Lisa Miccio

List of Publications by Year
in descending order

163 papers	3,892 citations	109321 35 h-index	128289 60 g-index
167 all docs	167 docs citations	167 times ranked	2322 citing authors

#	Article	IF	Citations
1	Tomographic flow cytometry by digital holography. Light: Science and Applications, 2017, 6, e16241-e16241.	16.6	310
2	Recent advances in holographic 3D particle tracking. Advances in Optics and Photonics, 2015, 7, 713.	25.5	258
3	Direct full compensation of the aberrations in quantitative phase microscopy of thin objects by a single digital hologram. Applied Physics Letters, 2007, 90, 041104.	3.3	159
4	Digital holography as a method for 3D imaging and estimating the biovolume of motile cells. Lab on A Chip, 2013, 13, 4512.	6.0	152
5	Red blood cell as an adaptive optofluidic microlens. Nature Communications, 2015, 6, 6502.	12.8	141
6	Liquid micro-lens array activated by selective electrowetting on lithium niobate substrates. Optics Express, 2008, 16, 8084.	3.4	140
7	Tunable liquid microlens arrays in electrode-less configuration and their accurate characterization by interference microscopy. Optics Express, 2009, 17, 2487.	3.4	123
8	Quantitative Phase Microscopy of microstructures with extended measurement range and correction of chromatic aberrations by multiwavelength digital holography. Optics Express, 2007, 15, 14591.	3.4	107
9	Imaging live humans through smoke and flames using far-infrared digital holography. Optics Express, 2013, 21, 5379.	3.4	106
10	3D morphometry of red blood cells by digital holography. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2014, 85, 1030-1036.	1.5	103
11	Digital Holography, a metrological tool for quantitative analysis: Trends and future applications. Optics and Lasers in Engineering, 2018, 104, 32-47.	3.8	101
12	Full Color 3-D Imaging by Digital Holography and Removal of Chromatic Aberrations. Journal of Display Technology, 2008, 4, 97-100.	1.2	90
13	Digital self-referencing quantitative phase microscopy by wavefront folding in holographic image reconstruction. Optics Letters, 2010, 35, 3390.	3.3	88
14	Dynamic DIC by digital holography microscopy for enhancing phase-contrast visualization. Biomedical Optics Express, 2011, 2, 331.	2.9	88
15	Full-angle tomographic phase microscopy of flowing quasi-spherical cells. Lab on A Chip, 2018, 18, 126-131.	6.0	83
16	Twin-beams digital holography for 3D tracking and quantitative phase-contrast microscopy in microfluidics. Optics Express, 2011, 19, 25833.	3.4	69
17	Perspectives on liquid biopsy for labelâ€free detection of â€œcirculating tumor cellsâ€•through intelligent labâ€onâ€chips. View, 2020, 1, 20200034.	5.3	69
18	Diagnostic Tools for Lab-on-Chip Applications Based on Coherent Imaging Microscopy. Proceedings of the IEEE, 2015, 103, 192-204.	21.3	68

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19	Particle tracking by full-field complex wavefront subtraction in digital holography microscopy. Lab on A Chip, 2014, 14, 1129-1134.	6.0	66
20	Imaging adherent cells in the microfluidic channel hidden by flowing RBCs as occluding objects by a holographic method. Lab on A Chip, 2014, 14, 2499.	6.0	65
21	Optical reconstruction of digital holograms recorded at 106 Î¼m: route for 3D imaging at long infrared wavelengths. Optics Letters, 2010, 35, 2112.	3.3	58
22	Breakthroughs in Photonics 2013: Holographic Imaging. IEEE Photonics Journal, 2014, 6, 1-6.	2.0	58
23	Holographic imaging of unlabelled sperm cells for semen analysis: a review. Journal of Biophotonics, 2015, 8, 779-789.	2.3	56
24	Wettability patterning of lithium niobate substrate by modulating pyroelectric effect to form microarray of sessile droplets. Applied Physics Letters, 2008, 92, 213107.	3.3	55
25	Numerical multiplexing and demultiplexing of digital holographic information for remote reconstruction in amplitude and phase. Optics Letters, 2008, 33, 2629.	3.3	49
26	Driving and analysis of micro-objects by digital holographic microscope in microfluidics. Optics Letters, 2011, 36, 3079.	3.3	49
27	Label-Free Optical Marker for Red-Blood-Cell Phenotyping of Inherited Anemias. Analytical Chemistry, 2018, 90, 7495-7501.	6.5	49
28	Active accumulation of very diluted biomolecules by nano-dispensing for easy detection below the femtomolar range. Nature Communications, 2014, 5, 5314.	12.8	48
29	All-optical microfluidic chips for reconfigurable dielectrophoretic trapping through SLM light induced patterning. Lab on A Chip, 2012, 12, 4449.	6.0	44
30	Simultaneous Optical Manipulation, 3-D Tracking, and Imaging of Micro-Objects by Digital Holography in Microfluidics. IEEE Photonics Journal, 2012, 4, 451-454.	2.0	41
31	Light induced DEP for immobilizing and orienting Escherichia coli bacteria. Optics and Lasers in Engineering, 2016, 76, 34-39.	3.8	40
32	Investigating fibroblast cells under â€œsafeâ€•and â€œinjuriousâ€•blueâ€light exposure by holographic microscopy. Journal of Biophotonics, 2017, 10, 919-927.	2.3	40
33	In situinvestigation of periodic poling in congruent LiNbO₃by quantitative interference microscopy. Measurement Science and Technology, 2008, 19, 074008.	2.6	39
34	Speeding up reconstruction of 3D tomograms in holographic flow cytometry via deep learning. Lab on A Chip, 2022, 22, 793-804.	6.0	39
35	Phase map retrieval in digital holography: avoiding the undersampling effect by a lateral shear approach. Optics Letters, 2007, 32, 2233.	3.3	37
36	Infrared digital reflective-holographic 3D shape measurements. Optics Communications, 2008, 281, 1445-1449.	2.1	36

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37	Three-Dimensional Quantitative Intracellular Visualization of Graphene Oxide Nanoparticles by Tomographic Flow Cytometry. Nano Letters, 2021, 21, 5958-5966.	9.1	34
38	Hemicylindrical and toroidal liquid microlens formed by pyro-electro-wetting. Optics Letters, 2009, 34, 1075.	3.3	33
39	Printing of polymer microlenses by a pyroelectrohydrodynamic dispensing approach. Optics Letters, 2012, 37, 2460.	3.3	30
40	Rolling angle recovery of flowing cells in holographic tomography exploiting the phase similarity. Applied Optics, 2021, 60, A277.	1.8	30
41	Improving holographic reconstruction by automatic Butterworth filtering for microelectromechanical systems characterization. Applied Optics, 2015, 54, 3428.	2.1	29
42	Phase contrast tomography at lab on chip scale by digital holography. Methods, 2018, 136, 108-115.	3.8	29
43	Light induced patterning of poly(dimethylsiloxane) microstructures. Optics Express, 2010, 18, 10947.	3.4	27
44	Biolens behavior of RBCs under opticallyâ€induced mechanical stress. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2017, 91, 527-533.	1.5	27
45	Graded-size microlens array by the pyro-electrohydrodynamic continuous printing method. Applied Optics, 2013, 52, 7699.	1.8	26
46	Label-Free Assessment of the Drug Resistance of Epithelial Ovarian Cancer Cells in a Microfluidic Holographic Flow Cytometer Boosted through Machine Learning. ACS Omega, 2021, 6, 31046-31057.	3.5	26
47	Holographic tracking of living cells by three-dimensional reconstructed complex wavefronts alignment. Optics Letters, 2014, 39, 2759.	3.3	25
48	Investigation on dynamics of red blood cells through their behavior as biophotonic lenses. Journal of Biomedical Optics, 2016, 21, 1.	2.6	25
49	Investigation on cone jetting regimes of liquid droplets subjected to pyroelectric fields induced by laser blasts. Applied Physics Letters, 2015, 106, .	3.3	24
50	Amplitude and phase reconstruction of photorefractive spatial bright-soliton in LiNbO_3 during its dynamic formation by digital holography. Optics Express, 2007, 15, 8243.	3.4	23
51	In vitro cytotoxicity evaluation of cadmium by labelâ€free holographic microscopy. Journal of Biophotonics, 2018, 11, e201800099.	2.3	23
52	Intelligent polarization-sensitive holographic flow-cytometer: Towards specificity in classifying natural and microplastic fibers. Science of the Total Environment, 2022, 815, 152708.	8.0	21
53	Exploring the capabilities of Digital Holography as tool for testing optical microstructures. 3D Research, 2011, 2, 1.	1.8	20
54	Investigation on specific solutions of Gerchbergâ€“Saxton algorithm. Optics and Lasers in Engineering, 2014, 52, 206-211.	3.8	20

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55	Numerical tools for the characterization of microelectromechanical systems by digital holographic microscopy. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2015, 14, 041314.	0.9	20
56	Neuroblastoma Cells Classification Through Learning Approaches by Direct Analysis of Digital Holograms. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-9.	2.9	19
57	Differential diagnosis of hereditary anemias from a fraction of blood drop by digital holography and hierarchical machine learning. Biosensors and Bioelectronics, 2022, 201, 113945.	10.1	19
58	High frequency viscoelastic behaviour of low molecular weight hyaluronic acid water solutions. Biorheology, 2007, 44, 403-18.	0.4	18
59	Compensation of aberrations in holographic microscopes: main strategies and applications. Applied Physics B: Lasers and Optics, 2022, 128, .	2.2	18
60	Full-Field and Quantitative Analysis of a Thin Liquid Film at the Nanoscale by Combining Digital Holography and White Light Interferometry. Journal of Physical Chemistry C, 2021, 125, 1075-1086.	3.1	16
61	Deep Learning-Based, Misalignment Resilient, Real-Time Fourier Ptychographic Microscopy Reconstruction of Biological Tissue Slides. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-10.	2.9	16
62	Hydrodynamic Red Blood Cells Deformation by Quantitative Phase Microscopy and Zernike Polynomials. Frontiers in Physics, 2019, 7, .	2.1	15
63	Reliability of 3D Imaging by Digital Holography at Long IR Wavelength. Journal of Display Technology, 2010, 6, 465-471.	1.2	14
64	Digital holography as metrology tool at micro-nanoscale for soft matter. Light Advanced Manufacturing, 2022, 3, 151.	5.1	13
65	Toward an All-Optical Fingerprint of Synthetic and Natural Microplastic Fibers by Polarization-Sensitive Holographic Microscopy. ACS Photonics, 2022, 9, 694-705.	6.6	12
66	Nanomechanics of a fibroblast suspended using point-like anchors reveal cytoskeleton formation. RSC Advances, 2016, 6, 24245-24249.	3.6	11
67	Droplet Ejection and Liquid Jetting by Visible Laser Irradiation in Pyroâ€Photovoltaic Feâ€Doped LiNbO₃ Platforms. Advanced Materials Interfaces, 2021, 8, 2101164.	3.7	9
68	Optobiology: live cells in optics and photonics. JPhys Photonics, 2021, 3, 012003.	4.6	8
69	Lipid particle detection by means digital holography and lateral shear interferometry. Proceedings of SPIE, 2007, , .	0.8	7
70	Biological Lenses as a Photomask for Writing Laser Spots into Ferroelectric Crystals. ACS Applied Bio Materials, 2019, 2, 4675-4680.	4.6	7
71	The Talbot effect in self-assembled red blood cells investigated by digital holography. JPhys Photonics, 2020, 2, 035005.	4.6	7
72	Axisymmetric bare freestanding films of highly viscous liquids: Preparation and real-time investigation of capillary leveling. Journal of Colloid and Interface Science, 2021, 596, 493-499.	9.4	6

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73	Kinematic analysis and visualization of Tetraselmis microalgae 3D motility by digital holography. Applied Optics, 2022, 61, B331.	1.8	6
74	Full characterization of the photorefractive bright soliton formation process using a digital holographic technique. Measurement Science and Technology, 2009, 20, 045301.	2.6	5
75	Lensless Digital Holography Improves Fire Safety. Optics and Photonics News, 2013, 24, 26.	0.5	5
76	Detection and visualization improvement of spermatozoa cells by digital holography. , 2011, , .		4
77	Digital holographic microscopy for the characterization of microelectromechanical systems. , 2016, , .		4
78	Manipulating Thin Liquid Films for Tunable Microlens Arrays. Optics and Photonics News, 2008, 19, 34.	0.5	3
79	Imaging and phase measurements of 3D objects at 10.6 microns by digital holography. Proceedings of SPIE, 2007, , .	0.8	2
80	Quantitative Phase Contrast in Holographic Microscopy Through the Numerical Manipulation of the Retrieved Wavefronts. Springer Series in Surface Sciences, 2011, , 61-85.	0.3	2
81	Combining digital holographic microscopy and optical tweezers: a new route in microfluidic. , 2012, , .		2
82	Investigation on 3D morphological changes of in vitro cells through digital holographic microscopy. Proceedings of SPIE, 2013, , .	0.8	2
83	Revealing fire survivors hidden behind smoke and flames by IR active imaging systems. , 2014, , .		2
84	3D imaging in microfluidics: new holographic methods and devices. , 2019, , .		2
85	Holographic tracking and imaging of free-swimming Tetraselmis by off-axis holographic microscopy.. , 2021, , .		2
86	Interferometric characterization of pyroelectrically activated micro-arrays of liquid lenses in lithium niobate crystals. , 2008, , .		1
87	Activation and control of microlens liquid arrays on functionalized polar electric crystal substrates by electro-wetting effect and temperature. Journal of Physics: Conference Series, 2008, 139, 012015.	0.4	1
88	Multiplexing and demultiplexing of digital holograms recorded in microscopic configuration. Proceedings of SPIE, 2009, , .	0.8	1
89	Quantitative Phase Microscopy for Accurate Characterization of Microlens Arrays. Springer Series in Surface Sciences, 2011, , 115-144.	0.3	1
90	Combining Digital Holographic Microscopy with Microfluidics. , 2013, , 193-210.		1

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91	A new 3D tracking method for cell mechanics investigation exploiting the capabilities of digital holography in microscopy. , 2014, , .		1
92	Automatic digital filtering for the accuracy improving of a digital holographic measurement system. Proceedings of SPIE, 2014, , .	0.8	1
93	3D manipulation and visualization of in-vitro cells by optical tweezers and digital holographic microscopy. Proceedings of SPIE, 2014, , .	0.8	1
94	Investigation on cytoskeleton dynamics for non-adherent cells under point-like stimuli. , 2015, , .		1
95	Cells characterization in microfluidic flows by small angle light scattering and 3D holographic technique. Proceedings of SPIE, 2015, , .	0.8	1
96	Monitoring cell morphology during necrosis and apoptosis by quantitative phase imaging. Proceedings of SPIE, 2015, , .	0.8	1
97	Lab on chip optical imaging of biological sample by quantitative phase microscopy. , 2015, , .		1
98	Red blood cell three-dimensional morphometry by quantitative phase microscopy. , 2015, , .		1
99	Electrohydrodynamic Dispenser for Delivering Multiphase Samples at Nanoscale. Springer Series in Surface Sciences, 2015, , 251-276.	0.3	1
100	Looking beyond Smoke and Flames by Lensless Infrared Digital Holography. , 2014, , 911-916.		1
101	Full 3D morphology of diatoms flowing in a microfluidic channel by digital holographic microscopy. , 2015, , .		1
102	Tomographic flow cytometry of circulating human breast adenocarcinoma cells. , 2018, , .		1
103	Recent Advancements and Perspective About Digital Holography: A Super-Tool in Biomedical and Bioengineering Fields. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 235-241.	0.5	1
104	Optical coherent devices and imaging systems. AIP Conference Proceedings, 2007, , .	0.4	0
105	Optical Tweezers as a Probe for Oligodeoxyribonucleotide Structuration. Nucleosides, Nucleotides and Nucleic Acids, 2007, 26, 1295-1299.	1.1	0
106	Lateral shear and digital holographic microscopy to check dynamic behaviour of biological cell. Proceedings of SPIE, 2007, , .	0.8	0
107	In-situ monitoring of periodic domain formation in ferroelectric crystals. , 2007, , .		0
108	Novel concept in electro-wettability patterning with electrodes-less configuration to activate and control Liquid Microlens Arrays on functionalized polar electric substrates. , 2008, , .		0

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109	Tunable liquid microlens array driven by pyroelectric effect: full interferometric characterization. Proceedings of SPIE, 2008, , .	0.8	0
110	Phase map retrieval in digital holography: avoiding the under-sampling effect by a lateral shear approach. Proceedings of SPIE, 2008, , .	0.8	0
111	Self-assembled Liquid Microlens Arrays activated by pyroelectric effect. , 2009, , .		0
112	Tuneable liquid microlenses onto a functionalized polar dielectric substrates: formation and characterization. Proceedings of SPIE, 2010, , .	0.8	0
113	Self induced patterning of PDMS structures by surface-charge lithography driven by photorefractive effect. , 2010, , .		0
114	Dynamic differential image contrast by digital holography for imaging and quantitative phase microscopy. , 2011, , .		0
115	Holographic microscope for quantitative phase-contrast imaging of particles driven by optical forces in microfluidics. , 2011, , .		0
116	3D tracking and phase-contrast imaging by twin-beams digital holographic microscope in microfluidics. , 2012, , .		0
117	Fabrication of optical microlenses by a new inkjet printing technique based on pyro-electrohydrodynamic (PEHD) effect. Proceedings of SPIE, 2012, , .	0.8	0
118	Computer-generated hologram tailored for dielectrophoretic PDMS patterning. Proceedings of SPIE, 2012, , .	0.8	0
119	A new iterative Fourier transform algorithm for optimal design in holographic optical tweezers. , 2012, , .		0
120	Seeing through smoke and flames: a challenge for imaging capabilities, met thanks to digital holography at far infrared. , 2013, , .		0
121	A new 3D tracking method exploiting the capabilities of digital holography in microscopy. Proceedings of SPIE, 2013, , .	0.8	0
122	Charge-driven dispensing of picolitre drops for biomolecules microarrays by Pyro-Electro-hydrodynamic system. , 2013, , .		0
123	Self-chaining of nanoparticles in polymethyl methacrylate through electrode-free dielectrophoresis. , 2013, , .		0
124	Cell mechanics investigation by digital holographic microscopy. Proceedings of SPIE, 2013, , .	0.8	0
125	Investigation on cytoskeleton dynamics for no-adherent cells subjected to point-like stimuli by digital holographic microscopy and holographic optical trapping. Proceedings of SPIE, 2014, , .	0.8	0
126	Three-dimensional holographic tracking approach based on full-field complex wavefront matching. , 2014, , .		0

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127	Printing on demand of polymer micro lenses array. Proceedings of SPIE, 2014, , .	0.8	0
128	Pyro-printing on demand of polymer microlenses. , 2014, , .		0
129	Label-Free 3D Imaging for Lab-on-Chip Biomedical Applications. , 2014, , .		0
130	3D visualization and biovolume estimation of motile cells by digital holography. Proceedings of SPIE, 2014, , .	0.8	0
131	Red blood cell as optofluidic tunable lens. , 2015, , .		0
132	Label-free coherent microscopy through blood by digital holography. Proceedings of SPIE, 2015, , .	0.8	0
133	Wavefronts matching: a novel paradigm for three-dimensional holographic particle tracking. Proceedings of SPIE, 2015, , .	0.8	0
134	Full 3D morphology of diatoms flowing in a microfluidic channel by digital holographic microscopy. Proceedings of SPIE, 2015, , .	0.8	0
135	Digital holography for recovering 3D shape of red blood cells. , 2015, , .		0
136	Holographic quantitative imaging of sample hidden by turbid medium or occluding objects. Proceedings of SPIE, 2015, , .	0.8	0
137	Holographic 3D particles tracking methods for bio-microfluidic applications. , 2015, , .		0
138	Tomographic phase microscopy of rolling cells in microfluidic flow. , 2016, , .		0
139	Biological elements carry out optical tasks in coherent imaging systems. , 2016, , .		0
140	Coherent label-free imaging through turbidity: a holographic approach. Proceedings of SPIE, 2016, , .	0.8	0
141	Tomographic flow cytometry assisted by intelligent wavefronts analysis. Proceedings of SPIE, 2017, , .	0.8	0
142	Computational tomographic phase microscopy. , 2017, , .		0
143	RBCs as microlenses: wavefront analysis and applications. , 2017, , .		0
144	Microfluidic engineering for continuous in-flow cyto-tomography. EPJ Web of Conferences, 2019, 215, 10003.	0.3	0

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145	Writing in Photorefractive Crystals by Bio-Lenses. , 2019, , .		0
146	Quantitative thickness mapping of a freestanding thin liquid film by fusing digital holography and white light interferometry. , 2021, , .		0
147	Tomographic flow cytometry as the key-enabling technology for label-free liquid biopsy. , 2021, , .		0
148	Holographic fingerprint as a morphological marker to identify micro-plastics. , 2021, , .		0
149	Tracking-based rolling angles recovery method for holographic tomography of flowing cells. , 2021, , .		0
150	Label-free microfluidic platform for blood analysis based on phase-contrast imaging. , 2021, , .		0
151	Optobiology: bio-lensing in living cells from diagnostic to biolitography. , 2021, , .		0
152	Holographic Three-Dimensional Tracking of Micro-objects Exploiting Their Morphological Properties. , 2014, , 555-558.		0
153	Detection and sorting of microplastics in marine environment by new imaging tools. , 2018, , .		0
154	Methods for holographic 3D tracking and rotating angle recovery in tomographic flow cytometry. , 2019, , .		0
155	Bio-Lithography by RBC-lenses: DH Wavefront evaluation of imprinted structures in Lithium Niobate. , 2019, , .		0
156	Anaemias diagnosis by label-free quantitative phase imaging. , 2019, , .		0
157	Label-free imaging of cancer cells by in-flow tomography. , 2019, , .		0
158	Label-free holographic microscopy for in vitro cadmium cytotoxicity testing. , 2019, , .		0
159	Holographic processing pipeline for tomographic flow cytometry. , 2019, , .		0
160	Diagnostic decision support tool for anemias based on label-free holographic imaging. , 2019, , .		0
161	Holographic imaging for 3D cells morphology in microfluidic flow. , 2019, , .		0
162	Microalgae as potential bioindicators for heavy metal pollution. , 2021, , .		0

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163	Raw holograms based machine learning for cancer cells classification in microfluidics. , 2021, , .		0