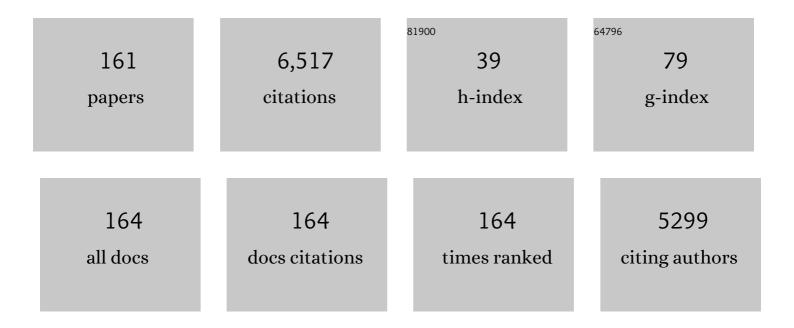
Michael Mazilu

List of Publications by Year in descending order

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ΜΙCHAEL ΜΑΖΙΙΙΙ

#	Article	IF	CITATIONS
1	Optically mediated particle clearing using Airy wavepackets. Nature Photonics, 2008, 2, 675-678.	31.4	1,067
2	Optical manipulation of nanoparticles: a review. Journal of Nanophotonics, 2008, 2, 021875.	1.0	407
3	In situ wavefront correction and its application to micromanipulation. Nature Photonics, 2010, 4, 388-394.	31.4	390
4	Dynamics of microparticles trapped in a perfect vortex beam. Optics Letters, 2013, 38, 4919.	3.3	263
5	Auto-focusing and self-healing of Pearcey beams. Optics Express, 2012, 20, 18955.	3.4	252
6	Laser-induced rotation and cooling of a trapped microgyroscope in vacuum. Nature Communications, 2013, 4, 2374.	12.8	251
7	Optical vortex trap for resonant confinement of metal nanoparticles. Optics Express, 2008, 16, 4991.	3.4	213
8	Dual beam fibre trap for Raman micro-spectroscopy of single cells. Optics Express, 2006, 14, 5779.	3.4	172
9	Early detection of cervical neoplasia by Raman spectroscopy. International Journal of Cancer, 2007, 121, 2723-2728.	5.1	150
10	Beam steering in planar-photonic crystals: from superprism to supercollimator. Journal of Lightwave Technology, 2003, 21, 561-566.	4.6	138
11	Light beats the spread: "nonâ€diffracting―beams. Laser and Photonics Reviews, 2010, 4, 529-547.	8.7	134
12	Bidirectional Optical Sorting of Gold Nanoparticles. Nano Letters, 2012, 12, 1923-1927.	9.1	124
13	Superprism phenomena in planar photonic crystals. IEEE Journal of Quantum Electronics, 2002, 38, 915-918.	1.9	109
14	In-fiber common-path optical coherence tomography using a conical-tip fiber. Optics Express, 2009, 17, 2375.	3.4	109
15	Online Fluorescence Suppression in Modulated Raman Spectroscopy. Analytical Chemistry, 2010, 82, 738-745.	6.5	106
16	Optical deflection and sorting of microparticles in a near-field optical geometry. Optics Express, 2008, 16, 3712.	3.4	105
17	Propagation characteristics of Airy beams: dependence upon spatial coherence and wavelength. Optics Express, 2009, 17, 13236.	3.4	103
18	Harnessing speckle for a sub-femtometre resolved broadband wavemeter and laser stabilization. Nature Communications, 2017, 8, 15610.	12.8	80

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19	Optimal algorithm for fluorescence suppression of modulated Raman spectroscopy. Optics Express, 2010, 18, 11382.	3.4	79
20	Optical Eigenmodes; exploiting the quadratic nature of the light-matter interaction. Optics Express, 2011, 19, 933.	3.4	77
21	Light-sheet microscopy with attenuation-compensated propagation-invariant beams. Science Advances, 2018, 4, eaar4817.	10.3	76
22	Planar photonic crystal polarization splitter. Optics Letters, 2004, 29, 1620.	3.3	75
23	The resolution of optical traps created by Light Induced Dielectrophoresis (LIDEP). Optics Express, 2007, 15, 12619.	3.4	73
24	Exploiting Lens Aberrations to Create Electron-Vortex Beams. Physical Review Letters, 2013, 111, 064801.	7.8	72
25	Far field subwavelength focusing using optical eigenmodes. Applied Physics Letters, 2011, 98, .	3.3	65
26	Is it possible to create a perfect fractional vortex beam?. Optica, 2017, 4, 330.	9.3	60
27	Optical forces near a nanoantenna. Journal of Nanophotonics, 2010, 4, 041570.	1.0	59
28	Modulated Raman spectroscopy for enhanced identification of bladder tumor cells in urine samples. Journal of Biomedical Optics, 2011, 16, 037002.	2.6	57
29	Measuring the orbital angular momentum of partially coherent optical vortices through singularities in their cross-spectral density functions. Optics Letters, 2012, 37, 4949.	3.3	56
30	Effect of pulse temporal shape on optical trapping and impulse transfer using ultrashort pulsed lasers. Optics Express, 2010, 18, 7554.	3.4	53
31	Random super-prism wavelength meter. Optics Letters, 2014, 39, 96.	3.3	53
32	Reproducible Surface-Enhanced Raman Quantification of Biomarkers in Multicomponent Mixtures. ACS Nano, 2014, 8, 2575-2583.	14.6	52
33	Measurement of the Restoring Forces Acting on Two Optically Bound Particles from Normal Mode Correlations. Physical Review Letters, 2007, 98, 068102.	7.8	50
34	Guided neuronal growth using optical line traps. Optics Express, 2008, 16, 10507.	3.4	50
35	Modulated Raman Spectroscopy for Enhanced Cancer Diagnosis at the Cellular Level. Sensors, 2015, 15, 13680-13704.	3.8	50
36	Optical path clearing and enhanced transmission through colloidal suspensions. Optics Express, 2010, 18, 17130.	3.4	48

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37	Effect of the radial and azimuthal mode indices of a partially coherent vortex field upon a spatial correlation singularity. New Journal of Physics, 2013, 15, 113053.	2.9	46
38	Simultaneous determination of the constituent azimuthal and radial mode indices for light fields possessing orbital angular momentum. Applied Physics Letters, 2012, 100, .	3.3	45
39	Picoliter Rheology of Gaseous Media Using a Rotating Optically Trapped Birefringent Microparticle. Analytical Chemistry, 2011, 83, 8855-8858.	6.5	43
40	The Use of Wavelength Modulated Raman Spectroscopy in Label-Free Identification of T Lymphocyte Subsets, Natural Killer Cells and Dendritic Cells. PLoS ONE, 2015, 10, e0125158.	2.5	42
41	Rotational Dynamics and Heating of Trapped Nanovaterite Particles. ACS Nano, 2016, 10, 11505-11510.	14.6	39
42	Wide-field multiphoton imaging through scattering media without correction. Science Advances, 2018, 4, eaau1338.	10.3	39
43	Is there an optimal basis to maximise optical information transfer?. Scientific Reports, 2016, 6, 22821.	3.3	38
44	Biologically enabled sub-diffractive focusing. Optics Express, 2014, 22, 27214.	3.4	36
45	Optical eigenmode imaging. Physical Review A, 2011, 84, .	2.5	34
46	Enhanced two-point resolution using optical eigenmode optimized pupil functions. Journal of Optics (United Kingdom), 2011, 13, 105707.	2.2	33
47	Orbital-angular-momentum transfer to optically levitated microparticles in vacuum. Physical Review A, 2016, 94, .	2.5	33
48	Accelerating vortices in Airy beams. Proceedings of SPIE, 2009, , .	0.8	31
49	Creating and probing of a perfect vortex in situ with an optically trapped particle. Optical Review, 2015, 22, 162-165.	2.0	30
50	Optical detection and grading of lung neoplasia by Raman microspectroscopy. International Journal of Cancer, 2009, 124, 376-380.	5.1	29
51	Observation and simulation of an optically driven micromotor. Journal of Optics (United Kingdom), 2011, 13, 044018.	2.2	29
52	Optical micromanipulation using supercontinuum Laguerre-Gaussian and Gaussian beams. Optics Express, 2008, 16, 10117.	3.4	28
53	Generation of attenuation-compensating Airy beams. Optics Letters, 2014, 39, 4950.	3.3	28
54	Dual lattice photonic-crystal beam splitters. Applied Physics Letters, 2005, 86, 211106.	3.3	26

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55	Modal Characterization using Principal Component Analysis: application to Bessel, higher-order Gaussian beams and their superposition. Scientific Reports, 2013, 3, 1422.	3.3	25
56	Rotation of two trapped microparticles in vacuum: observation of optically mediated parametric resonances. Optics Letters, 2015, 40, 4751.	3.3	24
57	Prospects for versatile phase manipulation in the TEM: Beyond aberration correction. Ultramicroscopy, 2015, 151, 85-93.	1.9	23
58	Classification of Raman spectra of single cells with autofluorescence suppression by wavelength modulated excitation. Analytical Methods, 2013, 5, 4608.	2.7	22
59	Structural characterization of shock-affected sapphire. Applied Physics A: Materials Science and Processing, 2006, 86, 197-200.	2.3	21
60	Etaloning, fluorescence and ambient light suppression by modulated wavelength Raman spectroscopy. Biomedical Spectroscopy and Imaging, 2012, 1, 383-389.	1.2	21
61	Coherent control of plasmonic nanoantennas using optical eigenmodes. Scientific Reports, 2013, 3, 1808.	3.3	21
62	Collision of propagating vortices embedded within Airy beams. Journal of Optics (United Kingdom), 2013, 15, 044001.	2.2	21
63	Dynamics of optical nonlinearities induced by strong light illumination in CdS nanocrystallites. Journal of Applied Physics, 1997, 81, 3586-3591.	2.5	20
64	Enhanced bioanalyte detection in waveguide confined Raman spectroscopy using wavelength modulation. Journal of Biophotonics, 2011, 4, 514-518.	2.3	20
65	Nonredundant Raman imaging using optical eigenmodes. Optica, 2014, 1, 257.	9.3	20
66	Fluorescence suppression using wavelength modulated Raman spectroscopy in fiber-probe-based tissue analysis. Journal of Biomedical Optics, 2012, 17, 0770061.	2.6	19
67	Optical trapping with a perfect vortex beam. Proceedings of SPIE, 2014, , .	0.8	18
68	Exciton saturation in GaAs multiple quantum wells at room temperature. Journal of Applied Physics, 1999, 86, 3734-3744.	2.5	17
69	Spin and angular momentum operators and their conservation. Journal of Optics, 2009, 11, 094005.	1.5	16
70	Fluorescence suppression within Raman spectroscopy using annular beam excitation. Applied Physics Letters, 2007, 91, 023903.	3.3	15
71	Exploring the ultrashort pulse laser parameter space for membrane permeabilisation in mammalian cells. Scientific Reports, 2012, 2, 858.	3.3	15
72	Optical impedance of metallic nano-structures. Optics Express, 2006, 14, 7709.	3.4	14

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73	Black Metals: Optical Absorbers. Micromachines, 2020, 11, 256.	2.9	14
74	Polarization switching and induced birefringence in InGaAsP multiple quantum wells at 1.5 μm. Journal of Applied Physics, 2002, 91, 4090-4094.	2.5	13
75	Quantitative Detection of Pharmaceuticals Using a Combination of Paper Microfluidics and Wavelength Modulated Raman Spectroscopy. PLoS ONE, 2015, 10, e0123334.	2.5	13
76	Numerical investigation of passive optical sorting of plasmon nanoparticles. Optics Express, 2011, 19, 13922.	3.4	12
77	Measuring and structuring the spatial coherence length of organic lightâ€emitting diodes. Laser and Photonics Reviews, 2016, 10, 82-90.	8.7	12
78	Optimisation of Wavelength Modulated Raman Spectroscopy: Towards High Throughput Cell Screening. PLoS ONE, 2013, 8, e67211.	2.5	11
79	Modular method for calculation of transmission and reflection in multilayered structures. Applied Optics, 2001, 40, 6670.	2.1	10
80	Simulated holographic three-dimensional intensity shaping of evanescent-wave fields. Journal of the Optical Society of America B: Optical Physics, 2008, 25, 849.	2.1	10
81	Tunable optical nonlinearities in Cd1â^'xZnxTe ternary alloys. Journal of Applied Physics, 1997, 82, 1355-1358.	2.5	9
82	Preparation of optical quality ZnCdTe thin films by vacuum evaporation. Applied Optics, 1998, 37, 2681.	2.1	9
83	Room temperature electron spin relaxation in GaInNAs multiple quantum wells at 1.31¼m. Applied Physics Letters, 2006, 89, 211122.	3.3	9
84	Enhanced cell transfection using subwavelength focused optical eigenmode beams [Invited]. Photonics Research, 2013, 1, 42.	7.0	9
85	Exact solution for excitons in intense laser fields. Journal of Luminescence, 1997, 72-74, 802-803.	3.1	8
86	An interacting dipole model to explore broadband transverse optical binding. Journal of Physics Condensed Matter, 2012, 24, 464117.	1.8	8
87	Wavelength modulated surface enhanced (resonance) Raman scattering for background-free detection. Analyst, The, 2013, 138, 2816.	3.5	8
88	Development of a graded index microlens based fiber optical trap and its characterization using principal component analysis. Biomedical Optics Express, 2015, 6, 1512.	2.9	8
89	Enhanced Optical Manipulation of Cells Using Antireflection Coated Microparticles. ACS Photonics, 2015, 2, 1403-1409.	6.6	8
90	Modal beam splitter: determination of the transversal components of an electromagnetic light field. Scientific Reports, 2017, 7, 9139.	3.3	7

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91	Breaking the Symmetry of Momentum Conservation Using Evanescent Acoustic Fields. Physical Review Letters, 2018, 121, 244301.	7.8	7
92	Dispersion-induced ultrafast pulse reshaping in 1.55-μm InGaAs-InGaAsP optical amplifiers. IEEE Journal of Quantum Electronics, 2003, 39, 1388-1393.	1.9	6
93	Fluorescence spectroscopy of anin vitro model of human cervical precancer identifies neoplastic phenotype. International Journal of Cancer, 2007, 120, 1964-1970.	5.1	6
94	Carrier heating in semiconductor optical amplifier-based Sagnac-type all-optical switches. Semiconductor Science and Technology, 2006, 21, 1703-1708.	2.0	5
95	Optical eigenmodes; spin and angular momentum. Journal of Optics (United Kingdom), 2011, 13, 064009.	2.2	5
96	Encoding complex valued fields using intensity. Optics Express, 2016, 24, 23186.	3.4	5
97	Low-threshold, multi-gigahertz repetition-rate femtosecond Ti:sapphire laser. Electronics Letters, 2003, 39, 1820.	1.0	4
98	Size resolution with light-induced dielectrophoresis (LIDEP). , 2006, 6326, 303.		4
99	Optical trapping using ultrashort 12.9fs pulses. , 2008, , .		4
100	Revisiting transverse optical binding. , 2009, , .		4
101	Wavelet transforms for optical pulse analysis. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 2890.	1.5	3
102	Supercontinuum Airy beams. , 2009, , .		3
103	Resonance enhanced optical manipulation: the push and pull of light. , 2012, , .		3
104	Spin relaxation and all-optical polarisation switching in GaInNAs multiple quantum wells. , 2006, , .		2
105	Algorithm-based continuous pulse duration tuning and performance control of a mode-locked laser diode. Optics Express, 2012, 20, 7022.	3.4	2
106	Airy Beams for Light-sheet Microscopy. Microscopy and Microanalysis, 2015, 21, 1723-1724.	0.4	2
107	Interferometric Hetero-Detector Phase Measurement. Optical and Quantum Electronics, 2004, 36, 431-442.	3.3	1
108	Spatial dependence of gain nonlinearities in InGaAs semiconductor optical amplifier. Applied Physics Letters, 2005, 87, 121108.	3.3	1

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109	Holographic 3D intensity shaping of evanescent waves. , 2007, , .		1
110	Optical "snowblowing" of microparticles and cells in a microfluidc environment using Airy and parabolic wavepackets. , 2009, , .		1
111	Modulated Raman spectroscopy technique for real-time fluorescence rejection. , 2010, , .		1
112	Raman spectra of single cells with autofluorescence suppression by modulated wavelength excitation. Proceedings of SPIE, 2012, , .	0.8	1
113	SERS sensing of cancer biomarkers. , 2014, , .		1
114	Rotational dynamics and heating of trapped nanovaterite particles. , 2017, , .		1
115	Green-function Method for Nonlinear Interactions of Elastic Waves. , 2019, , .		1
116	Fluorescence background suppression in Raman spectroscopy. , 2010, , .		1
117	Can information Capacity be Increased with Orbital Angular Momentum?. , 2016, , .		1
118	Integrating sphere based speckle generation for wavelength determination and laser stabilization. , 2016, , .		1
119	Nonlinear optical eigenmodes: perturbative approach. , 2019, , .		1
120	Intraband Carrier Dynamics In Semiconductor Optical Amplifier-Based Switch. AIP Conference Proceedings, 2005, , .	0.4	0
121	Early identification of cervical neoplasia with Raman spectroscopy and advanced methods for biomedical applications. , 2008, , .		0
122	Photons as momentum-energy eigenmodes. , 2009, , .		0
123	Fluorescence-free biochemical characterization of cells using modulated Raman spectroscopy. Proceedings of SPIE, 2010, , .	0.8	0
124	Optical Sculpting: Shaping the Future of Biophotonic. , 2010, , .		0
125	Advanced Studies of â€~Non-Diffracting' Light Fields. , 2010, , .		0
126	Fluorescence-Free Biochemical Characterization of Cells Using Modulated Raman Spectroscopy. , 2010, , .		0

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127	Determination of optical forces in the proximity of a nanoantenna. Proceedings of SPIE, 2010, , .	0.8	0
128	In situ wavefront optimization: towards the ideal performance of a biophotonics system. Proceedings of SPIE, 2010, , .	0.8	0
129	Optical sculpting: trapping through disorder and transfer of orbital angular momentum. Proceedings of SPIE, 2011, , .	0.8	0
130	Passive optical sorting of plasmon nanoparticles: Numerical investigation of optimal illumination. , 2011, , .		0
131	Selective and optimal illumination of nano-photonic structures using optical eigenmodes. , 2011, , .		0
132	Optical sorting of gold nanoparticles based on the red-shift of plasmon resonance. Proceedings of SPIE, 2012, , .	0.8	0
133	The role of spectral bandwidth in transverse optical binding. , 2012, , .		0
134	Optical eigenmodes for imaging applications. , 2012, , .		0
135	Quantum mechanics compatible Maxwell's stress tensor (presentation video). Proceedings of SPIE, 2014, , .	0.8	0
136	Multi-mode fibre correction for applications in optomechanics using a digital micromirror device. , 2014, , .		0
137	Attenuation compensating Airy beams generated by using a digital micro-mirror device. , 2014, , .		Ο
138	Biomolecular sensing for cancer diagnostics using highly reproducible SERS substrates. , 2014, , .		0
139	Dynamics of Microparticles Trapped in a Perfect Vortex Beam. , 2014, , .		0
140	Sub-diffractive light confinement: A biological-based approach. , 2014, , .		0
141	Density of optical degrees of freedom: intensity, linear, and angular momentum. , 2014, , .		0
142	Combining focusing properties of a single diatom valve with optical eigenmodes in ultra-shrinking of light. , 2014, , .		0
143	Color encoding of phase: A new step in imaging by structured light and single pixel detection. , 2015, , .		0
144	Optically Trapped Microscopic Particles in a Perfect Fractional Vortex Beam. , 2016, , .		0

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145	Dynamics of optically levitated microparticles in vacuum placed in 2D and 3D optical potentials possessing orbital angular momentum. , 2017, , .		0
146	Ultrasonic waves in uniaxially stressed multilayered and one-dimensional phononic structures: Guided and Floquet wave analysis. Journal of the Acoustical Society of America, 2018, 144, 81-91.	1.1	0
147	Non-Classical Second-Order Nonlinear Elastic Wave Interactions. , 2019, , .		0
148	Multiphoton propagation eigenmodes for sum-frequency generation. Optics Communications, 2020, 466, 125610.	2.1	0
149	Optical Sculpting: Changing The Shape of Micromanipulation. , 2010, , .		0
150	SHAPING THE FUTURE OF NANOBIOPHOTONICS. , 2011, , .		0
151	Optimal focusing In Situ: new routes for optical trapping and Biophotonics. , 2011, , .		0
152	Optical Sculpting: trapping through disorder. , 2011, , .		0
153	Fluorescence Suppression Using Modulated Wavelength Raman Spectroscopy for Tissue and Cell Analysis. , 2012, , .		0
154	Optical Eigenmode Compressive Imaging: Theory and Applications. , 2013, , .		0
155	Rotation induced cooling of an optically trapped microgyroscope in vacuum. , 2013, , .		0
156	Real-time optical eigenmode characterisation. , 2014, , .		0
157	Rotation induced cooling of an optically trapped microgyroscope in vacuum. , 2014, , .		0
158	Identification of Single Human Immune Cells with Wavelength Modulation Raman Spectroscopy. , 2016, , \cdot		0
159	Wavelength detection at sub-femtometer resolution and application to laser stabilization. , 2016, , .		0
160	Optical eigenmode description of partially coherent light fields. , 2019, , .		0
161	Optical eigenmode description of single-photon light-matter interactions. , 2019, , .		0