Aydogan Ozcan

List of Publications by Year in descending order

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Version: 2024-02-01

490 papers	25,980 citations	5261 83 h-index	7736 150 g-index
507 all docs	507 docs citations	507 times ranked	17879 citing authors

#	Article	IF	Citations
1	All-optical machine learning using diffractive deep neural networks. Science, 2018, 361, 1004-1008.	6.0	1,105
2	Phase recovery and holographic image reconstruction using deep learning in neural networks. Light: Science and Applications, 2018, 7, 17141-17141.	7.7	662
3	Emerging Technologies for Next-Generation Point-of-Care Testing. Trends in Biotechnology, 2015, 33, 692-705.	4.9	583
4	Deep learning enables cross-modality super-resolution in fluorescence microscopy. Nature Methods, 2019, 16, 103-110.	9.0	545
5	On the use of deep learning for computational imaging. Optica, 2019, 6, 921.	4.8	495
6	Deep learning microscopy. Optica, 2017, 4, 1437.	4.8	475
7	Imaging without lenses: achievements and remaining challenges of wide-field on-chip microscopy. Nature Methods, 2012, 9, 889-895.	9.0	461
8	Lensfree microscopy on a cellphone. Lab on A Chip, 2010, 10, 1787.	3.1	448
9	Fluorescent Imaging of Single Nanoparticles and Viruses on a Smart Phone. ACS Nano, 2013, 7, 9147-9155.	7.3	445
10	Compact, light-weight and cost-effective microscope based on lensless incoherent holography for telemedicine applications. Lab on A Chip, 2010, 10, 1417.	3.1	420
11	Inference in artificial intelligence with deep optics and photonics. Nature, 2020, 588, 39-47.	13.7	418
12	Virtual histological staining of unlabelled tissue-autofluorescence images via deep learning. Nature Biomedical Engineering, 2019, 3, 466-477.	11.6	397
13	Lensfree on-chip microscopy over a wide field-of-view using pixel super-resolution. Optics Express, 2010, 18, 11181.	1.7	381
14	Integrated rapid-diagnostic-test reader platform on a cellphone. Lab on A Chip, 2012, 12, 2678.	3.1	371
15	Optofluidic Fluorescent Imaging Cytometry on a Cell Phone. Analytical Chemistry, 2011, 83, 6641-6647.	3.2	365
16	Detection and Spatial Mapping of Mercury Contamination in Water Samples Using a Smart-Phone. ACS Nano, 2014, 8, 1121-1129.	7.3	361
17	Optical imaging techniques for point-of-care diagnostics. Lab on A Chip, 2013, 13, 51-67.	3.1	320
18	Mobile phones democratize and cultivate next-generation imaging, diagnostics and measurement tools. Lab on A Chip, 2014, 14, 3187-3194.	3.1	306

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19	Cellphone-Based Hand-Held Microplate Reader for Point-of-Care Testing of Enzyme-Linked Immunosorbent Assays. ACS Nano, 2015, 9, 7857-7866.	7.3	300
20	Handheld high-throughput plasmonic biosensor using computational on-chip imaging. Light: Science and Applications, 2014, 3, e122-e122.	7.7	299
21	High-throughput lensfree 3D tracking of human sperms reveals rare statistics of helical trajectories. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16018-16022.	3.3	297
22	Cost-effective and compact wide-field fluorescent imaging on a cell-phone. Lab on A Chip, 2011, 11, 315-322.	3.1	294
23	Cellphone-based devices for bioanalytical sciences. Analytical and Bioanalytical Chemistry, 2014, 406, 3263-3277.	1.9	268
24	Quantum dot enabled detection of Escherichia coli using a cell-phone. Analyst, The, 2012, 137, 2541.	1.7	256
25	Cost-effective and rapid blood analysis on a cell-phone. Lab on A Chip, 2013, 13, 1282.	3.1	253
26	Extended depth-of-field in holographic imaging using deep-learning-based autofocusing and phase recovery. Optica, 2018, 5, 704.	4.8	247
27	A personalized food allergen testing platform on a cellphone. Lab on A Chip, 2013, 13, 636-640.	3.1	243
28	Lensless Imaging and Sensing. Annual Review of Biomedical Engineering, 2016, 18, 77-102.	5.7	243
29	PhaseStain: the digital staining of label-free quantitative phase microscopy images using deep learning. Light: Science and Applications, 2019, 8, 23.	7.7	241
30	Holographic pixel super-resolution in portable lensless on-chip microscopy using a fiber-optic array. Lab on A Chip, 2011, 11, 1276.	3.1	238
31	Speckle reduction in optical coherence tomography images using digital filtering. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2007, 24, 1901.	0.8	236
32	Wide-field computational imaging of pathology slides using lens-free on-chip microscopy. Science Translational Medicine, 2014, 6, 267ra175.	5.8	235
33	Lensfree holographic imaging for on-chip cytometry and diagnostics. Lab on A Chip, 2009, 9, 777-787.	3.1	226
34	Wearable and Implantable Sensors for Biomedical Applications. Annual Review of Analytical Chemistry, 2018, 11, 127-146.	2.8	211
35	Ultra wide-field lens-free monitoring of cells on-chip. Lab on A Chip, 2008, 8, 98-106.	3.1	209
36	Lens-free optical tomographic microscope with a large imaging volume on a chip. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 7296-7301.	3.3	208

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37	Cell separation based on size and deformability using microfluidic funnel ratchets. Lab on A Chip, 2012, 12, 2369.	3.1	205
38	Synthetic aperture-based on-chip microscopy. Light: Science and Applications, 2015, 4, e261-e261.	7.7	204
39	A unified initiative to harness Earth's microbiomes. Science, 2015, 350, 507-508.	6.0	195
40	Albumin testing in urine using a smart-phone. Lab on A Chip, 2013, 13, 4231.	3.1	180
41	Deep learning in holography and coherent imaging. Light: Science and Applications, 2019, 8, 85.	7.7	174
42	Three-dimensional virtual refocusing of fluorescence microscopy images using deep learning. Nature Methods, 2019, 16, 1323-1331.	9.0	172
43	Immunochromatographic Diagnostic Test Analysis Using Google Glass. ACS Nano, 2014, 8, 3069-3079.	7.3	171
44	Rapid imaging, detection and quantification of Giardia lamblia cysts using mobile-phone based fluorescent microscopy and machine learning. Lab on A Chip, 2015, 15, 1284-1293.	3.1	165
45	Integrating microfluidics and lensless imaging for point-of-care testing. Biosensors and Bioelectronics, 2009, 24, 3208-3214.	5.3	162
46	Maskless imaging of dense samples using pixel super-resolution based multi-height lensfree on-chip microscopy. Optics Express, 2012, 20, 3129.	1.7	160
47	Imaging and Sizing of Single DNA Molecules on a Mobile Phone. ACS Nano, 2014, 8, 12725-12733.	7.3	155
48	Design of task-specific optical systems using broadband diffractive neural networks. Light: Science and Applications, 2019, 8, 112.	7.7	150
49	Smartphoneâ€based clinical diagnostics: towards democratization of evidenceâ€based health care. Journal of Internal Medicine, 2019, 285, 19-39.	2.7	147
50	Pixel super-resolution using wavelength scanning. Light: Science and Applications, 2016, 5, e16060-e16060.	7.7	145
51	Deep Learning Enhanced Mobile-Phone Microscopy. ACS Photonics, 2018, 5, 2354-2364.	3.2	142
52	Lensless digital holographic microscopy and its applications in biomedicine and environmental monitoring. Methods, 2018, 136, 4-16.	1.9	142
53	Holographic opto-fluidic microscopy. Optics Express, 2010, 18, 27499.	1.7	138
54	Tools for the Microbiome: Nano and Beyond. ACS Nano, 2016, 10, 6-37.	7.3	137

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55	Mobile Phone-Based Microscopy, Sensing, and Diagnostics. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 1-14.	1.9	137
56	Lensfree optofluidic plasmonic sensor for real-time and label-free monitoring of molecular binding events over a wide field-of-view. Scientific Reports, 2014, 4, 6789.	1.6	134
57	Wide-field optical detection of nanoparticles using on-chip microscopy and self-assembled nanolenses. Nature Photonics, 2013, 7, 247-254.	15.6	133
58	Roadmap on digital holography [Invited]. Optics Express, 2021, 29, 35078.	1.7	133
59	A deep learning-enabled portable imaging flow cytometer for cost-effective, high-throughput, and label-free analysis of natural water samples. Light: Science and Applications, 2018, 7, 66.	7.7	131
60	Detection of waterborne parasites using field-portable and cost-effective lensfree microscopy. Lab on A Chip, 2010, 10, 2419.	3.1	130
61	Lensless wide-field fluorescent imaging on a chip using compressive decoding of sparse objects. Optics Express, 2010, 18, 10510.	1.7	130
62	High-Throughput Lens-Free Blood Analysis on a Chip. Analytical Chemistry, 2010, 82, 4621-4627.	3.2	127
63	Edge sparsity criterion for robust holographic autofocusing. Optics Letters, 2017, 42, 3824.	1.7	122
64	Analysis of Diffractive Optical Neural Networks and Their Integration With Electronic Neural Networks. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-14.	1.9	120
65	Targeted DNA sequencing and in situ mutation analysis using mobile phone microscopy. Nature Communications, 2017, 8, 13913.	5.8	118
66	Field-portable wide-field microscopy of dense samples using multi-height pixel super-resolution based lensfree imaging. Lab on A Chip, 2012, 12, 1242.	3.1	117
67	Increased space-bandwidth product in pixel super-resolved lensfree on-chip microscopy. Scientific Reports, 2013, 3, .	1.6	113
68	Compact and Light-Weight Automated Semen Analysis Platform Using Lensfree on-Chip Microscopy. Analytical Chemistry, 2010, 82, 8307-8312.	3.2	109
69	Terahertz pulse shaping using diffractive surfaces. Nature Communications, 2021, 12, 37.	5.8	107
70	Field-portable reflection and transmission microscopy based on lensless holography. Biomedical Optics Express, 2011, 2, 2721.	1.5	106
71	Distributed Medical Image Analysis and Diagnosis through Crowd-Sourced Games: A Malaria Case Study. PLoS ONE, 2012, 7, e37245.	1.1	106
72	Air quality monitoring using mobile microscopy and machine learning. Light: Science and Applications, 2017, 6, e17046-e17046.	7.7	105

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73	Smart-phone based computational microscopy using multi-frame contact imaging on a fiber-optic array. Lab on A Chip, 2013, 13, 4015.	3.1	103
74	Highly Stable and Sensitive Nucleic Acid Amplification and Cell-Phone-Based Readout. ACS Nano, 2017, 11, 2934-2943.	7.3	101
75	Deep learning-based transformation of H&E stained tissues into special stains. Nature Communications, 2021, 12, 4884.	5.8	100
76	Unconventional methods of imaging: computational microscopy and compact implementations. Reports on Progress in Physics, 2016, 79, 076001.	8.1	98
77	Bright-field holography: cross-modality deep learning enables snapshot 3D imaging with bright-field contrast using a single hologram. Light: Science and Applications, 2019, 8, 25.	7.7	98
78	Spectrally encoded single-pixel machine vision using diffractive networks. Science Advances, 2021, 7, .	4.7	96
79	Early detection and classification of live bacteria using time-lapse coherent imaging and deep learning. Light: Science and Applications, 2020, 9, 118.	7.7	93
80	On-Chip Biomedical Imaging. IEEE Reviews in Biomedical Engineering, 2013, 6, 29-46.	13.1	92
81	Sperm Trajectories Form Chiral Ribbons. Scientific Reports, 2013, 3, 1664.	1.6	92
82	Deep-Learning-Based Image Reconstruction and Enhancement in Optical Microscopy. Proceedings of the IEEE, 2020, 108, 30-50.	16.4	90
83	Lensfree Holographic Imaging of Antibody Microarrays for High-Throughput Detection of Leukocyte Numbers and Function. Analytical Chemistry, 2010, 82, 3736-3744.	3.2	88
84	Cell-laden Polymeric Microspheres for Biomedical Applications. Trends in Biotechnology, 2015, 33, 653-666.	4.9	88
85	Machine learning and computation-enabled intelligent sensor design. Nature Machine Intelligence, 2021, 3, 556-565.	8.3	86
86	All-optical information-processing capacity of diffractive surfaces. Light: Science and Applications, 2021, 10, 25.	7.7	85
87	Wide field-of-view lens-free fluorescent imaging on a chip. Lab on A Chip, 2010, 10, 824.	3.1	84
88	Computational imaging without a computer: seeing through random diffusers at the speed of light. ELight, 2022, 2, .	11.9	83
89	On-chip differential interference contrast microscopy using lensless digital holography. Optics Express, 2010, 18, 4717.	1.7	82
90	Deep learning-based super-resolution in coherent imaging systems. Scientific Reports, 2019, 9, 3926.	1.6	82

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91	Sparsity-based multi-height phase recovery in holographic microscopy. Scientific Reports, 2016, 6, 37862.	1.6	81
92	Field-Portable Pixel Super-Resolution Colour Microscope. PLoS ONE, 2013, 8, e76475.	1.1	81
93	Digital synthesis of histological stains using micro-structured and multiplexed virtual staining of label-free tissue. Light: Science and Applications, 2020, 9, 78.	7.7	79
94	Class-specific differential detection in diffractive optical neural networks improves inference accuracy. Advanced Photonics, 2019, 1, 1.	6.2	79
95	Highâ€throughput lensfree imaging and characterization of a heterogeneous cell solution on a chip. Biotechnology and Bioengineering, 2009, 102, 856-868.	1.7	78
96	Field-portable lensfree tomographic microscope. Lab on A Chip, 2011, 11, 2222.	3.1	78
97	Roadmap for optofluidics. Journal of Optics (United Kingdom), 2017, 19, 093003.	1.0	78
98	Resolution enhancement in scanning electron microscopy using deep learning. Scientific Reports, 2019, 9, 12050.	1.6	78
99	Characterization of natural- and organobentonite by XRD, SEM, FT-IR and thermal analysis techniques and its adsorption behaviour in aqueous solutions. Clay Minerals, 2012, 47, 31-44.	0.2	75
100	Ensemble learning of diffractive optical networks. Light: Science and Applications, 2021, 10, 14.	7.7	75
101	Misalignment resilient diffractive optical networks. Nanophotonics, 2020, 9, 4207-4219.	2.9	75
102	High-Throughput and Label-Free Single Nanoparticle Sizing Based on Time-Resolved On-Chip Microscopy. ACS Nano, 2015, 9, 3265-3273.	7.3	73
103	Cellphone-based detection platform for rbST biomarker analysis in milk extracts using a microsphere fluorescence immunoassay. Analytical and Bioanalytical Chemistry, 2014, 406, 6857-6866.	1.9	71
104	Inkjet-printed point-of-care immunoassay on a nanoscale polymer brush enables subpicomolar detection of analytes in blood. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E7054-E7062.	3.3	70
105	Multi-angle lensless digital holography for depth resolved imaging on a chip. Optics Express, 2010, 18, 9690.	1.7	68
106	Optofluidic Tomography on a Chip. Applied Physics Letters, 2011, 98, 161109.	1.5	68
107	Lensfree Fluorescent On-Chip Imaging of Transgenic Caenorhabditis elegans Over an Ultra-Wide Field-of-View. PLoS ONE, 2011, 6, e15955.	1.1	67
108	On-Chip Cytometry using Plasmonic Nanoparticle Enhanced Lensfree Holography. Scientific Reports, 2013, 3, 1699.	1.6	66

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109	Point-of-Care Serodiagnostic Test for Early-Stage Lyme Disease Using a Multiplexed Paper-Based Immunoassay and Machine Learning. ACS Nano, 2020, 14, 229-240.	7.3	66
110	Deep learning-enabled point-of-care sensing using multiplexed paper-based sensors. Npj Digital Medicine, 2020, 3, 66.	5.7	65
111	Wide-field computational color imaging using pixel super-resolved on-chip microscopy. Optics Express, 2013, 21, 12469.	1.7	63
112	Automated single-cell motility analysis on a chip using lensfree microscopy. Scientific Reports, 2014, 4, 4717.	1.6	63
113	Addressable nanoantennas with cleared hotspots for single-molecule detection on a portable smartphone microscope. Nature Communications, 2021, 12, 950.	5.8	63
114	Computational Sensing Using Low-Cost and Mobile Plasmonic Readers Designed by Machine Learning. ACS Nano, 2017, 11, 2266-2274.	7.3	62
115	Quantification of plant chlorophyll content using Google Glass. Lab on A Chip, 2015, 15, 1708-1716.	3.1	59
116	Propagation phasor approach for holographic image reconstruction. Scientific Reports, 2016, 6, 22738.	1.6	59
117	Rapid, portable and cost-effective yeast cell viability and concentration analysis using lensfree on-chip microscopy and machine learning. Lab on A Chip, 2016, 16, 4350-4358.	3.1	59
118	Label-Free Bioaerosol Sensing Using Mobile Microscopy and Deep Learning. ACS Photonics, 2018, 5, 4617-4627.	3.2	59
119	Automated screening of sickle cells using a smartphone-based microscope and deep learning. Npj Digital Medicine, 2020, 3, 76.	5.7	57
120	Calling Biomarkers in Milk Using a Protein Microarray on Your Smartphone. PLoS ONE, 2015, 10, e0134360.	1.1	57
121	Wide-field lensless fluorescent microscopy using a tapered fiber-optic faceplate on a chip. Analyst, The, 2011, 136, 3512.	1.7	56
122	Lens-Free Imaging for Biological Applications. Journal of the Association for Laboratory Automation, 2012, 17, 43-49.	2.8	55
123	Recent Progress in Lyme Disease and Remaining Challenges. Frontiers in Medicine, 2021, 8, 666554.	1.2	55
124	Homogeneous Entropy-Driven Amplified Detection of Biomolecular Interactions. ACS Nano, 2016, 10, 7467-7475.	7.3	54
125	Plasmonics Enhanced Smartphone Fluorescence Microscopy. Scientific Reports, 2017, 7, 2124.	1.6	53
126	Paper-based multiplexed vertical flow assay for point-of-care testing. Lab on A Chip, 2019, 19, 1027-1034.	3.1	53

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127	Deep Learning Enables High-Throughput Analysis of Particle-Aggregation-Based Biosensors Imaged Using Holography. ACS Photonics, 2019, 6, 294-301.	3.2	53
128	Color and monochrome lensless on-chip imaging of Caenorhabditis elegans over a wide field-of-view. Lab on A Chip, 2010, 10, 1109.	3.1	52
129	Lensfree super-resolution holographic microscopy using wetting films on a chip. Optics Express, 2011, 19, 17378.	1.7	52
130	Giga-Pixel Lensfree Holographic Microscopy and Tomography Using Color Image Sensors. PLoS ONE, 2012, 7, e45044.	1.1	52
131	Toward giga-pixel nanoscopy on a chip: a computational wide-field look at the nano-scale without the use of lenses. Lab on A Chip, 2013, 13, 2028.	3.1	52
132	All-optical synthesis of an arbitrary linear transformation using diffractive surfaces. Light: Science and Applications, 2021, 10, 196.	7.7	52
133	Emerging Advances to Transform Histopathology Using Virtual Staining. BME Frontiers, 2020, 2020, .	2.2	52
134	Grain size effects in polycrystalline gold nanoparticles. Nanoscale, 2012, 4, 4228.	2.8	51
135	Scale-, Shift-, and Rotation-Invariant Diffractive Optical Networks. ACS Photonics, 2021, 8, 324-334.	3.2	51
136	High-throughput screening of large volumes of whole blood using structured illumination and fluorescent on-chip imaging. Lab on A Chip, 2012, 12, 4968.	3.1	50
137	Multi-color LUCAS: Lensfree On-chip Cytometry Using Tunable Monochromatic Illumination and Digital Noise Reduction. Cellular and Molecular Bioengineering, 2008, 1, 146-156.	1.0	49
138	Benchmarking Smartphone Fluorescence-Based Microscopy with DNA Origami Nanobeads: Reducing the Gap toward Single-Molecule Sensitivity. ACS Omega, 2019, 4, 637-642.	1.6	49
139	Label-free 3D computational imaging of spermatozoon locomotion, head spin and flagellum beating over a large volume. Light: Science and Applications, 2018, 7, 17121-17121.	7.7	48
140	Identification of pathogenic bacteria in complex samples using a smartphone based fluorescence microscope. RSC Advances, 2018, 8, 36493-36502.	1.7	48
141	Single-Shot Autofocusing of Microscopy Images Using Deep Learning. ACS Photonics, 2021, 8, 625-638.	3.2	48
142	Evaluation of a Mobile Phone-Based Microscope for Screening of Schistosoma haematobium Infection in Rural Ghana. American Journal of Tropical Medicine and Hygiene, 2017, 96, 1468-1471.	0.6	47
143	Parasite motility is critical for virulence of African trypanosomes. Scientific Reports, 2018, 8, 9122.	1.6	47
144	Tunable Vapor-Condensed Nanolenses. ACS Nano, 2014, 8, 7340-7349.	7.3	46

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145	Democratization of Nanoscale Imaging and Sensing Tools Using Photonics. Analytical Chemistry, 2015, 87, 6434-6445.	3.2	45
146	Motility-based label-free detection of parasites in bodily fluids using holographic speckle analysis and deep learning. Light: Science and Applications, 2018, 7, 108.	7.7	45
147	Biomedical imaging and sensing using flatbed scanners. Lab on A Chip, 2014, 14, 3248-3257.	3.1	44
148	Wide-field imaging of birefringent synovial fluid crystals using lens-free polarized microscopy for gout diagnosis. Scientific Reports, 2016, 6, 28793.	1.6	42
149	Polarization multiplexed diffractive computing: all-optical implementation of a group of linear transformations through a polarization-encoded diffractive network. Light: Science and Applications, 2022, 11, .	7.7	42
150	Optoelectronic tweezers integrated with lensfree holographic microscopy for wide-field interactive cell and particle manipulation on a chip. Lab on A Chip, 2013, 13, 2278.	3.1	41
151	Deep Learning-Based Holographic Polarization Microscopy. ACS Photonics, 2020, 7, 3023-3034.	3.2	41
152	Sensing of electrolytes in urine using a miniaturized paper-based device. Scientific Reports, 2020, 10, 13620.	1.6	40
153	Allâ€Optical Phase Recovery: Diffractive Computing for Quantitative Phase Imaging. Advanced Optical Materials, 2022, 10, .	3.6	40
154	Crowd-sourced BioGames: managing the big data problem for next-generation lab-on-a-chip platforms. Lab on A Chip, 2012, 12, 4102.	3.1	39
155	Lensfree On-Chip Microscopy and Tomography for Biomedical Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1059-1072.	1.9	38
156	Computational imaging, sensing and diagnostics for global health applications. Current Opinion in Biotechnology, 2014, 25, 8-16.	3.3	38
157	Color calibration and fusion of lens-free and mobile-phone microscopy images for high-resolution and accurate color reproduction. Scientific Reports, 2016, 6, 27811.	1.6	37
158	Towards Wireless Health: Lensless On-Chip Cytometry. Optics and Photonics News, 2008, 19, 24.	0.4	36
159	Deep learningâ€based color holographic microscopy. Journal of Biophotonics, 2019, 12, e201900107.	1.1	36
160	Biopsy-free in vivo virtual histology of skin using deep learning. Light: Science and Applications, 2021, 10, 233.	7.7	36
161	Demosaiced pixel super-resolution for multiplexed holographic color imaging. Scientific Reports, 2016, 6, 28601.	1.6	34
162	Neural Network-Based On-Chip Spectroscopy Using a Scalable Plasmonic Encoder. ACS Nano, 2021, 15, 6305-6315.	7.3	34

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163	Computer-Free, All-Optical Reconstruction of Holograms Using Diffractive Networks. ACS Photonics, 2021, 8, 3375-3384.	3.2	34
164	Optical Detection and Sizing of Single Nanoparticles Using Continuous Wetting Films. ACS Nano, 2013, 7, 7601-7609.	7.3	32
165	Computational out-of-focus imaging increases the spaceâ€“bandwidth product in lens-based coherent microscopy. Optica, 2016, 3, 1422.	4.8	32
166	High-throughput and automated diagnosis of antimicrobial resistance using a cost-effective cellphone-based micro-plate reader. Scientific Reports, 2016, 6, 39203.	1.6	32
167	Microscopy without lenses. Physics Today, 2017, 70, 50-56.	0.3	32
168	Rapid imaging, detection, and quantification of Nosema ceranae spores in honey bees using mobile phone-based fluorescence microscopy. Lab on A Chip, 2019, 19, 789-797.	3.1	32
169	COVID-19 biosensing technologies. Biosensors and Bioelectronics, 2021, 178, 113046.	5.3	30
170	Holographic Image Reconstruction with Phase Recovery and Autofocusing Using Recurrent Neural Networks. ACS Photonics, 2021, 8, 1763-1774.	3.2	30
171	3D imaging of optically cleared tissue using a simplified CLARITY method and on-chip microscopy. Science Advances, 2017, 3, e1700553.	4.7	29
172	Computational imaging of sperm locomotion. Biology of Reproduction, 2017, 97, 182-188.	1.2	29
173	Microplastics retained in stormwater control measures: Where do they come from and where do they go?. Water Research, 2022, 210, 118008.	5.3	29
174	Combined reflection and transmission microscope for telemedicine applications in field settings. Lab on A Chip, 2011, 11, 2738.	3.1	28
175	Lensfree Optofluidic Microscopy and Tomography. Annals of Biomedical Engineering, 2012, 40, 251-262.	1.3	28
176	Determination of tetracycline residues in chicken meat by liquid chromatography-tandem mass spectrometry. Food Additives and Contaminants: Part B Surveillance, 2012, 5, 45-49.	1.3	27
177	Enzyme-Free Nucleic Acid Amplification Assay Using a Cellphone-Based Well Plate Fluorescence Reader. Analytical Chemistry, 2018, 90, 690-695.	3.2	27
178	Fractal LAMP: Label-Free Analysis of Fractal Precipitate for Digital Loop-Mediated Isothermal Nucleic Acid Amplification. ACS Sensors, 2020, 5, 385-394.	4.0	27
179	Recurrent neural network-based volumetric fluorescence microscopy. Light: Science and Applications, 2021, 10, 62.	7.7	27
180	Holographic detection of nanoparticles using acoustically actuated nanolenses. Nature Communications, 2020, 11, 171.	5.8	26

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181	A Mathematical Framework for Combining Decisions of Multiple Experts toward Accurate and Remote Diagnosis of Malaria Using Tele-Microscopy. PLoS ONE, 2012, 7, e46192.	1.1	25
182	Spectral Demultiplexing in Holographic and Fluorescent On-chip Microscopy. Scientific Reports, 2014, 4, 3760.	1.6	25
183	Differential Near-Field Scanning Optical Microscopy. Nano Letters, 2006, 6, 2609-2616.	4.5	24
184	Minimum-phase-function-based processing in frequency-domain optical coherence tomography systems. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 1669.	0.8	24
185	Giga-pixel fluorescent imaging over an ultra-large field-of-view using a flatbed scanner. Lab on A Chip, 2013, 13, 4460.	3.1	24
186	Iterative processing of second-order optical nonlinearity depth profiles. Optics Express, 2004, 12, 3367.	1.7	23
187	BioGames: A Platform for Crowd-Sourced Biomedical Image Analysis and Telediagnosis. Games for Health Journal, 2012, 1, 373-376.	1.1	23
188	Wide-field pathology imaging using on-chip microscopy. Virchows Archiv Fur Pathologische Anatomie Und Physiologie Und Fur Klinische Medizin, 2015, 467, 3-7.	1.4	23
189	Computational Sensing of Staphylococcus aureus on Contact Lenses Using 3D Imaging of Curved Surfaces and Machine Learning. ACS Nano, 2018, 12, 2554-2559.	7.3	23
190	Smartphone-imaged microfluidic biochip for measuring CD64 expression from whole blood. Analyst, The, 2019, 144, 3925-3935.	1.7	23
191	Pathological crystal imaging with singleâ€shot computational polarized light microscopy. Journal of Biophotonics, 2020, 13, e201960036.	1.1	23
192	At the intersection of optics and deep learning: statistical inference, computing, and inverse design. Advances in Optics and Photonics, 2022, 14, 209.	12.1	23
193	Lensfree sensing on a microfluidic chip using plasmonic nanoapertures. Applied Physics Letters, 2010, 97, 221107.	1.5	22
194	Lensfree on-chip imaging using nanostructured surfaces. Applied Physics Letters, 2010, 96, 171106.	1.5	22
195	Wide-field Fluorescent Microscopy and Fluorescent Imaging Flow Cytometry on a Cell-phone. Journal of Visualized Experiments, 2013, , .	0.2	22
196	Nano-imaging enabled via self-assembly. Nano Today, 2014, 9, 560-573.	6.2	22
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