Guoan Zheng

List of Publications by Year
in descending order

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136 papers	7,582 citations	71102 41 h-index	54911 84 g-index
141 all docs	141 docs citations	141 times ranked	3518 citing authors

#	Article	IF	Citations
1	Wide-field, high-resolution Fourier ptychographic microscopy. Nature Photonics, 2013, 7, 739-745.	31.4	1,286
2	Hadamard single-pixel imaging versus Fourier single-pixel imaging. Optics Express, 2017, 25, 19619.	3.4	315
3	Embedded pupil function recovery for Fourier ptychographic microscopy. Optics Express, 2014, 22, 4960.	3.4	311
4	Quantitative phase imaging via Fourier ptychographic microscopy. Optics Letters, 2013, 38, 4845.	3.3	289
5	Optical imaging techniques in microfluidics and their applications. Lab on A Chip, 2012, 12, 3566.	6.0	272
6	Diffraction tomography with Fourier ptychography. Optica, 2016, 3, 827.	9.3	193
7	The ePetri dish, an on-chip cell imaging platform based on subpixel perspective sweeping microscopy (SPSM). Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16889-16894.	7.1	188
8	Concept, implementations and applications of Fourier ptychography. Nature Reviews Physics, 2021, 3, 207-223.	26.6	180
9	Aperture-scanning Fourier ptychography for 3D refocusing and super-resolution macroscopic imaging. Optics Express, 2014, 22, 13586.	3.4	166
10	Fast Fourier single-pixel imaging via binary illumination. Scientific Reports, 2017, 7, 12029.	3.3	163
11	Spectral multiplexing and coherent-state decomposition in Fourier ptychographic imaging. Biomedical Optics Express, 2014, 5, 1757.	2.9	161
12	High numerical aperture Fourier ptychography: principle, implementation and characterization. Optics Express, 2015, 23, 3472.	3.4	151
13	High-resolution fluorescence imaging via pattern-illuminated Fourier ptychography. Optics Express, 2014, 22, 20856.	3.4	142
14	Fourier ptychographic reconstruction using Wirtinger flow optimization. Optics Express, 2015, 23, 4856.	3.4	137
15	Microscopy refocusing and dark-field imaging by using a simple LED array. Optics Letters, 2011, 36, 3987.	3.3	133
16	Moistureâ€Responsive Wrinkling Surfaces with Tunable Dynamics. Advanced Materials, 2017, 29, 1700828.	21.0	133
17	Simultaneous spatial, spectral, and 3D compressive imaging via efficient Fourier single-pixel measurements. Optica, 2018, 5, 315.	9.3	129
18	Adaptive system correction for robust Fourier ptychographic imaging. Optics Express, 2013, 21, 32400.	3.4	127

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19	Sub-pixel resolving optofluidic microscope for on-chip cell imaging. Lab on A Chip, 2010, 10, 3125.	6.0	120
20	Sparsely sampled Fourier ptychography. Optics Express, 2014, 22, 5455.	3.4	116
21	Optimization of sampling pattern and the design of Fourier ptychographic illuminator. Optics Express, 2015, 23, 6171.	3.4	110
22	Camera array based light field microscopy. Biomedical Optics Express, 2015, 6, 3179.	2.9	98
23	Solving Fourier ptychographic imaging problems via neural network modeling and TensorFlow. Biomedical Optics Express, 2018, 9, 3306.	2.9	90
24	Content adaptive illumination for Fourier ptychography. Optics Letters, 2014, 39, 6648.	3.3	86
25	FPscope: a field-portable high-resolution microscope using a cellphone lens. Biomedical Optics Express, 2014, 5, 3305.	2.9	81
26	Wide-field, high-resolution lensless on-chip microscopy via near-field blind ptychographic modulation. Lab on A Chip, 2020, 20, 1058-1065.	6.0	80
27	Digital pathology with Fourier ptychography. Computerized Medical Imaging and Graphics, 2015, 42, 38-43.	5.8	76
28	Fourier ptychographic microscopy for filtration-based circulating tumor cell enumeration and analysis. Journal of Biomedical Optics, 2014, 19, 066007.	2.6	73
29	Characterization of spatially varying aberrations for wide field-of-view microscopy. Optics Express, 2013, 21, 15131.	3.4	67
30	Fourier Ptychography for Brightfield, Phase, Darkfield, Reflective, Multi-Slice, and Fluorescence Imaging. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 77-88.	2.9	66
31	Microscopy illumination engineering using a low-cost liquid crystal display. Biomedical Optics Express, 2015, 6, 574.	2.9	61
32	Autofocusing technologies for whole slide imaging and automated microscopy. Journal of Biophotonics, 2020, 13, e202000227.	2.3	60
33	Stiffness analysis of 3D spheroids using microtweezers. PLoS ONE, 2017, 12, e0188346.	2.5	57
34	InstantScope: a low-cost whole slide imaging system with instant focal plane detection. Biomedical Optics Express, 2015, 6, 3210.	2.9	56
35	Color Capable Sub-Pixel Resolving Optofluidic Microscope and Its Application to Blood Cell Imaging for Malaria Diagnosis. PLoS ONE, 2011, 6, e26127.	2.5	54
36	Transform- and multi-domain deep learning for single-frame rapid autofocusing in whole slide imaging. Biomedical Optics Express, 2018, 9, 1601.	2.9	51

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37	Near-field Fourier ptychography: super-resolution phase retrieval via speckle illumination. Optics Express, 2019, 27, 7498.	3.4	51
38	Incoherent Fourier ptychographic photography using structured light. Photonics Research, 2015, 3, 19.	7.0	49
39	Review of bio-optical imaging systems with a high space-bandwidth product. Advanced Photonics, 2021, 3, .	11.8	48
40	Image-free classification of fast-moving objects using â€œlearnedâ€•structured illumination and single-pixel detection. Optics Express, 2020, 28, 13269.	3.4	48
41	Reflective Fourier ptychography. Journal of Biomedical Optics, 2016, 21, 026010.	2.6	47
42	OpenWSI: a low-cost, high-throughput whole slide imaging system via single-frame autofocusing and open-source hardware. Optics Letters, 2020, 45, 260.	3.3	45
43	Observation of reflectionless absorption due to spatial Kramersâ€“Kronig profile. Nature Communications, 2017, 8, 51.	12.8	44
44	Rapid focus map surveying for whole slide imaging with continuous sample motion. Optics Letters, 2017, 42, 3379.	3.3	42
45	Super-resolution microscopy via ptychographic structured modulation of a diffuser. Optics Letters, 2019, 44, 3645.	3.3	42
46	Fourier Ptychographic Microscopy: A Gigapixel Superscope for Biomedicine. Optics and Photonics News, 2014, 25, 26.	0.5	40
47	Overlapped Fourier coding for optical aberration removal. Optics Express, 2014, 22, 24062.	3.4	40
48	Single-frame rapid autofocusing for brightfield and fluorescence whole slide imaging. Biomedical Optics Express, 2016, 7, 4763.	2.9	40
49	Field-portable quantitative lensless microscopy based on translated speckle illumination and sub-sampled ptychographic phase retrieval. Optics Letters, 2019, 44, 1976.	3.3	40
50	Resolution doubling with a reduced number of image acquisitions. Biomedical Optics Express, 2015, 6, 2946.	2.9	39
51	Breakthroughs in Photonics 2013: Fourier Ptychographic Imaging. IEEE Photonics Journal, 2014, 6, 1-7.	2.0	38
52	05 gigapixel microscopy using a flatbed scanner. Biomedical Optics Express, 2014, 5, 1.	2.9	38
53	Surface-wave-enabled darkfield aperture for background suppression during weak signal detection. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 9043-9048.	7.1	37
54	Wide field-of-view microscope based on holographic focus grid illumination. Optics Letters, 2010, 35, 2188.	3.3	36

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55	On-chip continuous monitoring of motile microorganisms on an ePetri platform. Lab on A Chip, 2012, 12, 2385.	6.0	36
56	Resolution-Enhanced Parallel Coded Ptychography for High-Throughput Optical Imaging. ACS Photonics, 2021, 8, 3261-3271.	6.6	36
57	Multilayer fluorescence imaging on a single-pixel detector. Biomedical Optics Express, 2016, 7, 2425.	2.9	33
58	Virtual<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>k</mml:mi></mml:math>-Space Modulation Optical Microscopy. Physical Review Letters, 2016, 117, 028102.	7.8	32
59	Full-field Fourier ptychography (FFP): Spatially varying pupil modeling and its application for rapid field-dependent aberration metrology. APL Photonics, 2019, 4, .	5.7	32
60	Micro-tomography via single-pixel imaging. Optics Express, 2018, 26, 31094.	3.4	32
61	Imaging and Identification of Waterborne Parasites Using a Chip-Scale Microscope. PLoS ONE, 2014, 9, e89712.	2.5	31
62	Motion-corrected Fourier ptychography. Biomedical Optics Express, 2016, 7, 4543.	2.9	30
63	13-fold resolution gain through turbid layer via translated unknown speckle illumination. Biomedical Optics Express, 2018, 9, 260.	2.9	30
64	Invited Article: Mask-modulated lensless imaging with multi-angle illuminations. APL Photonics, 2018, 3, 060803.	5.7	30
65	Roadmap on neurophotonics. Journal of Optics (United Kingdom), 2016, 18, 093007.	2.2	28
66	Super-resolved multispectral lensless microscopy via angle-tilted, wavelength-multiplexed ptychographic modulation. Optics Letters, 2020, 45, 3486.	3.3	28
67	Focal plane tuning in wide-field-of-view microscope with Talbot pattern illumination. Optics Letters, 2011, 36, 2179.	3.3	23
68	Fourier ptychographic microscopy using wavelength multiplexing. Journal of Biomedical Optics, 2017, 22, 066006.	2.6	23
69	Single-shot lensless imaging via simultaneous multi-angle LED illumination. Optics Express, 2018, 26, 21418.	3.4	22
70	Virtual brightfield and fluorescence staining for Fourier ptychography via unsupervised deep learning. Optics Letters, 2020, 45, 5405.	3.3	22
71	Ptychographic modulation engine: a low-cost DIY microscope add-on for coherent super-resolution imaging. Journal Physics D: Applied Physics, 2020, 53, 014005.	2.8	21
72	Negative Group Velocity in the Absence of Absorption Resonance. Scientific Reports, 2013, 3, 1628.	3.3	20

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73	Dual lightâ€emitting diodeâ€based multichannel microscopy for wholeâ€slide multiplane, multispectral and phase imaging. Journal of Biophotonics, 2018, 11, e201700075.	2.3	20
74	Recovering higher dimensional image data using multiplexed structured illumination. Optics Express, 2015, 23, 30393.	3.4	19
75	Single-pixel ptychography. Optics Letters, 2021, 46, 1624.	3.3	19
76	Blood-Coated Sensor for High-Throughput Ptychographic Cytometry on a Blu-ray Disc. ACS Sensors, 2022, 7, 1058-1067.	7.8	19
77	Subsampled phase retrieval for temporal resolution enhancement in lensless on-chip holographic video. Biomedical Optics Express, 2017, 8, 1981.	2.9	18
78	High-throughput digital pathology via a handheld, multiplexed, and AI-powered ptychographic whole slide scanner. Lab on A Chip, 2022, 22, 2657-2670.	6.0	18
79	Ptychographic sensor for large-scale lensless microbial monitoring with high spatiotemporal resolution. Biosensors and Bioelectronics, 2022, 196, 113699.	10.1	17
80	Optical recording reveals topological distribution of functionally classified colorectal afferent neurons in intact lumbosacral <scp>DRG</scp>. Physiological Reports, 2019, 7, e14097.	1.7	15
81	Quantitative multi-height phase retrieval via a coded image sensor. Biomedical Optics Express, 2021, 12, 7173.	2.9	15
82	Terapixel hyperspectral whole-slide imaging via slit-array detection and projection. Journal of Biomedical Optics, 2018, 23, 1.	2.6	14
83	Observation of Wave Packet Distortion during a Negative-Group-Velocity Transmission. Scientific Reports, 2015, 5, 8100.	3.3	13
84	Synthetic aperture ptychography: coded sensor translation for joint spatial-Fourier bandwidth expansion. Photonics Research, 2022, 10, 1624.	7.0	13
85	A phase conjugate mirror inspired approach for building cloaking structures with left-handed materials. New Journal of Physics, 2009, 11, 033010.	2.9	12
86	Improving weak-signal identification via predetection background suppression by a pixel-level, surface-wave enabled dark-field aperture. Optics Letters, 2010, 35, 2636.	3.3	12
87	Rapid and robust whole slide imaging based on LED-array illumination and color-multiplexed single-shot autofocusing. Quantitative Imaging in Medicine and Surgery, 2019, 9, 823-831.	2.0	12
88	Quantitative phase imaging via a cGAN network with dual intensity images captured under centrosymmetric illumination. Optics Letters, 2019, 44, 2879.	3.3	12
89	Optofluidic ptychography on a chip. Lab on A Chip, 2021, 21, 4549-4556.	6.0	12
90	Deep learning-enabled whole slide imaging (DeepWSI): oil-immersion quality using dry objectives, longer depth of field, higher system throughput, and better functionality. Optics Express, 2021, 29, 39669.	3.4	12

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91	Chip-scale Microscopy for On-chip Cell Monitoring. Microscopy and Microanalysis, 2012, 18, 1220-1221.	0.4	11
92	High-throughput lensless whole slide imaging via continuous height-varying modulation of a tilted sensor. Optics Letters, 2021, 46, 5212.	3.3	11
93	Mask-modulated lensless imaging via translated structured illumination. Optics Express, 2021, 29, 12491.	3.4	10
94	Wirtinger gradient descent optimization for reducing Gaussian noise in lensless microscopy. Optics and Lasers in Engineering, 2020, 134, 106131.	3.8	9
95	Whole slide imaging of circulating tumor cells captured on a capillary microchannel device. Lab on A Chip, 2019, 19, 3796-3803.	6.0	8
96	TRANSITION BEHAVIOR OF K-SURFACE: FROM HYPERBOLA TO ELLIPSE. Progress in Electromagnetics Research, 2008, 81, 267-277.	4.4	8
97	Light transmission along a slab waveguide with a core of anisotropic metamaterial. Optik, 2008, 119, 591-595.	2.9	7
98	Abrupt change of reflectivity from the strongly anisotropic metamaterial. Optics Communications, 2008, 281, 1941-1944.	2.1	7
99	Chipâ€scale microscopy imaging. Journal of Biophotonics, 2012, 5, 639-649.	2.3	6
100	Ptychography-based high-throughput lensless on-chip microscopy via incremental proximal algorithms. Optics Express, 2021, 29, 37892.	3.4	6
101	Accelerated Phase Shifting for Structured Illumination Microscopy Based on Deep Learning. IEEE Transactions on Computational Imaging, 2021, 7, 700-712.	4.4	5
102	Robust multi-angle structured illumination lensless microscopy via illumination angle calibration. Optics Letters, 2022, 47, 1847.	3.3	5
103	Enhancement of Evanescent Wave in an Electrically Anisotropic Slab with Partially Negative Permittivity Tensor. Journal of Electromagnetic Waves and Applications, 2008, 22, 1341-1350.	1.6	4
104	Characterization of acceptance angles of â€˜small circular apertures. Optics Express, 2009, 17, 23903.	3.4	4
105	Pixel level optical-transfer-function design based on the surface-wave-interferometry aperture. Optics Express, 2010, 18, 16499.	3.4	4
106	Ringing-free fast Fourier single-pixel imaging. Optics Letters, 2022, 47, 1017.	3.3	4
107	Electromagnetic equivalent model for phase conjugate mirror based on the utilization of left-handed material. Optics Express, 2007, 15, 13877.	3.4	3
108	Possible Abnormal Group Velocity in the Normal Dispersive Anisotropic Media. Journal of Electromagnetic Waves and Applications, 2008, 22, 1309-1317.	1.6	3

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109	Subpixel resolving optofluidic microscope based on super resolution algorithm. , 2011, , .		3
110	Stereoscopic optofluidic on-chip microscope. , 2011, , .		3
111	Modeling Extensions of Fourier Ptychographic Microscopy. Microscopy and Microanalysis, 2014, 20, 370-371.	0.4	3
112	Fourier ptychographic imaging. , 2015, , .		3
113	Wrinkling Devices: Moistureâ€Responsive Wrinkling Surfaces with Tunable Dynamics (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overlock	21.0	3
114	Deep distributed optimization for blind diffuser-modulation ptychography. Optics Letters, 2022, 47, 3015.	3.3	3
115	Color-capable sub-pixel resolving optofluidic microscope for on-chip cell imaging. , 2011, , .		2
116	High-Throughput Functional Characterization of Visceral Afferents by Optical Recordings From Thoracolumbar and Lumbosacral Dorsal Root Ganglia. Frontiers in Neuroscience, 2021, 15, 657361.	2.8	2
117	Wavelength Multiplexed Fourier Ptychograhic Microscopy. , 2016, , .		2
118	A novel prototype of analog dual bandpass filter based on the composite right/left-handed ladder network. , 2006, , .		1
119	LCD-based digital eyeglass for modulating spatial-angular information. Optics Express, 2015, 23, 11813.	3.4	1
120	Geometry Modulation in Optic Communication. , 2006, , .		0
121	TE and TM bandgap in the metamaterial slab waveguide. , 2006, , .		0
122	Multifunctional optofluidic microscope. , 2009, , .		0
123	A wide field-of-view microscope based on holographic focus grid. , 2010, , .		0
124	Boosting detection sensitivity by using a surface-wave-enabled darkfield aperture (SWEDA). , 2011, , .		0
125	Fourier ptychography for multimodal imaging. , 2015, , .		0
126	Angular light modulator using optical blinds. Optics Express, 2016, 24, 28467.	3.4	0

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127	In Situ Microscopy Study of ZnO Acid Etching Nanostructures. Microscopy and Microanalysis, 2020, 26, 1464-1466.	0.4	0
128	Effective color transfer enables rapid computational microscopy for digital pathology. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	5.1	0
129	Digital Petri Dish for On-chip Cell Monitoring. , 2012, , .		0
130	Towards Giga-pixel Microscopy. , 2012, , .		0
131	Fourier ptychography: a computational framework for high-resolution, high-throughput imaging. , 2014, , .		0
132	Fourier ptychography: a computational framework for high-resolution, high-throughput imaging. , 2014, , .		0
133	Imaging innovations for wide-field, high-resolution microscopy. , 2016, , .		0
134	Imaging innovations for wide-field, high-resolution microscopy. , 2016, , .		0
135	Axially shifted pattern illumination for macroscale turbidity suppression and virtual volumetric confocal imaging without axial scanning. Optics Letters, 2019, 44, 811.	3.3	0
136	SPARC: Sex difference in colorectal afferent sensitization in zymosanâ€induced visceral hypersensitivity as revealed by highâ€throughput GCaMP recordings in thoracolumbar and lumbosacral DRG. FASEB Journal, 2022, 36, .	0.5	0