Giuseppe Vicidomini

List of Publications by Year
in descending order

104 papers	4,206 citations	147566 31 h-index	123241 61 g-index
114 all docs	114 docs citations	114 times ranked	4230 citing authors

#	Article	IF	Citations
1	STED super-resolved microscopy. Nature Methods, 2018, 15, 173-182.	9.0	452
2	Sharper low-power STED nanoscopy by time gating. Nature Methods, 2011, 8, 571-573.	9.0	396
3	The 2015 super-resolution microscopy roadmap. Journal Physics D: Applied Physics, 2015, 48, 443001.	1.3	291
4	Image deblurring with Poisson data: from cells to galaxies. Inverse Problems, 2009, 25, 123006.	1.0	237
5	Simultaneous multi-lifetime multi-color STED imaging for colocalization analyses. Optics Express, 2011, 19, 3130.	1.7	204
6	STED Nanoscopy with Time-Gated Detection: Theoretical and Experimental Aspects. PLoS ONE, 2013, 8, e54421.	1.1	134
7	Multi-photon excitation microscopy. BioMedical Engineering OnLine, 2006, 5, 36.	1.3	132
8	A robust and versatile platform for image scanning microscopy enabling super-resolution FLIM. Nature Methods, 2019, 16, 175-178.	9.0	132
9	Strategies to maximize the performance of a STED microscope. Optics Express, 2012, 20, 7362.	1.7	113
10	Encoding and decoding spatio-temporal information for super-resolution microscopy. Nature Communications, 2015, 6, 6701.	5.8	95
11	Fourier ring correlation simplifies image restoration in fluorescence microscopy. Nature Communications, 2019, 10, 3103.	5.8	94
12	Simultaneous multiplane confocal microscopy using acoustic tunable lenses. Optics Express, 2014, 22, 19293.	1.7	93
13	STED with wavelengths closer to the emission maximum. Optics Express, 2012, 20, 5225.	1.7	91
14	Synthesis of highly luminescent wurtzite CdSe/CdS giant-shell nanocrystals using a fast continuous injection route. Journal of Materials Chemistry C, 2014, 2, 3439.	2.7	90
15	Single-wavelength two-photon excitationâ€"stimulated emission depletion (SW2PE-STED) superresolution imaging. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6390-6393.	3.3	84
16	Evaluating image resolution in stimulated emission depletion microscopy. Optica, 2018, 5, 32.	4.8	84
17	STED-FLCS: An Advanced Tool to Reveal Spatiotemporal Heterogeneity of Molecular Membrane Dynamics. Nano Letters, 2015, 15, 5912-5918.	4.5	71
18	Measurement of nanoscale three-dimensional diffusion in the interior of living cells by STED-FCS. Nature Communications, 2017, 8, 65.	5.8	68

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19	Towards real-time image deconvolution: application to confocal and STED microscopy. Scientific Reports, 2013, 3, 2523.	1.6	65
20	STED nanoscopy: a glimpse into the future. Cell and Tissue Research, 2015, 360, 143-150.	1.5	64
21	Gated CW-STED microscopy: A versatile tool for biological nanometer scale investigation. Methods, 2014, 66, 124-130.	1.9	60
22	Smart scanning for low-illumination and fast RESOLFT nanoscopy in vivo. Nature Communications, 2019, 10, 556.	5.8	58
23	Image scanning microscopy with a quadrant detector. Optics Letters, 2015, 40, 5355.	1.7	49
24	High Data Output and Automated 3D Correlative Lightâ€"Electron Microscopy Method. Traffic, 2008, 9, 1828-1838.	1.3	48
25	Multi-images deconvolution improves signal-to-noise ratio on gated stimulated emission depletion microscopy. Applied Physics Letters, 2014, 105, 234106.	1.5	43
26	Image formation in image scanning microscopy, including the case of two-photon excitation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2017, 34, 1339.	0.8	39
27	Markov random field aided Bayesian approach for image reconstruction in confocal microscopy. Journal of Applied Physics, 2007, 102, .	1.1	38
28	Photon-separation to enhance the spatial resolution of pulsed STED microscopy. Nanoscale, 2019, 11, 1754-1761.	2.8	38
29	Local raster image correlation spectroscopy generates high-resolution intracellular diffusion maps. Communications Biology, 2018, 1, 10.	2.0	37
30	Measuring Mobility in Chromatin by Intensity-Sorted FCS. Biophysical Journal, 2019, 116, 987-999.	0.2	37
31	Confocal-based fluorescence fluctuation spectroscopy with a SPAD array detector. Light: Science and Applications, 2021, 10, 31.	7.7	37
32	SPAD-based asynchronous-readout array detectors for image-scanning microscopy. Optica, 2020, 7, 755.	4.8	37
33	Role of three-dimensional bleach distribution in confocal and two-photon fluorescence recovery after photobleaching experiments. Applied Optics, 2007, 46, 7401.	2.1	36
34	A new filtering technique for removing antiâ€Stokes emission background in gated CWâ€STED microscopy. Journal of Biophotonics, 2014, 7, 376-380.	1.1	36
35	Two-photon image-scanning microscopy with SPAD array and blind image reconstruction. Biomedical Optics Express, 2020, 11, 2905.	1.5	33
36	Image reconstruction for multiphoton fluorescence microscopy. Applied Physics Letters, 2008, 92, .	1.5	31

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37	Pixel reassignment in image scanning microscopy: a re-evaluation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2020, 37, 154.	0.8	31
38	A novel approach for correlative light electron microscopy analysis. Microscopy Research and Technique, 2010, 73, 215-224.	1.2	29
39	Application of the splitâ€gradient method to 3D image deconvolution in fluorescence microscopy. Journal of Microscopy, 2009, 234, 47-61.	0.8	28
40	Interpretation of the optical transfer function: Significance for image scanning microscopy. Optics Express, 2016, 24, 27280.	1.7	28
41	Gated-sted microscopy with subnanosecond pulsed fiber laser for reducing photobleaching. Microscopy Research and Technique, 2016, 79, 785-791.	1.2	27
42	Two-Photon Excitation STED Microscopy with Time-Gated Detection. Scientific Reports, 2016, 6, 19419.	1.6	27
43	Gated STED microscopy with time-gated single-photon avalanche diode. Biomedical Optics Express, 2015, 6, 2258.	1.5	26
44	Removal of anti-Stokes emission background in STED microscopy by FPGA-based synchronous detection. Review of Scientific Instruments, 2017, 88, 053701.	0.6	25
45	Improvement in volume estimation from confocal sections after image deconvolution. Microscopy Research and Technique, 2004, 64, 151-155.	1.2	23
46	Automatic deconvolution in 4Pi-microscopy with variable phase. Optics Express, 2010, 18, 10154.	1.7	23
47	Fuzzy logic and maximum a posteriori-based image restoration for confocal microscopy. Optics Letters, 2006, 31, 3582.	1.7	22
48	Characterization of nanostructures fabricated with two-beam DLW lithography using STED microscopy. Optical Materials Express, 2016, 6, 3169.	1.6	16
49	PRRT2 modulates presynaptic Ca2+ influx by interacting with P/Q-type channels. Cell Reports, 2021, 35, 109248.	2.9	15
50	Influence of laser intensity noise on gated CW-STED microscopy. Laser Physics Letters, 2014, 11, 095603.	0.6	14
51	Improving SPLIT-STED super-resolution imaging with tunable depletion and excitation power. Journal Physics D: Applied Physics, 2020, 53, 234003.	1.3	13
52	3D HDO-CLEM. Methods in Cell Biology, 2012, 111, 95-115.	0.5	12
53	Efficient two-photon excitation stimulated emission depletion nanoscope exploiting spatiotemporal information. Neurophotonics, 2019, 6, 1.	1.7	12
54	Image scanning microscopy with multiphoton excitation or Bessel beam illumination. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2020, 37, 1639.	0.8	11

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55	Automatic deconvolution of 4Pi-microscopy data with arbitrary phase. Optics Letters, 2009, 34, 3583.	1.7	10
56	Fluorescence microscopy in the spotlight. Microscopy Research and Technique, 2014, 77, 479-482.	1.2	10
57	Three-dimensional microscopy migrates to the web with ?PowerUp Your Microscope?. Microscopy Research and Technique, 2004, 64, 196-203.	1.2	9
58	Î»/20 axial control in 25D polymerized structures fabricated with DLW lithography. Optics Express, 2015, 23, 24850.	1.7	9
59	Fluorescence Microscopy. Springer Handbooks, 2019, , 1039-1088.	0.3	9
60	Characterization of uniform ultrathin layer for z-response measurements in three-dimensional section fluorescence microscopy. Journal of Microscopy, 2007, 225, 88-95.	0.8	8
61	High Data Output Method for 3-D Correlative Light-Electron Microscopy Using Ultrathin Cryosections. , 2013, 950, 417-437.		8
62	Improving the Spatial Resolution in Direct Laser Writing Lithography by Using a Reversible Cationic Photoinitiator. Journal of Physical Chemistry C, 2017, 121, 16970-16977.	1.5	8
63	Machine learning approach for single molecule localisation microscopy. Biomedical Optics Express, 2018, 9, 1680.	1.5	8
64	FRET measurements on fuzzy fluorescent nanostructures. Microscopy Research and Technique, 2007, 70, 452-458.	1.2	7
65	Annular pupil filter under shot-noise condition for linear and non linear microscopy. Optics Express, 2009, 17, 6867.	1.7	7
66	Chromatin investigation in the nucleus using a phasor approach to structured illumination microscopy. Biophysical Journal, 2021, 120, 2566-2576.	0.2	7
67	Cooled SPAD array detector for low light-dose fluorescence laser scanning microscopy. Biophysical Reports, 2021, 1, 100025.	0.7	7
68	Evaluation of sted super-resolution image quality by image correlation spectroscopy (QuICS). Scientific Reports, 2021, 11, 20782.	1.6	7
69	Two-Photon Excitation Fluorescence Microscopy. , 2007, , 751-789.		6
70	3D localized photoactivation of pa-GFP in living cells using two-photon interactions. , 2006, 2006, 389-91.		5
71	Selective fluorescence functionalization of dye-doped polymerized structures fabricated by direct laser writing (DLW) lithography. Nanoscale, 2015, 7, 20164-20170.	2.8	5
72	Linewidth and Writing Resolution. , 2016, , 190-220.		5

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73	Evidence for ciliary pigment localization in colored ciliates and implications for their photosensory transduction chain: A confocal microscopy study. Microscopy Research and Technique, 2007, 70, 1028-1033.	1.2	4
74	A novel pulsed STED microscopy method using FastFLIM and the phasor plots. Proceedings of SPIE, 2017, , .	0.8	4
75	Pixel reassignment in image scanning microscopy with a doughnut beam: example of maximum likelihood restoration. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2021, 38, 1075.	0.8	4
76	The Importance of Photon Arrival Times in STED Microscopy. Springer Series on Fluorescence, 2014, , 283-301.	0.8	2
77	Role of the Pico-Nano-Second Temporal Dimension in STED Microscopy. Springer Series on Fluorescence, 2016, , 311-329.	0.8	2
78	5 STED microscopy: exploring fluorescence lifetime gradients for super-resolution at reduced illumination intensities. , 2018, , 85-102.		2
79	T2P-GFP: two-photon photoactivation of PA-GFP in the 720-840 nm spectral region.. , 2006, 6089, 175.		1
80	Studying the illumination puzzle towards an isotropic increase of optical resolution. , 2008, , .		1
81	Optimizing Parameters for Wll STED Imaging. Biophysical Journal, 2012, 102, 725a.	0.2	1
82	STED Microscopy with Time-Gated Detection:Benefits and Limitations. Biophysical Journal, 2013, 104, 667a-668a.	0.2	1
83	Stimulated Emission Depletion (STED) Microscopy. , 2013, , 2470-2475.		1
84	A Liquid Tunable Microscope as a New Paradigm in Optical Microscopy to Paint 4D Chromatin Organisation in the Cell Nucleus. Biophysical Journal, 2018, 114, 347a.	0.2	1
85	Image scanning microscopy (ISM) with a single photon avalanche diode (SPAD) array detector. , 2018, , .		1
86	Image Formation in Fluorescence Microscopy. , 2005, , 371-393.		1
87	Fluorescence Three-Dimensional Optical Imaging. , 2013, , 824-826.		1
88	Super-Resolution Fluorescence Optical Microscopy: Targeted and Stochastic Read-Out Approaches. Advances in Atom and Single Molecule Machines, 2014, , 27-43.	0.0	1
89	Improving multiphoton STED nanoscopy with separation of photons by LIfetime Tuning (SPLIT). , 2018, , .		1
90	The SPLIT approach for enhancing the spatial resolution in pulsed STED microscopy with FastFLIM and phasor plots. , 2019, , .		1

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91	Polyelectrolytes, Polyelectrolyte Microcapsules and Nanospheres- Valuable tools for Microscope Refinement in Subresolution Range. Microscopy and Microanalysis, 2004, 10, 1288-1289.	0.2	0
92	Soft computing approach to confocal and two-photon excitation microscopy. , 2007, , .		0
93	STED Microscope Optimization: Neuroscience Applications. Biophysical Journal, 2013, 104, 670a.	0.2	0
94	Simultaneous multiplane imaging for 3D confocal microscopy using high-speed z-scanning multiplexing. , 2015, , .		0
95	Background-Free Super-Resolution Microscopy of Subcellular Structures by Lifetime Tuning and Photons Separation. Biophysical Journal, 2015, 108, 359a.	0.2	0
96	The importance of the photon arrival times in STED microscopy. Proceedings of SPIE, 2015, , .	0.8	0
97	Learning-based approach to boost detection rate and localisation accuracy in single molecule localisation microscopy. , 2016, , .		0
98	Microscopy using source and detector arrays. , 2016, , .		0
99	Super-Resolution Fluorescence Microscopy. , 2019, , 1-12.		0
100	Linewidth and writing resolution. , 2020, , 351-384.		0
101	Fluorescence Laser-Scanning Microscopy with SPAD Array Detector: Towards Single-Photon Microscopy. , 2021, , .		0
102	From Microscopy to Nanoscopy: How to Get and Read Optical Data at Single Molecule Level Using Confocal and Two-Photon Excitation Microscopy. , 2005, , 187-207.		0
103	Super-Resolution Imaging through Laser-Scanning Microscopy. , 2021, , 1-28.		0
104	Time-Resolved STED Microscopy with Single-Photon Detector Array: a Perfect Synergy. , 2021, , .		0