

# Pierre Marquet

## List of Publications by Year in descending order

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102  
papers

9,775  
citations

81743

39  
h-index

95083

68  
g-index

106  
all docs

106  
docs citations

106  
times ranked

4178  
citing authors

#	ARTICLE	IF	CITATIONS
1	Digital holographic microscopy: a noninvasive contrast imaging technique allowing quantitative visualization of living cells with subwavelength axial accuracy. <i>Optics Letters</i> , 2005, 30, 468.	1.7	1,209
2	Simultaneous amplitude-contrast and quantitative phase-contrast microscopy by numerical reconstruction of Fresnel off-axis holograms. <i>Applied Optics</i> , 1999, 38, 6994.	2.1	955
3	Spatial filtering for zero-order and twin-image elimination in digital off-axis holography. <i>Applied Optics</i> , 2000, 39, 4070.	2.1	814
4	Measurement of the integral refractive index and dynamic cell morphometry of living cells with digital holographic microscopy. <i>Optics Express</i> , 2005, 13, 9361.	1.7	641
5	Cell refractive index tomography by digital holographic microscopy. <i>Optics Letters</i> , 2006, 31, 178.	1.7	567
6	Marker-free phase nanoscopy. <i>Nature Photonics</i> , 2013, 7, 113-117.	15.6	527
7	In vivo local determination of tissue optical properties: applications to human brain. <i>Applied Optics</i> , 1999, 38, 4939.	2.1	395
8	Real-time dual-wavelength digital holographic microscopy with a single hologram acquisition. <i>Optics Express</i> , 2007, 15, 7231.	1.7	393
9	Automatic procedure for aberration compensation in digital holographic microscopy and applications to specimen shape compensation. <i>Applied Optics</i> , 2006, 45, 851.	2.1	337
10	Numerical parametric lens for shifting, magnification, and complete aberration compensation in digital holographic microscopy. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2006, 23, 3177.	0.8	290
11	Total aberrations compensation in digital holographic microscopy with a reference conjugated hologram. <i>Optics Express</i> , 2006, 14, 4300.	1.7	286
12	Living specimen tomography by digital holographic microscopy: morphometry of testate amoeba. <i>Optics Express</i> , 2006, 14, 7005.	1.7	255
13	Noninvasive characterization of the fission yeast cell cycle by monitoring dry mass with digital holographic microscopy. <i>Journal of Biomedical Optics</i> , 2009, 14, 034049.	1.4	181
14	Simultaneous cell morphometry and refractive index measurement with dual-wavelength digital holographic microscopy and dye-enhanced dispersion of perfusion medium. <i>Optics Letters</i> , 2008, 33, 744.	1.7	179
15	Early Cell Death Detection with Digital Holographic Microscopy. <i>PLoS ONE</i> , 2012, 7, e30912.	1.1	174
16	Comparative study of human erythrocytes by digital holographic microscopy, confocal microscopy, and impedance volume analyzer. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2008, 73A, 895-903.	1.1	171
17	Polarization imaging by use of digital holography. <i>Applied Optics</i> , 2002, 41, 27.	2.1	141
18	Review of quantitative phase-digital holographic microscopy: promising novel imaging technique to resolve neuronal network activity and identify cellular biomarkers of psychiatric disorders. <i>Neurophotonics</i> , 2014, 1, 020901.	1.7	139

#	ARTICLE	IF	CITATIONS
19	Roadmap on digital holography [Invited]. Optics Express, 2021, 29, 35078.	1.7	133
20	In vivo endoscopic tissue diagnostics based on spectroscopic absorption, scattering, and phase function properties. Journal of Biomedical Optics, 2003, 8, 495.	1.4	123
21	Determination of Transmembrane Water Fluxes in Neurons Elicited by Glutamate Ionotropic Receptors and by the Cotransporters KCC2 and NKCC1: A Digital Holographic Microscopy Study. Journal of Neuroscience, 2011, 31, 11846-11854.	1.7	113
22	Label-Free Cytotoxicity Screening Assay by Digital Holographic Microscopy. Assay and Drug Development Technologies, 2013, 11, 101-107.	0.6	105
23	Spatial analysis of erythrocyte membrane fluctuations by digital holographic microscopy. Blood Cells, Molecules, and Diseases, 2009, 42, 228-232.	0.6	92
24	Submicrometer tomography of cells by multiple-wavelength digital holographic microscopy in reflection. Optics Letters, 2009, 34, 653.	1.7	89
25	Influence of shot noise on phase measurement accuracy in digital holographic microscopy. Optics Express, 2007, 15, 8818.	1.7	88
26	Cell morphology and intracellular ionic homeostasis explored with a multimodal approach combining epifluorescence and digital holographic microscopy. Journal of Biophotonics, 2010, 3, 432-436.	1.1	87
27	Submicrometer optical tomography by multiple-wavelength digital holographic microscopy. Applied Optics, 2006, 45, 8209.	2.1	77
28	Automated statistical quantification of three-dimensional morphology and mean corpuscular hemoglobin of multiple red blood cells. Optics Express, 2012, 20, 10295.	1.7	77
29	Measurement of absolute cell volume, osmotic membrane water permeability, and refractive index of transmembrane water and solute flux by digital holographic microscopy. Journal of Biomedical Optics, 2013, 18, 036007.	1.4	72
30	Shot-noise influence on the reconstructed phase image signal-to-noise ratio in digital holographic microscopy. Applied Optics, 2006, 45, 7667.	2.1	71
31	Purely numerical compensation for microscope objective phase curvature in digital holographic microscopy: influence of digital phase mask position. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 2944.	0.8	67
32	Automated quantitative analysis of 3D morphology and mean corpuscular hemoglobin in human red blood cells stored in different periods. Optics Express, 2013, 21, 30947.	1.7	56
33	Automated segmentation of multiple red blood cells with digital holographic microscopy. Journal of Biomedical Optics, 2013, 18, 026006.	1.4	56
34	Assertive Anger Mediates Effects of Dialectical Behavioural Informed Skills Training for Borderline Personality Disorder: A Randomized Controlled Trial. Clinical Psychology and Psychotherapy, 2016, 23, 189-202.	1.4	56
35	The specificity of the familial aggregation of early-onset bipolar disorder : A controlled 10-year follow-up study of offspring of parents with mood disorders. Journal of Affective Disorders, 2016, 190, 26-33.	2.0	54
36	Label-free second-harmonic phase imaging of biological specimen by digital holographic microscopy. Optics Letters, 2010, 35, 4102.	1.7	48

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37	Spatially-Resolved Eigenmode Decomposition of Red Blood Cells Membrane Fluctuations Questions the Role of ATP in Flickering. PLoS ONE, 2012, 7, e40667.	1.1	48
38	Automated multi-parameter measurement of cardiomyocytes dynamics with digital holographic microscopy. Optics Express, 2015, 23, 13333.	1.7	40
39	Quantitative phase restoration by direct inversion using the optical transfer function. Optics Letters, 2011, 36, 2671.	1.7	39
40	Simultaneous Optical Recording in Multiple Cells by Digital Holographic Microscopy of Chloride Current Associated to Activation of the Ligand-Gated Chloride Channel GABAA Receptor. PLoS ONE, 2012, 7, e51041.	1.1	38
41	Determination of reduced scattering and absorption coefficients by a single charge-coupled-device array measurement, part II: measurements on biological tissues. Optical Engineering, 1995, 34, 2064.	0.5	37
42	Roadmap on Digital Holography-Based Quantitative Phase Imaging. Journal of Imaging, 2021, 7, 252.	1.7	37
43	Recognition and classification of red blood cells using digital holographic microscopy and data clustering with discriminant analysis. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 1204.	0.8	36
44	Comparative study of quantitative phase imaging techniques for refractometry of optical waveguides. Optics Express, 2018, 26, 17498.	1.7	34
45	Quantification of stored red blood cell fluctuations by time-lapse holographic cell imaging. Biomedical Optics Express, 2018, 9, 4714.	1.5	29
46	Real time, nanometric 3D-tracking of nanoparticles made possible by second harmonic generation digital holographic microscopy. Optics Express, 2010, 18, 17392.	1.7	27
47	Amplitude point-spread function measurement of high-NA microscope objectives by digital holographic microscopy. Optics Letters, 2007, 32, 2456.	1.7	23
48	The human CFTR protein expressed in CHO cells activates an aquaporin 3 in a cAMP dependent pathway: study by Digital Holographic Microscopy. Journal of Cell Science, 2014, 127, 546-56.	1.2	20
49	Physical interpretation of the phase function related parameter $\hat{\Gamma}^3$ studied with a fractal distribution of spherical scatterers. Optics Express, 2010, 18, 23664.	1.7	19
50	Effects of hypotonic stress and ouabain on the apparent diffusion coefficient of water at cellular and tissue levels in <i>Aplysia</i> . NMR in Biomedicine, 2014, 27, 280-290.	1.6	17
51	The shorter the better? A follow-up analysis of 10-session psychiatric treatment including the motive-oriented therapeutic relationship for borderline personality disorder. Psychotherapy Research, 2017, 27, 362-370.	1.1	16
52	Sample and substrate preparation for exploring living neurons in culture with quantitative-phase imaging. Methods, 2018, 136, 90-107.	1.9	14
53	Marker-Free Automatic Quantification of Drug-Treated Cardiomyocytes with Digital Holographic Imaging. ACS Photonics, 2020, 7, 105-113.	3.2	14
54	Polychromatic digital holographic microscopy: a quasicohherent-noise-free imaging technique to explore the connectivity of living neuronal networks. Neurophotonics, 2020, 7, 040501.	1.7	12

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55	DHM (Digital Holography Microscope) for imaging cells. Journal of Physics: Conference Series, 2007, 61, 1317-1321.	0.3	11
56	Psychopathological precursors of the onset of mood disorders in offspring of parents with and without mood disorders: results of a 13-year prospective cohort high-risk study. Journal of Child Psychology and Psychiatry and Allied Disciplines, 2021, 62, 404-413.	3.1	11
57	Digital holographic microscopy applied to life sciences. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6244-7.	0.5	10
58	Measuring Absolute Cell Volume Using Quantitative-Phase Digital Holographic Microscopy and a Low-Cost, Open-Source, and 3D-Printed Flow Chamber. Frontiers in Physics, 2019, 7, .	1.0	10
59	The Lausanne-Geneva cohort study of offspring of parents with mood disorders: methodology, findings, current sample characteristics, and perspectives. Social Psychiatry and Psychiatric Epidemiology, 2017, 52, 1041-1058.	1.6	9
60	Simultaneous dual-contrast three-dimensional imaging in live cells via optical diffraction tomography and fluorescence. Photonics Research, 2019, 7, 1042.	3.4	9
61	Advantages of digital holographic microscopy for real-time full field absolute phase imaging. , 2008, , .		8
62	Real-time dual-wavelength digital holographic microscopy for extended measurement range with enhanced axial resolution. Proceedings of SPIE, 2008, , .	0.8	8
63	Development of a diffuse reflectance probe for in situ measurement of inherent optical properties in sea ice. Cryosphere, 2021, 15, 4483-4500.	1.5	6
64	Biological cell (pollen grain) refractive index tomography with digital holographic microscopy. , 2006, , .		5
65	Sub-cellular quantitative optical diffraction tomography with digital holographic microscopy. , 2007, , .		4
66	Image-Based Marker-Free Screening of GABAA Agonists, Antagonists, and Modulators. SLAS Discovery, 2020, 25, 458-470.	1.4	4
67	Digital Holographic Microscopy Applied to Diffraction Tomography of a Cell Refractive Index. , 2006, , .		4
68	Digital holographic microscopy: a new optical imaging technique to investigate cellular dynamics. , 2006, , .		3
69	Dual-wavelength Digital Holography for quantification of cell volume and integral refractive index (RI). , 2011, , .		3
70	Exploring Neural Cell Dynamics with Digital Holographic Microscopy. , 2013, , .		3
71	Digital Holographic Microscopy (DHM) for Measuring Biophysical Parameters of Living Cells. , 2013, , 71-95.		3
72	Low-cost production and sealing procedure of mechanical parts of a versatile 3D-printed perfusion chamber for digital holographic microscopy of primary neurons in culture. , 2017, , .		3

#	ARTICLE	IF	CITATIONS
73	Multi-wavelength digital holographic microscopy for sub-micron topography of reflecting specimens. , 2007, , .		2
74	Cell death detection and ionic homeostasis monitoring with digital holographic microscopy. , 2011, , .		2
75	Quantitative measurement of absolute cell volume and intracellular integral refractive index (RI) with dual-wavelength digital holographic microscopy (DHM). Proceedings of SPIE, 2012, , .	0.8	2
76	Cell biology explored with Digital Holographic Microscopy. , 2008, , .		2
77	Simultaneous measurements of a specimen quantitative-phase signal and its surrounding medium refractive index using quantitative-phase imaging. Optics Letters, 2020, 45, 5587.	1.7	2
78	Engineered fluidic device to achieve multiplexed monitoring of cell cultures with digital holographic microscopy. Optics Express, 2022, 30, 414.	1.7	2
79	Environmental factors in offspring of parents with mood disorders and their role in parentâ€“child transmission: findings from a 14-year prospective high-risk study. International Journal of Bipolar Disorders, 2022, 10, 11.	0.8	2
80	Use of digital holographic microscopy in tomography. , 2006, 6191, 183.		1
81	Progress and perspectives in digital holographic microscopy applied to life sciences. , 2010, , .		1
82	Study of Intracellular Ion Dynamics with a Multimodality Approach Combining Epifluorescence and Digital Holographic Microscopy. , 2010, , .		1
83	Low-Cost Production of a Versatile 3D-Printed Perfusion Chamber for Quantitative Phase Imaging of Primary Neurons in Culture. , 2017, , .		1
84	Real-time Phase Recovery of Biological Cell in Digital Holographic Microscopy by Use of a Self-Calibration Hologram. , 2006, , .		1
85	Cell Death and Ionic Regulation Detection with Digital Holographic Microscopy. , 2011, , .		1
86	Digital Holographic Microscopy (DHM). Imaging & Microscopy, 2006, 8, 46-48.	0.1	0
87	Non-invasive dry mass determination and monitoring at the single cell level with digital holographic microscopy. Proceedings of SPIE, 2008, , .	0.8	0
88	Dual-wavelength digital holographic microscopy with sub-nanometer axial accuracy. , 2008, , .		0
89	Tomography of red blood cells by multiple-wavelength digital holographic microscopy. , 2009, , .		0
90	Measuring biophysical properties of living cells with digital holographic microscopy. , 2011, , .		0

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91	Digital holographic microscopy applied to neurociences. , 2012, , .		0
92	Super-resolution Phase Tomography. , 2013, , .		0
93	Exploring cell structure, dynamics and homeostasis with a multimodal microscopy approach based on digital holographic microscopy: towards identifying early biomarkers of cell viability and cytotoxicity. , 2018, , .		0
94	Solving the Refractive Index - Thickness Ambiguity in Quantitative Phase Imaging of Primary Neurons in Culture with a Low-Cost Custom-Made 3D-Printed Perfusion Chamber. , 2018, , .		0
95	Measuring Absolute Cell Volume Using Digital Holographic Microscopy. , 2020, , .		0
96	Quantitative measurements of dynamic cell morphometry and intracellular integral refractive index with Digital holographic microscopy. , 2006, , .		0
97	Refractive Index Tomography by Digital Holographic Microscopy. , 2008, , .		0
98	Simultaneous cell morphometry and refractive index measurement with dual-wavelength Digital Holographic Microscopy. , 2008, , .		0
99	Exploring cell dynamics with Digital Holographic Microscopy. , 2009, , .		0
100	Early Glutamate-mediated Cell Death Detection with Digital Holographic Microscopy. , 2011, , .		0
101	Comparative study of quantitative phase imaging techniques for refractometry of optical fibers. , 2018, , .		0
102	Label-Free Phenotyping of Human Cells with Multimodal Quantitative-Phase Digital Holographic Microscopy: Towards the Identification of New Cellular Biomarkers of Diseases. , 2020, , .		0