Changhuei Yang

List of Publications by Year
in descending order

171 papers	15,388 citations	29994 54 h-index	17546 121 g-index
180 all docs	180 docs citations	180 times ranked	9386 citing authors

#	Article	IF	Citations
1	Sensitivity advantage of swept source and Fourier domain optical coherence tomography. Optics Express, 2003, 11, 2183.	1.7	1,888
2	Developing optofluidic technology through the fusion of microfluidics and optics. Nature, 2006, 442, 381-386.	13.7	1,779
3	Wide-field, high-resolution Fourier ptychographic microscopy. Nature Photonics, 2013, 7, 739-745.	15.6	1,286
4	Optical phase conjugation for turbidity suppression in biological samples. Nature Photonics, 2008, 2, 110-115.	15.6	629
5	Guidestar-assisted wavefront-shaping methods for focusing light into biological tissue. Nature Photonics, 2015, 9, 563-571.	15.6	451
6	Spectral-domain phase microscopy. Optics Letters, 2005, 30, 1162.	1.7	352
7	Embedded pupil function recovery for Fourier ptychographic microscopy. Optics Express, 2014, 22, 4960.	1.7	311
8	Implementation of a digital optical phase conjugation system and its application to study the robustness of turbidity suppression by phase conjugation. Optics Express, 2010, 18, 3444.	1.7	300
9	Deep-tissue focal fluorescence imaging with digitally time-reversed ultrasound-encoded light. Nature Communications, 2012, 3, 928.	5.8	300
10	Quantitative phase imaging via Fourier ptychographic microscopy. Optics Letters, 2013, 38, 4845.	1.7	289
11	Optofluidic microscopyâ€"a method for implementing a high resolution optical microscope on a chip. Lab on A Chip, 2006, 6, 1274-1276.	3.1	272
12	Lensless high-resolution on-chip optofluidic microscopes for <i>Caenorhabditis elegans</i> and cell imaging. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 10670-10675.	3.3	263
13	Cellular Organization and Substructure Measured Using Angle-Resolved Low-Coherence Interferometry. Biophysical Journal, 2002, 82, 2256-2264.	0.2	229
14	Mobility and transverse flow visualization using phase variance contrast with spectral domain optical coherence tomography. Optics Express, 2007, 15, 12636.	1.7	229
15	Speckle-scale focusing in the diffusive regime with time reversal of variance-encoded light (TROVE). Nature Photonics, 2013, 7, 300-305.	15.6	209
16	Wavefront shaping with disorder-engineered metasurfaces. Nature Photonics, 2018, 12, 84-90.	15.6	205
17	Spectral domain optical coherence tomography: a better OCT imaging strategy. BioTechniques, 2005, 39, S6-S13.	0.8	202
18	Diffraction tomography with Fourier ptychography. Optica, 2016, 3, 827.	4.8	193

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19	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.	3.3	188
20	Focusing through dynamic tissue with millisecond digital optical phase conjugation. Optica, 2015, 2, 728.	4.8	186
21	Concept, implementations and applications of Fourier ptychography. Nature Reviews Physics, 2021, 3, 207-223.	11.9	180
22	Instantaneous complex conjugate resolved spectral domain and swept-source OCT using 3x3 fiber couplers. Optics Express, 2005, 13, 957.	1.7	174
23	An in vivo study of turbidity suppression by optical phase conjugation (TSOPC) on rabbit ear. Optics Express, 2010, 18, 25.	1.7	163
24	Translation correlations in anisotropically scattering media. Nature Physics, 2015, 11, 684-689.	6.5	156
25	High numerical aperture Fourier ptychography: principle, implementation and characterization. Optics Express, 2015, 23, 3472.	1.7	151
26	Instantaneous quadrature low-coherence interferometry with 3Ã—3 fiber-optic couplers. Optics Letters, 2003, 28, 2162.	1.7	144
27	A smartphone-based chip-scale microscope using ambient illumination. Lab on A Chip, 2014, 14, 3056-3063.	3.1	138
28	Microscopy refocusing and dark-field imaging by using a simple LED array. Optics Letters, 2011, 36, 3987.	1.7	133
29	Digital optical phase conjugation of fluorescence in turbid tissue. Applied Physics Letters, 2012, 101, 081108.	1.5	126
30	Focusing on moving targets through scattering samples. Optica, 2014, 1, 227.	4.8	122
31	Sub-pixel resolving optofluidic microscope for on-chip cell imaging. Lab on A Chip, 2010, 10, 3125.	3.1	120
32	Paired-angle-rotation scanning optical coherence tomography forward-imaging probe. Optics Letters, 2006, 31, 1265.	1.7	100
33	Fourier-domain low-coherence interferometry for light-scattering spectroscopy. Optics Letters, 2003, 28, 1230.	1.7	97
34	Standardizing the resolution claims for coherent microscopy. Nature Photonics, 2016, 10, 68-71.	15.6	94
35	Phase-referenced interferometer with subwavelength and subhertz sensitivity applied to the study of cell membrane dynamics. Optics Letters, 2001, 26, 1271.	1.7	91
36	Physical key-protected one-time pad. Scientific Reports, 2013, 3, 3543.	1.6	89

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37	In situ detection of neoplastic transformation and chemopreventive effects in rat esophagus epithelium using angle-resolved low-coherence interferometry. Cancer Research, 2003, 63, 3556-9.	0.4	88
38	Spectral triangulation molecular contrast optical coherence tomography with indocyanine green as the contrast agent. Optics Letters, 2004, 29, 2016.	1.7	76
39	Digital pathology with Fourier ptychography. Computerized Medical Imaging and Graphics, 2015, 42, 38-43.	3.5	76
40	Interferometric phase-dispersion microscopy. Optics Letters, 2000, 25, 1526.	1.7	75
41	Frequency estimation precision in Doppler optical coherence tomography using the Cramer-Rao lower bound. Optics Express, 2005, 13, 410.	1.7	73
42	Fourier ptychographic microscopy for filtration-based circulating tumor cell enumeration and analysis. Journal of Biomedical Optics, 2014, 19, 066007.	1.4	73
43	Solving ptychography with a convex relaxation. New Journal of Physics, 2015, 17, 053044.	1.2	73
44	Molecular Contrast Optical Coherence Tomography: A ReviewÂ¶. Photochemistry and Photobiology, 2005, 81, 215.	1.3	72
45	Relation between speckle decorrelation and optical phase conjugation (OPC)-based turbidity suppression through dynamic scattering media: a study on in vivo mouse skin. Biomedical Optics Express, 2015, 6, 72.	1.5	69
46	Counting White Blood Cells from a Blood Smear Using Fourier Ptychographic Microscopy. PLoS ONE, 2015, 10, e0133489.	1.1	68
47	Characterization of spatially varying aberrations for wide field-of-view microscopy. Optics Express, 2013, 21, 15131.	1.7	67
48	Cavity ring-down technique and its application to the measurement of ultraslow velocities. Optics Letters, 1995, 20, 1068.	1.7	62
49	A phase space model of Fourier ptychographic microscopy. Optics Express, 2014, 22, 338.	1.7	62
50	Fourier ptychographic reconstruction using Poisson maximum likelihood and truncated Wirtinger gradient. Scientific Reports, 2016, 6, 27384.	1.6	61
51	Wide-field Fourier ptychographic microscopy using laser illumination source. Biomedical Optics Express, 2016, 7, 4787.	1.5	60
52	Deep tissue optical focusing and optogenetic modulation with time-reversed ultrasonically encoded light. Science Advances, 2017, 3, eaao5520.	4.7	60
53	Protein-based molecular contrast optical coherence tomography with phytochrome as the contrast agent. Optics Letters, 2004, 29, 1396.	1.7	57
54	Optofluidic ultrahigh-throughput detection of fluorescent drops. Lab on A Chip, 2015, 15, 1417-1423.	3.1	57

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55	Color Capable Sub-Pixel Resolving Optofluidic Microscope and Its Application to Blood Cell Imaging for Malaria Diagnosis. PLoS ONE, 2011, 6, e26127.	1.1	54
56	Method for auto-alignment of digital optical phase conjugation systems based on digital propagation. Optics Express, 2014, 22, 14054.	1.7	53
57	Measurement of angular distributions by use of low-coherence interferometry for light-scattering spectroscopy. Optics Letters, 2001, 26, 322.	1.7	52
58	Polarization-resolved second-harmonic-generation optical coherence tomography in collagen. Optics Letters, 2004, 29, 2252.	1.7	52
59	In vivo study of optical speckle decorrelation time across depths in the mouse brain. Biomedical Optics Express, 2017, 8, 4855.	1.5	52
60	Imaging moving targets through scattering media. Optics Express, 2017, 25, 3935.	1.7	52
61	Focusing light through scattering media by transmission matrix inversion. Optics Express, 2017, 25, 27234.	1.7	51
62	Fluorescence microscopy imaging with a Fresnel zone plate array based optofluidic microscope. Lab on A Chip, 2011, 11, 3698.	3.1	50
63	Optical focusing inside scattering media with time-reversed ultrasound microbubble encoded light. Nature Communications, 2015, 6, 8968.	5.8	50
64	Wide field-of-view fluorescence image deconvolution with aberration-estimation from Fourier ptychography. Biomedical Optics Express, 2016, 7, 352.	1.5	48
65	A high-efficiency microfluidic device for size-selective trapping and sorting. Lab on A Chip, 2014, 14, 2480-2490.	3.1	46
66	Non-iterative complex wave-field reconstruction based on Kramersâ€“Kronig relations. Photonics Research, 2021, 9, 1003.	3.4	44
67	The application of on-chip optofluidic microscopy for imaging Giardia lamblia trophozoites and cysts. Biomedical Microdevices, 2009, 11, 951-958.	1.4	41
68	Wavefront image sensor chip. Optics Express, 2010, 18, 16685.	1.7	41
69	Overlapped Fourier coding for optical aberration removal. Optics Express, 2014, 22, 24062.	1.7	40
70	Quantitative phase imaging and complex field reconstruction by pupil modulation differential phase contrast. Optics Express, 2016, 24, 25345.	1.7	40
71	Focusing light inside scattering media with magnetic-particle-guided wavefront shaping. Optica, 2017, 4, 1337.	4.8	40
72	05 gigapixel microscopy using a flatbed scanner. Biomedical Optics Express, 2014, 5, 1.	1.5	38

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73	Aperture scanning Fourier ptychographic microscopy. Biomedical Optics Express, 2016, 7, 3140.	1.5	38
74	Fluorescence imaging through dynamic scattering media with speckle-encoded ultrasound-modulated light correlation. Nature Photonics, 2020, 14, 511-516.	15.6	38
75	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.	3.3	37
76	Implementation of a color-capable optofluidic microscope on a RGB CMOS color sensor chip substrate. Lab on A Chip, 2010, 10, 411.	3.1	37
77	Parallel Fourier ptychographic microscopy for high-throughput screening with 96 cameras (96 Eyes). Scientific Reports, 2019, 9, 11114.	1.6	37
78	Wide field-of-view microscope based on holographic focus grid illumination. Optics Letters, 2010, 35, 2188.	1.7	36
79	On-chip continuous monitoring of motile microorganisms on an ePetri platform. Lab on A Chip, 2012, 12, 2385.	3.1	36
80	Incubator embedded cell culture imaging system (EmSight) based on Fourier ptychographic microscopy. Biomedical Optics Express, 2016, 7, 3097.	1.5	36
81	Phase-dispersion optical tomography. Optics Letters, 2001, 26, 686.	1.7	35
82	Iterative Time-Reversed Ultrasonically Encoded Light Focusing in Backscattering Mode. Scientific Reports, 2014, 4, 7156.	1.6	34
83	Computational aberration compensation by coded-aperture-based correction of aberration obtained from optical Fourier coding and blur estimation. Optica, 2019, 6, 647.	4.8	34
84	Wide-angular-range and high-resolution beam steering by a metasurface-coupled phased array. Optics Letters, 2018, 43, 5255.	1.7	33
85	Wide Field-of-View On-Chip Talbot Fluorescence Microscopy for Longitudinal Cell Culture Monitoring from within the Incubator. Analytical Chemistry, 2013, 85, 2356-2360.	3.2	32
86	Theoretical comparison of the sensitivity of molecular contrast optical coherence tomography techniques. Optics Express, 2005, 13, 8146.	1.7	31
87	Manual-scanning optical coherence tomography probe based on position tracking. Optics Letters, 2009, 34, 3400.	1.7	31
88	Imaging and Identification of Waterborne Parasites Using a Chip-Scale Microscope. PLoS ONE, 2014, 9, e89712.	1.1	31
89	Motion-corrected Fourier ptychography. Biomedical Optics Express, 2016, 7, 4543.	1.5	30
90	Wide and scalable field-of-view Talbot-grid-based fluorescence microscopy. Optics Letters, 2012, 37, 5018.	1.7	29

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91	Molecular contrast optical coherence tomography: a pump-probe scheme using indocyanine green as a contrast agent. Journal of Biomedical Optics, 2006, 11, 054017.	1.4	28
92	Interferometric speckle visibility spectroscopy (ISVS) for human cerebral blood flow monitoring. APL Photonics, 2020, 5, .	3.0	28
93	Feasibility of field-based light scattering spectroscopy. Journal of Biomedical Optics, 2000, 5, 138.	1.4	27
94	Analyzing the relationship between decorrelation time and tissue thickness in acute rat brain slices using multispeckle diffusing wave spectroscopy. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 270.	0.8	27
95	Characterization of light collection through a subwavelength aperture from a point source. Optics Express, 2006, 14, 10410.	1.7	26
96	Diffusing wave spectroscopy: A unified treatment on temporal sampling and speckle ensemble methods. APL Photonics, 2021, 6, 016105.	3.0	25
97	The application of Fresnel zone plate based projection in optofluidic microscopy. Optics Express, 2008, 16, 15595.	1.7	23
98	Focal plane tuning in wide-field-of-view microscope with Talbot pattern illumination. Optics Letters, 2011, 36, 2179.	1.7	23
99	Wide field-of-view Talbot grid-based microscopy for multicolor fluorescence imaging. Optics Express, 2013, 21, 14555.	1.7	23
100	Computational aberration correction of VIS-NIR multispectral imaging microscopy based on Fourier ptychography. Optics Express, 2019, 27, 24923.	1.7	23
101	High-resolution non-line-of-sight imaging employing active focusing. Nature Photonics, 2022, 16, 462-468.	15.6	23
102	Microfluidic-integrated laser-controlled microactuators with on-chip microscopy imaging functionality. Lab on A Chip, 2014, 14, 3781.	3.1	22
103	2-D PSTD Simulation of optical phase conjugation for turbidity suppression. Optics Express, 2007, 15, 16005.	1.7	21
104	Molecular Contrast Optical Coherence Tomography: A Review. Photochemistry and Photobiology, 2004, 81, 215-37.	1.3	21
105	Fundamental sensitivity limit imposed by dark 1/f noise in the low optical signal detection regime. Optics Express, 2008, 16, 6822.	1.7	20
106	Chip-scale fluorescence microscope based on a silo-filter complementary metal-oxide semiconductor image sensor. Optics Letters, 2013, 38, 1817.	1.7	20
107	Optical information transmission through complex scattering media with optical-channel-based intensity streaming. Nature Communications, 2021, 12, 2411.	5.8	20
108	Images of Spinal Nerves and Adjacent Structures With Optical Coherence Tomography: Preliminary Animal Studies. Journal of Pain, 2007, 8, 767-773.	0.7	19

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109	Observation of polarization-gate based reconstruction quality improvement during the process of turbidity suppression by optical phase conjugation. Applied Physics Letters, 2009, 95, 123702.	1.5	19
110	Model for estimating the penetration depth limit of the time-reversed ultrasonically encoded optical focusing technique. Optics Express, 2014, 22, 5787.	1.7	19
111	Homodyne en face optical coherence tomography. Optics Letters, 2006, 31, 1815.	1.7	18
112	Optical phase conjugation (OPC)-assisted isotropic focusing. Optics Express, 2013, 21, 8781.	1.7	18
113	2Ï€ ambiguity-free optical distance measurement with subnanometer precision with a novel phase-crossing low-coherence interferometer. Optics Letters, 2002, 27, 77.	1.7	17
114	Harmonically-related diffraction gratings-based interferometer for quadrature phase measurements. Optics Express, 2006, 14, 8127.	1.7	17
115	Quantitative differential interference contrast microscopy based on structured-aperture interference. Applied Physics Letters, 2008, 93, 091113.	1.5	17
116	Optical phase conjugation assisted scattering lens: variable focusing and 3D patterning. Scientific Reports, 2016, 6, 23494.	1.6	17
117	Neurophotonic Tools for Microscopic Measurements and Manipulation: Status Report. Neurophotonics, 2022, 9, 013001.	1.7	17
118	Measurement of the anomalous phase velocity of ballistic light in a random medium by use of a novel interferometer. Optics Letters, 2001, 26, 235.	1.7	15
119	A generalized noise variance analysis model and its application to the characterization of 1/f noise. Optics Express, 2007, 15, 3833.	1.7	14
120	Axial standing-wave illumination frequency-domain imaging (SWIF). Optics Express, 2014, 22, 11001.	1.7	14
121	Quantum trajectory analysis of a thresholdlike transition in the microlaser. Physical Review A, 1997, 55, 4492-4500.	1.0	13
122	Interference of a four-hole aperture for on-chip quantitative two-dimensional differential phase imaging. Optics Letters, 2007, 32, 2963.	1.7	12
123	Improving weak-signal identification via predetection background suppression by a pixel-level, surface-wave enabled dark-field aperture. Optics Letters, 2010, 35, 2636.	1.7	12
124	Imaging through highly scattering human skulls with ultrasound-modulated optical tomography. Optics Letters, 2020, 45, 2973.	1.7	11
125	Full field phase imaging using a harmonically matched diffraction grating pair based homodyne quadrature interferometer. Applied Physics Letters, 2007, 90, 151123.	1.5	10
126	Time-reversed ultrasonically encoded optical focusing through highly scattering ex vivo human cataractous lenses. Journal of Biomedical Optics, 2018, 23, 1.	1.4	10

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127	Markov speckle for efficient random bit generation. Optics Express, 2012, 20, 26394.	1.7	9
128	Viral plaque analysis on a wide field-of-view, time-lapse, on-chip imaging platform. Analyst, The, 2014, 139, 3727-3734.	1.7	9
129	Investigating ultrasoundâ€“light interaction in scattering media. Journal of Biomedical Optics, 2020, 25, 1.	1.4	9
130	Amplification of optical delay by use of matched linearly chirped fiber Bragg gratings. Optics Letters, 2004, 29, 685.	1.7	8
131	Slanted hole array beam profiler (SHArP)â€”a high-resolution portable beam profiler based on a linear aperture array. Optics Letters, 2006, 31, 3161.	1.7	8
132	An optical tweezer actuated, nanoaperture-grid based Optofluidic Microscope implementation method. Optics Express, 2007, 15, 16367.	1.7	8
133	Diffusion model for ultrasound-modulated light. Journal of Biomedical Optics, 2014, 19, 035005.	1.4	8
134	Glare suppression by coherence gated negation. Optica, 2016, 3, 1107.	4.8	8
135	Molecular Contrast Optical Coherence Tomography: A Review^{Â¶}. Photochemistry and Photobiology, 2005, 81, 215-237.	1.3	6
136	Physically secure and fully reconfigurable data storage using optical scattering. , 2015, , .		6
137	Method to Determine Syringe Silicone Oil Layer Heterogeneity and Investigation of its Impact on Product Particle Counts. Journal of Pharmaceutical Sciences, 2020, 109, 3292-3299.	1.6	6
138	Implementation of free-space Fourier Ptychography with near maximum system numerical aperture. Optics Express, 2022, 30, 20321.	1.7	6
139	Harmonically matched grating-based full-field quantitative high-resolution phase microscope for observing dynamics of transparent biological samples. Optics Express, 2007, 15, 18141.	1.7	4
140	Characterization of acceptance angles of â€ˆsmall circular apertures. Optics Express, 2009, 17, 23903.	1.7	4
141	Pixel level optical-transfer-function design based on the surface-wave-interferometry aperture. Optics Express, 2010, 18, 16499.	1.7	4
142	A wide field-of-view scanning endoscope for whole anal canal imaging. Biomedical Optics Express, 2015, 6, 607.	1.5	4
143	Analysis of postreconstruction digital refocusing in Fourier ptychographic microscopy. Optical Engineering, 2022, 61, .	0.5	4
144	Phase-Referenced Interferometer with Subwavelength and Subhertz Sensitivity. Optics and Photonics News, 2001, 12, 36.	0.4	3

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145	Molecular contrast optical coherence tomography: SNR comparison of techniques and introduction of ground state recovery pump-probe OCT. , 2005, , .		3
146	Electromagnetic equivalent model for phase conjugate mirror based on the utilization of left-handed material. Optics Express, 2007, 15, 13877.	1.7	3
147	Focus grid generation by in-line holography. Optics Express, 2010, 18, 14366.	1.7	3
148	Subpixel resolving optofluidic microscope based on super resolution algorithm. , 2011, , .		3
149	Stereoscopic optofluidic on-chip microscope. , 2011, , .		3
150	Modeling Extensions of Fourier Ptychographic Microscopy. Microscopy and Microanalysis, 2014, 20, 370-371.	0.2	3
151	Single-shot surface 3D imaging by optical coherence factor. Optics Letters, 2020, 45, 1734.	1.7	3
152	Stain-free detection of embryo polarization using deep learning. Scientific Reports, 2022, 12, 2404.	1.6	3
153	Pump-probe scheme for optical coherence tomography using indocyanine green mixed with albumin or human plasma. , 2005, , .		2
154	Color-capable sub-pixel resolving optofluidic microscope for on-chip cell imaging. , 2011, , .		2
155	Themed issue: Optofluidics. Lab on A Chip, 2012, 12, 3539.	3.1	2
156	Fourier Ptychographic Microscopy for Rapid, High-Resolution Imaging of Circulating Tumor Cells Enriched by Microfiltration. Methods in Molecular Biology, 2017, 1634, 107-117.	0.4	2
157	Speckle-resolved optical coherence tomography for mesoscopic imaging within scattering media. Biomedical Optics Express, 2022, 13, 2068.	1.5	2
158	Optofluidic Microscope: A Novel High Resolution Microscope-on-a-Chip System. , 0, , .		1
159	SNR enhancement through phase dependent signal reconstruction algorithms for phase separated interferometric signals. Optics Express, 2007, 15, 10103.	1.7	1
160	Quantitative surface normal measurement by a wavefront camera. Optics Letters, 2012, 37, 199.	1.7	1
161	Feasibility and safety study of a high resolution wide field-of-view scanning endoscope for circumferential intraluminal intestinal imaging. Scientific Reports, 2021, 11, 3544.	1.6	1
162	Optofluidic microscopy. , 2005, , .		0

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163	Nano-aperture array based optical imaging system on a microfluidic chip. , 2006, , .		0
164	The Optofluidic Microscope Â¿ A High Resolution Microscope-on-A-Chip System. , 2007, , .		0
165	An optofluidic microscope on a chip driven by DC electrokinetics. , 2008, , .		0
166	Turning tissues transparent by optical phase conjugation. , 2010, , .		0
167	Deep tissue imaging by time-reversal optical phase conjugation techniques. , 2010, , .		0
168	Optofluidics 2013. Lab on A Chip, 2013, 13, 2673.	3.1	0
169	Rethinking microscopy. , 2014, , .		0
170	Advances in optics for biotechnology, medicine and surgery. Biomedical Optics Express, 2014, 5, 560.	1.5	0
171	Time-reversed ultrasonically encoded (TRUE) focusing for deep-tissue optogenetic modulation. , 2018, , .		0