
17	Dispersion measurement of tapered air-silica microstructure fiber by white-light interferometry. *Applied Optics*, **2002**, 41, 4467-70	1.7	32
16	Two-photon photocurrent imaging of vertical cavity surface emitting lasers. *Applied Physics Letters*, **2000**, 76, 1510-1512	3.4	4
15	Comparison of one- and two-photon optical beam-induced current imaging. *Journal of Applied Physics*, **1999**, 86, 2226-2231	2.5	28
14	Feasibility of molecular-resolution fluorescence near-field microscopy using multi-photon absorption and field enhancement near a sharp tip. *Journal of Applied Physics*, **1999**, 85, 1294-1301	2.5	84
13	Design of organic molecules with large two-photon absorption cross sections. *Science*, **1998**, 281, 1653-6	33.3	1841
12	Two-Photon Fluorescence Excitation Cross Sections of Biomolecular Probes from 690 to 960 nm. *Applied Optics*, **1998**, 37, 7352-6	1.7	540
11	Two-photon optical beam induced current imaging through the backside of integrated circuits. *Applied Physics Letters*, **1997**, 71, 2578-2580	3.4	40
10	Hyper-Rayleigh and hyper-Raman scattering background of liquid water in two-photon excited fluorescence detection. *Analytical Chemistry*, **1997**, 69, 1285-7	7.8	31
9	Measurement of group delay dispersion of high numerical aperture objective lenses using two-photon excited fluorescence. *Applied Optics*, **1997**, 36, 397-401	1.7	69
8	Multiphoton-excited visible emission by serotonin solutions. *Photochemistry and Photobiology*, **1997**, 65, 931-6	3.6	50
7	Measurement of two-photon excitation cross sections of molecular fluorophores with data from 690 to 1050 nm. *Journal of the Optical Society of America B: Optical Physics*, **1996**, 13, 481	1.7	1797
6	Multiphoton fluorescence excitation: new spectral windows for biological imaging **1996**, 2819, 274		
5	Multiphoton excitation cross-sections of molecular fluorophores. *Bioimaging*, **1996**, 4, 198-207		47
4	Multiphoton excitation cross-sections of molecular fluorophores. *Bioimaging*, **1996**, 4, 198-207		118
3	Determination of absolute two-photon excitation cross sections by in situ second-order autocorrelation. *Optics Letters*, **1995**, 20, 2372	3	76
2	Whole-brain optical access in small adult vertebrates with two- and three-photon microscopy		1
1	Multiphoton imaging of neural structure and activity in Drosophila through the intact cuticle		2