Emmanuel Beaurepaire

List of Publications by Year
in descending order

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120 papers	7,022 citations	66234 42 h-index	60497 81 g-index
132 all docs	132 docs citations	132 times ranked	6913 citing authors

#	Article	IF	Citations
1	Imaging lipid bodies in cells and tissues using third-harmonic generation microscopy. Nature Methods, 2006, 3, 47-53.	9.0	522
2	High-resolution full-field optical coherence tomography with a Linnik microscope. Applied Optics, 2002, 41, 805.	2.1	457
3	Full-field optical coherence microscopy. Optics Letters, 1998, 23, 244.	1.7	433
4	Two-photon microscopy in brain tissue: parameters influencing the imaging depth. Journal of Neuroscience Methods, 2001, 111, 29-37.	1.3	399
5	Cell Lineage Reconstruction of Early Zebrafish Embryos Using Label-Free Nonlinear Microscopy. Science, 2010, 329, 967-971.	6.0	327
6	Tissue Deformation Modulates Twist Expression to Determine Anterior Midgut Differentiation in Drosophila Embryos. Developmental Cell, 2008, 15, 470-477.	3.1	306
7	Second harmonic imaging and scoring of collagen in fibrotic tissues. Optics Express, 2007, 15, 4054.	1.7	268
8	In vivo modulation of morphogenetic movements in Drosophila embryos with femtosecond laser pulses. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 1047-1052.	3.3	243
9	Functionalized Fluorescent Oxide Nanoparticles:â€‰ Artificial Toxins for Sodium Channel Targeting and Imaging at the Single-Molecule Level. Nano Letters, 2004, 4, 2079-2083.	4.5	181
10	Multicolor two-photon tissue imaging by wavelength mixing. Nature Methods, 2012, 9, 815-818.	9.0	165
11	Combined scanning optical coherence and two-photon-excited fluorescence microscopy. Optics Letters, 1999, 24, 969.	1.7	145
12	Multimodal Nonlinear Imaging of the Human Cornea. , 2010, 51, 2459.		143
13	Multiplex Cell and Lineage Tracking with Combinatorial Labels. Neuron, 2014, 81, 505-520.	3.8	142
14	Odor-evoked calcium signals in dendrites of rat mitral cells. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 1230-1234.	3.3	138
15	Ultra-deep two-photon fluorescence excitation in turbid media. Optics Communications, 2001, 188, 25-29.	1.0	133
16	Multicolor two-photon light-sheet microscopy. Nature Methods, 2014, 11, 600-601.	9.0	130
17	Whole-brain functional imaging with two-photon light-sheet microscopy. Nature Methods, 2015, 12, 379-380.	9.0	129
18	Three-dimensional investigation and scoring of extracellular matrix remodeling during lung fibrosis using multiphoton microscopy. Microscopy Research and Technique, 2007, 70, 162-170.	1.2	126

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19	Fourier-transform coherent anti-Stokes Raman scattering microscopy. Optics Letters, 2006, 31, 480.	1.7	124
20	Use of coherent control for selective two-photon fluorescence microscopy in live organisms. Optics Express, 2006, 14, 759.	1.7	120
21	Accuracy of correction in modal sensorless adaptive optics. Optics Express, 2012, 20, 2598.	1.7	106
22	Second-harmonic microscopy of unstained living cardiac myocytes:â€ƒmeasurements of sarcomere length with 20-nm accuracy. Optics Letters, 2004, 29, 2031.	1.7	100
23	Multicolor two-photon imaging of endogenous fluorophores in living tissues by wavelength mixing. Scientific Reports, 2017, 7, 3792.	1.6	99
24	Dual-color deep-tissue three-photon microscopy with a multiband infrared laser. Light: Science and Applications, 2018, 7, 12.	7.7	91
25	Cortical astrocytes develop in a plastic manner at both clonal and cellular levels. Nature Communications, 2019, 10, 4884.	5.8	87
26	Micrometer scaleEx Vivo multiphoton imaging of unstained arterial wall structure. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2006, 69A, 20-26.	1.1	83
27	Dynamic aberration correction for multiharmonic microscopy. Optics Letters, 2009, 34, 3145.	1.7	80
28	Multicolor multiscale brain imaging with chromatic multiphoton serial microscopy. Nature Communications, 2019, 10, 1662.	5.8	75
29	Mechanical factors activateÃŸâ€cateninâ€dependent oncogene expression in APC^{1638N/+}mouse colon. HFSP Journal, 2008, 2, 286-294.	2.5	74
30	Quantitative Characterization of Biological Liquids for Third-Harmonic Generation Microscopy. Biophysical Journal, 2007, 92, 603-612.	0.2	72
31	Odor-evoked calcium signals in dendrites of rat mitral cells. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 1230-4.	3.3	72
32	Signal epidetection in third-harmonic generation microscopy of turbid media. Optics Express, 2007, 15, 8913.	1.7	64
33	Structure sensitivity in third-harmonic generation microscopy. Optics Letters, 2005, 30, 2134.	1.7	63
34	Two-photon microscopy with simultaneous standard and extended depth of field using a tunable acoustic gradient-index lens. Optics Letters, 2009, 34, 1684.	1.7	62
35	Label-free imaging of bone multiscale porosity and interfaces using third-harmonic generation microscopy. Scientific Reports, 2017, 7, 3419.	1.6	62
36	Harmonic microscopy of isotropic and anisotropic microstructure of the human cornea. Optics Express, 2010, 18, 5028.	1.7	60

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37	Epifluorescence collection in two-photon microscopy. Applied Optics, 2002, 41, 5376.	2.1	59
38	Mitigating Phototoxicity during Multiphoton Microscopy of Live Drosophila Embryos in the 1.0â€“1.2 Âµm Wavelength Range. PLoS ONE, 2014, 9, e104250.	1.1	59
39	Life-Long Neurogenic Activity of Individual Neural Stem Cells and Continuous Growth Establish an Outside-In Architecture in the Teleost Pallium. Current Biology, 2017, 27, 3288-3301.e3.	1.8	57
40	Advances in multiphoton microscopy for imaging embryos. Current Opinion in Genetics and Development, 2011, 21, 538-548.	1.5	54
41	An actin-based viscoplastic lock ensures progressive body-axis elongation. Nature, 2019, 573, 266-270.	13.7	54
42	Velocimetric third-harmonic generation microscopy:â€ƒmicrometer-scale quantification of morphogenetic movements in unstained embryos. Optics Letters, 2004, 29, 2881.	1.7	52
43	Large-scale live imaging of adult neural stem cells in their endogenous niche. Development (Cambridge), 2015, 142, 3592-600.	1.2	51
44	Combined third-harmonic generation and four-wave mixing microscopy of tissues and embryos. Biomedical Optics Express, 2011, 2, 2837.	1.5	44
45	Emission properties and applications of nanostructured luminescent oxide nanoparticles. Progress in Solid State Chemistry, 2005, 33, 99-106.	3.9	43
46	Third-harmonic generation microscopy with focus-engineered beams: a numerical study. Optics Express, 2008, 16, 14703.	1.7	43
47	3D resolved mapping of optical aberrations in thick tissues. Biomedical Optics Express, 2012, 3, 1898.	1.5	37
48	All-fiber femtosecond laser providing 9 nJ, 50 MHz pulses at 1650 nm for three-photon microscopy. Journal of Optics (United Kingdom), 2017, 19, 065506.	1.0	36
49	Non-invasive monitoring of cell metabolism and lipid production in 3D engineered human adipose tissues using label-free multiphoton microscopy. Biomaterials, 2013, 34, 8607-8616.	5.7	35
50	Multiphoton microscopy of engineered dermal substitutes: assessment of 3-D collagen matrix remodeling induced by fibroblast contraction. Journal of Biomedical Optics, 2010, 15, 1.	1.4	31
51	Monitoring dynamic collagen reorganization during skin stretching with fast polarizationâ€resolved second harmonic generation imaging. Journal of Biophotonics, 2019, 12, e201800336.	1.1	31
52	Intravital deep-tumor single-beam 3-photon, 4-photon, and harmonic microscopy. ELife, 2022, 11, .	2.8	31
53	Fast In Vivo Imaging of SHG Nanoprobes with Multiphoton Light-Sheet Microscopy. ACS Photonics, 2020, 7, 1036-1049.	3.2	29
54	Dynamic spatiotemporal coordination of neural stem cell fate decisions occurs through local feedback in the adult vertebrate brain. Cell Stem Cell, 2021, 28, 1457-1472.e12.	5.2	29

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55	The TPLATE complex mediates membrane bending during plant clathrinâ€“mediated endocytosis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	26
56	Multiplexed two-photon microscopy of dynamic biological samples with shaped broadband pulses. Optics Express, 2009, 17, 12741.	1.7	24
57	High-speed polarization-resolved third-harmonic microscopy. Optica, 2019, 6, 385.	4.8	24
58	Efficient second-harmonic imaging of collagen in histological slides using Bessel beam excitation. Scientific Reports, 2016, 6, 29863.	1.6	22
59	Dispersion-based pulse shaping for multiplexed two-photon fluorescence microscopy. Optics Letters, 2010, 35, 3444.	1.7	20
60	Probing Ordered Lipid Assemblies with Polarized Third-Harmonic-Generation Microscopy. Physical Review X, 2013, 3, .	2.8	20
61	Simultaneous NAD(P)H and FAD fluorescence lifetime microscopy of long UVAâ€“induced metabolic stress in reconstructed human skin. Scientific Reports, 2021, 11, 22171.	1.6	20
62	Fast in vivo multiphoton light-sheet microscopy with optimal pulse frequency. Biomedical Optics Express, 2020, 11, 6012.	1.5	19
63	Femtosecond pulse-induced microprocessing of live Drosophila embryos. Medical Laser Application: International Journal for Laser Treatment and Research, 2005, 20, 207-216.	0.4	18
64	Third-harmonic generation microscopy with Bessel beams: a numerical study. Optics Express, 2012, 20, 24886.	1.7	18
65	Metrology of Multiphoton Microscopes Using Second Harmonic Generation Nanoprobes. Small, 2017, 13, 1701442.	5.2	16
66	Snapshots of archaeal DNA replication and repair in living cells using super-resolution imaging. Nucleic Acids Research, 2018, 46, 10757-10770.	6.5	16
67	Optical in situ size determination of single lanthanide-ion doped oxide nanoparticles. Applied Physics Letters, 2006, 89, 253103.	1.5	15
68	Methodology for Reconstructing Early Zebrafish Development From In Vivo Multiphoton Microscopy. IEEE Transactions on Image Processing, 2012, 21, 2335-2340.	6.0	15
69	Simple characterisation of a deformable mirror inside a high numerical aperture microscope using phase diversity. Journal of Microscopy, 2011, 244, 136-143.	0.8	10
70	Third harmonic generation imaging and analysis of the effect of low gravity on the lacuno-canalicular network of mouse bone. PLoS ONE, 2019, 14, e0209079.	1.1	10
71	Assessing correction accuracy in image-based adaptive optics. , 2012, , .		5
72	Modeling nonlinear microscopy near index-mismatched interfaces. Optica, 2021, 8, 944.	4.8	5

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73	<title>Optical coherence microscopy for high-resolution biological imaging</title>. , 2000, 4160, 24.		3
74	Functionalized luminescent oxide nanoparticles for sodium channel imaging at the single molecule level. , 2005, 5705, 192.		2
75	An Efficient Multicolor Two-Photon Imaging of Endogenous Fluorophores in Living Tissues by Wavelength Mixing. Biophysical Journal, 2017, 112, 186a.	0.2	2
76	Multicolor Two-Photon Fluorescence Lifetimes Microscopy by Wavelenght Mixing for Efficient and Simultaneus NADH and FAD Imaging Reveals Metabolic Shifts Associated to Cellular Differentiation and Oxidative Stress in Living Tissues. Biophysical Journal, 2018, 114, 346a.	0.2	2
77	In Utero Electroporation of Multiaddressable Genome-Integrating Color (MAGIC) Markers to Individualize Cortical Mouse Astrocytes. Journal of Visualized Experiments, 2020, , .	0.2	2
78	In vivo microdissection and live embryo imaging by two-photon microscopy to study Drosophila melanogaster early development. , 2004, 5463, 13.		1
79	Multiphoton microscopy using intrinsic signals for pharmacological studies in unstained cardiac and vascular tissue. , 2005, , .		1
80	Processing pipeline for digitalizing the lineage tree of early zebrafish embryogenesis from multiharmonic imaging. , 2011, , .		1
81	Neural Cell Segmentation in Large-Scale 3D Color Fluorescence Microscopy Images for Developemental Neuroscience. , 2018, , .		1
82	Microscopy with femtosecond lasers. European Physical Journal Special Topics, 2002, 12, 53-57.	0.2	1
83	<title>Optical coherence microscopy for the in-depth study of biological structures: system based on a parallel detection scheme</title>. , 1998, , .		0
84	<title>Low-coherence in-depth microscopy for biological tissue imaging: design of a real-time control system</title>. , 1998, 3194, 198.		0
85	<title>Imaging through scattering media using cameras and parallel processing</title>. , 1999, , .		0
86	<title>High-resolution real-time full-field interference microscopy</title>. , 1999, 3605, 13.		0
87	<title>3D imaging in biological tissues by tagging photon paths with ultrasound</title>. , 1999, , .		0
88	<title>Strategies for improving depth-penetration of two-photon imaging in vivo</title>. , 2001, , .		0
89	Chiral chromophores for second harmonic microscopy. , 2003, 5139, 121.		0
90	In vivo analysis of Drosophila embryo developmental dynamics by femtosecond pulse-induced ablation and multimodal nonlinear microscopy. , 2005, 5700, 256.		0

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91	An all-optical approach to modulate and quantitatively analyse embryo morphogenetic movements by using ultrashort laser pulses. , 2006, , .		0
92	Structure sensitivity and sources of contrast in third-harmonic generation (THG) microscopy of cells and tissues. , 2006, 6089, 229.		0
93	Spectroscopic analysis of skin intrinsic signals for multiphoton microscopy. , 2006, , .		0
94	Nonlinear microscopy of collagen fibers. , 2007, , .		0
95	Contrast mechanisms and signal epidetection in THG microscopy of scattering tissues. , 2008, , .		0
96	Nonlinear microscopy of tissues and embryo morphogenesis. , 2011, , .		0
97	Calibration of an adaptive microscope using phase diversity. , 2012, , .		0
98	Correction precision in image-based adaptive optics for nonlinear microscopy. Proceedings of SPIE, 2012, , .	0.8	0
99	Multiscale analysis of polarization-resolved third-harmonic generation microscopy from ordered lipid assemblies. , 2013, , .		0
100	Multiphoton light-sheet microscopy using wavelength mixing: fast multicolor imaging of the beating Zebrafish heart with low photobleaching. , 2015, , .		0
101	Three-photon microscopy with a monolithic all-fiber format laser emitting at 1650 nm. , 2016, , .		0
102	Multiphoton Imaging of Developing Tissues: Multicolor and Light-sheet Approaches. , 2017, , .		0
103	Volumetric multicolor multiphoton microscopy for neuron connectivity and cell lineage analysis. , 2017, , .		0
104	LIQUID LENS APPROACHES FOR SIMULTANEOUS STANDARD AND EXTENDED DEPTH OF FIELD IMAGING. , 2010, , .		0
105	Two-photon microscopy of biological organisms with shaped broadband pulses. , 2010, , .		0
106	Quantitative, Functional Biomarkers of Stem Cell Differentiation in 3D Using Multi-modal Non-linear Imaging with Endogenous Contrast. , 2013, , .		0
107	Large-scale live imaging of adult neural stem cells in their endogenous niche. Journal of Cell Science, 2015, 128, e1.2-e1.2.	1.2	0
108	MHz-repetition-rate ultrafast OPCPA system at 1700 nm for in-depth 3-photon microscopy of nervous tissue. , 2017, , .		0

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109	Dual-color three-photon microscopy of neural tissue using a multiband MHz OPA. , 2018, , .		0
110	Multicolor Two-photon Imaging of Endogenous Fluorophores in Living Tissues by Wavelength Mixing. , 2018, , .		0
111	Dual-color Three-photon Microscopy for Deep Imaging of Neural Tissue. , 2018, , .		0
112	Metrology in nonlinear microscopy using harmonic generation nanoprobes (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 Td (F		0
113	Chromatic serial multiphoton microscopy for high-content multiscale analysis of large brain volumes. , 2019, , .		0
114	Chromatic serial multiphoton microscopy for multicolor imaging of large brain volumes. , 2019, , .		0
115	Label-free THG imaging of bone tissue microstructure: effect of low gravity on the lacuno-canalicular network. , 2019, , .		0
116	Fast P-THG microscopy for the characterization of biomaterials. , 2019, , .		0
117	Multiphoton Light-sheet Microscopy at Optimal Pulse Frequency for Fast In Vivo Imaging. , 2020, , .		0
118	Advances in fast multiphoton microscopy using light-sheet illumination. , 2020, , .		0
119	Fast cardiac imaging in live embryos using multiphoton light-sheet microscopy at low laser repetition rate. , 2021, , .		0
120	nAdder: A scale-space approach for the 3D analysis of neuronal traces. PLoS Computational Biology, 2022, 18, e1010211.	1.5	0