

Wataru Watanabe

List of Publications by Citations

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104
papers

2,893
citations

27
h-index

53
g-index

141
ext. papers

3,444
ext. citations

2.3
avg, IF

4.73
L-index

#	Paper	IF	Citations
104	Ultrafast Processes for Bulk Modification of Transparent Materials. <i>MRS Bulletin</i> , 2006 , 31, 620-625	3.2	307
103	Three-dimensional hole drilling of silica glass from the rear surface with femtosecond laser pulses. <i>Optics Letters</i> , 2001 , 26, 1912-4	3	199
102	Femtosecond laser disruption of subcellular organelles in a living cell. <i>Optics Express</i> , 2004 , 12, 4203-13	3.3	173
101	In situ observation of photoinduced refractive-index changes in filaments formed in glasses by femtosecond laser pulses. <i>Optics Letters</i> , 2001 , 26, 19-21	3	167
100	Terahertz wire-grid polarizers with micrometer-pitch Al gratings. <i>Optics Letters</i> , 2009 , 34, 274-6	3	132
99	Wavelength division with three-dimensional couplers fabricated by filamentation of femtosecond laser pulses. <i>Optics Letters</i> , 2003 , 28, 2491-3	3	126
98	Symmetric waveguides in poly(methyl methacrylate) fabricated by femtosecond laser pulses. <i>Optics Express</i> , 2006 , 14, 291-7	3.3	120
97	Welding of Transparent Materials Using Femtosecond Laser Pulses. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, L687-L689	1.4	117
96	Laser micro-welding of transparent materials by a localized heat accumulation effect using a femtosecond fiber laser at 1558 nm. <i>Optics Express</i> , 2006 , 14, 10460-8	3.3	97
95	Optical seizing and merging of voids in silica glass with infrared femtosecond laser pulses. <i>Optics Letters</i> , 2000 , 25, 1669-71	3	91
94	Space-selective laser joining of dissimilar transparent materials using femtosecond laser pulses. <i>Applied Physics Letters</i> , 2006 , 89, 021106	3.4	88
93	Holographic fabrication of multiple layers of grating inside soda-lime glass with femtosecond laser pulses. <i>Applied Physics Letters</i> , 2002 , 80, 1508-1510	3.4	83
92	Fabrication of Fresnel zone plate embedded in silica glass by femtosecond laser pulses. <i>Optics Express</i> , 2002 , 10, 978-83	3.3	82
91	Multilevel phase-type diffractive lenses in silica glass induced by filamentation of femtosecond laser pulses. <i>Optics Letters</i> , 2004 , 29, 1846-8	3	72
90	Intracellular disruption of mitochondria in a living HeLa cell with a 76-MHz femtosecond laser oscillator. <i>Optics Express</i> , 2005 , 13, 9869-80	3.3	59
89	[INVITED] Ultrafast laser micro-processing of transparent material. <i>Optics and Laser Technology</i> , 2016 , 78, 52-61	4.2	56
88	Single femtosecond pulse holography using polymethyl methacrylate. <i>Optics Express</i> , 2002 , 10, 1173-8	3.3	50

87	Three-Dimensional Waveguides Fabricated in Poly(methyl methacrylate) by a Femtosecond Laser. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, L765-L767	1.4	49
86	Multi-Spectral Two-Photon Excited Fluorescence Microscopy Using Supercontinuum Light Source. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, L167-L169	1.4	41
85	Direct Welding between Copper and Glass Substrates with Femtosecond Laser Pulses. <i>Applied Physics Express</i> , 2008 , 1, 082601	2.4	39
84	Single-organelle tracking by two-photon conversion. <i>Optics Express</i> , 2007 , 15, 2490-8	3.3	39
83	Chromophore-assisted laser inactivation--towards a spatiotemporal-functional analysis of proteins, and the ablation of chromatin, organelle and cell function. <i>Journal of Cell Science</i> , 2014 , 127, 1621-9	5.3	38
82	Volume Grating Induced by a Self-Trapped Long Filament of Femtosecond Laser Pulses in Silica Glass. <i>Japanese Journal of Applied Physics</i> , 2003 , 42, 6916-6919	1.4	38
81	Structural modification in fused silica by a femtosecond fiber laser at 1558 nm. <i>Optics Express</i> , 2006 , 14, 6971-80	3.3	37
80	Motion of bubble in solid by femtosecond laser pulses. <i>Optics Express</i> , 2002 , 10, 603-8	3.3	36
79	Stimulated parametric emission microscopy. <i>Optics Express</i> , 2006 , 14, 786-93	3.3	34
78	Anisotropic refractive-index change in silica glass induced by self-trapped filament of linearly polarized femtosecond laser pulses. <i>Journal of Applied Physics</i> , 2003 , 93, 1889-1892	2.5	29
77	Fabrication of multimode interference waveguides in glass by use of a femtosecond laser. <i>Optics Letters</i> , 2005 , 30, 2888-90	3	26
76	Characterization of Micro-Channels Fabricated by In-Water Ablation of Femtosecond Laser Pulses. <i>Japanese Journal of Applied Physics</i> , 2004 , 43, 4207-4211	1.4	26
75	Estimation of the Refractive Index Change in Glass Induced by Femtosecond Laser Pulses. <i>Optical Review</i> , 2000 , 7, 14-17	0.9	26
74	Study of filamentary damage in synthesized silica induced by chirped femtosecond laser pulses. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005 , 22, 2437	1.7	24
73	Histone H2A mobility is regulated by its tails and acetylation of core histone tails. <i>Biochemical and Biophysical Research Communications</i> , 2007 , 357, 627-32	3.4	23
72	Density characterization of femtosecond laser modification in polymers. <i>Applied Physics Letters</i> , 2008 , 92, 091120	3.4	21
71	Optical knock out of stem cells with extremely ultrashort femtosecond laser pulses. <i>Journal of Biophotonics</i> , 2008 , 1, 463-9	3.1	21
70	Femtosecond laser disruption of mitochondria in living cells. <i>Medical Laser Application: International Journal for Laser Treatment and Research</i> , 2005 , 20, 185-191		21

69	Holographic data storage on nonphotosensitive glass with a single femtosecond laser pulse. <i>Applied Physics Letters</i> , 2002 , 81, 1952-1954	3-4	21
68	Increasing diffraction efficiency by heating phase gratings formed by femtosecond laser irradiation in poly(methyl methacrylate). <i>Applied Physics Letters</i> , 2009 , 94, 241122	3-4	19
67	Spatial Coherence of Supercontinuum Emitted from Multiple Filaments. <i>Japanese Journal of Applied Physics</i> , 2001 , 40, 592-595	1.4	17
66	Measurement of refractive index change induced by dark reaction of photopolymer with digital holographic quantitative phase microscopy. <i>Optics Communications</i> , 2012 , 285, 4911-4917	2	15
65	Fabrication of Dammann Gratings in Silica Glass Using a Filament of Femtosecond Laser. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, 5014-5016	1.4	14
64	In vivo manipulation of fluorescently labeled organelles in living cells by multiphoton excitation. <i>Journal of Biomedical Optics</i> , 2008 , 13, 031213	3-5	13
63	Coherent Array of White-Light Continuum Generated by Microlens Array. <i>Optical Review</i> , 1999 , 6, 167-172	9	13
62	Application of visualization techniques for cell and tissue engineering. <i>Journal of Bioscience and Bioengineering</i> , 2013 , 115, 122-6	3-3	12
61	Nonlinear Ultrafast Focal-Point Optics for Microscopic Imaging, Manipulation, and Machining. <i>Proceedings of the IEEE</i> , 2009 , 97, 1011-1030	14-3	11
60	Fabrication of controlled volume scattering medium in poly(methyl methacrylate) by focused femtosecond laser pulses. <i>Applied Physics Letters</i> , 2009 , 95, 221114	3-4	11
59	Femtosecond Laser Pulses Move Voids in Transparent Materials. <i>Optics and Photonics News</i> , 2001 , 12, 26	1.9	10
58	Fabrication of diffractive optical elements inside polymers by femtosecond laser irradiation. <i>Thin Solid Films</i> , 2009 , 518, 714-718	2.2	9
57	Tracking a Single Organelle with Two-Photon Protein Conversion. <i>Optics and Photonics News</i> , 2007 , 18, 20	1.9	9
56	Generation of Debris in Water-Assisted Femtosecond Laser Drilling of Silica Glass. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, 8013-8015	1.4	9
55	Coherence Spectrotomography: Optical Spectroscopic Tomography with Low-Coherence Interferometry. <i>Optical Review</i> , 2000 , 7, 406-414	0.9	9
54	Regenerated volume gratings in PMMA after femtosecond laser writing. <i>Optics Letters</i> , 2017 , 42, 1632-1635	5	8
53	Coherence Spectrotomography of Layered Medium with White-Light Continuum. <i>Optical Review</i> , 1999 , 6, 71-76	0.9	7
52	INTRACELLULAR MANIPULATION BY FEMTOSECOND LASERS: REVIEW. <i>Journal of Innovative Optical Health Sciences</i> , 2009 , 02, 1-8	1.2	6

51	Writing Speed Dependency of Femtosecond Laser Refractive Index Modification in Poly(dimethylsiloxane). <i>Journal of Laser Micro Nanoengineering</i> , 2012 , 7, 171-175	1	6
50	Ultrashort Laser Welding and Joining. <i>Topics in Applied Physics</i> , 2012 , 467-477	0.5	6
49	Joining of transparent materials by femtosecond laser pulses 2007 ,		5
48	Laser micro-welding of silicon and borosilicate glass using nonlinear absorption effect induced by 1558-nm femtosecond fiber laser pulses 2007 ,		5
47	Dispersive Coherence Spectrotomography with White-Light Continuum. <i>Optical Review</i> , 1999 , 6, 455-458.	0.9	5
46	Dendrite-joining of air-gap-separated PMMA substrates using ultrashort laser pulses. <i>Optical Materials Express</i> , 2017 , 7, 2141	2.6	4
45	Fabrication of Diffractive Optical Elements in Polymers by 400-nm Femtosecond Laser Pulses. <i>Journal of Laser Micro Nanoengineering</i> , 2012 , 7, 58-61	1	4
44	Waveguide writing in bulk PMMA by femtosecond laser pulses 2006 ,		4
43	Fabricating micro-Bragg reflectors in 3-D photorefractive waveguides. <i>Optics Express</i> , 1998 , 2, 503-8	3.3	4
42	Regeneration of a Grating in PMMA Inscribed by Femtosecond Laser Bessel Beam. <i>Journal of Laser Micro Nanoengineering</i> , 2017 , 12, 102-106	1	4
41	Phase measurement of structural modifications created by femtosecond laser pulses in glass with phase-shifting digital holographic microscopy. <i>Optical Engineering</i> , 2017 , 56, 111702	1.1	3
40	Filamentation in Ultrafast Laser Material Processing. <i>Springer Series in Chemical Physics</i> , 2010 , 161-181	0.3	3
39	Fabrication of volume grating induced in silica glass by femtosecond laser 2003 ,		3
38	Coherence spectrotomography with white light continuum 1998 , 3261, 305		3
37	Contrast enhancement by oblique illumination microscopy with an LED array. <i>Optik</i> , 2019 , 183, 92-98	2.5	3
36	Multi-contrast imaging of femtosecond-laser-induced modifications in glass by variable illumination with a projector-based microscope. <i>Optik</i> , 2017 , 150, 48-53	2.5	2
35	Low-cost multi-modal microscope using Raspberry Pi. <i>Optik</i> , 2020 , 212, 164713	2.5	2
34	Fabrication of photonic devices with femtosecond laser pulses 2004 , 5340, 119		2

33	High-accuracy optical computing based on interval arithmetic and the fixed-point theorem. <i>Applied Optics</i> , 1996 , 35, 1367-71	1.7	2
32	Mobile-phone-based Rheinberg microscope with a light-emitting diode array. <i>Journal of Biomedical Optics</i> , 2018 , 24, 1-6	3.5	2
31	Measurement of Light-induced Refractive Index Change in Photopolymer with Quantitative Phase Microscopy 2011 ,		2
30	Direct joining and welding with ultrashort laser pulses 2013 ,		1
29	Femtosecond laser direct writing of diffractive optical elements in polymers 2010 ,		1
28	Femtosecond laser fabrication of scattering medium by randomly distributed holes in polymer 2009 ,		1
27	Photofabrication for microphotonics in glass 2002 , 4459, 118		1
26	Parallelisms in interferometric fast spectral imaging 1998 ,		1
25	Optical implementation of Baker's map using parallel feedback system. <i>Optical Review</i> , 1996 , 3, A423-A425		1
24	Volume gratings and welding of glass/plastic by femtosecond laser direct writing 2018 ,		1
23	Image acquisition with smartphone-based LED array microscope 2018 ,		1
22	Reconstruction of complex amplitude by lensless phase-shift digital holography through an opaque glass plate 2018 ,		1
21	Image reconstruction behind diffuser by deep learning and spatial filtering 2020 ,		1
20	Looking through diffusers by phase correction with lensless digital holography. <i>OSA Continuum</i> , 2020 , 3, 3536	1.4	1
19	Laser Nanosurgery, Manipulation, and Transportation of Cells and Tissues. <i>Springer Series in Materials Science</i> , 2010 , 145-161	0.9	1
18	Fabrication of PDMS-based volume Bragg gratings by stitching of femtosecond laser filament. <i>Japanese Journal of Applied Physics</i> , 2021 , 60, 032003	1.4	1
17	Acquisition of Multi-Modal Images of Structural Modifications in Glass with Programmable LED-Array-Based Illumination. <i>Applied Sciences (Switzerland)</i> , 2019 , 9, 1136	2.6	0
16	Welding and Joining between Transparent Materials with Femtosecond Lasers. <i>Journal of the Japan Society for Precision Engineering</i> , 2015 , 81, 731-734	0.1	0

- 15 Fabrication of Micro-Photonic Component in Silica Glass with Femtosecond Laser Pulses. *Journal of the Optical Society of Korea*, **2004**, 8, 21-28 ○
- 14 Nanosurgery of sub-cellular organelles in living cells using a femtosecond laser oscillator **2006**, 6108, 7
- 13 Femtosecond laser manipulation of subcellular organelles in living cells **2005**, 5863, 28
- 12 Two-dimensional dispersive coherence spectrotomography with white-light continuum **1999**, 3753, 35
- 11 White-light continuum as a low-coherence light source for interferometry and its applications to dispersive coherence spectrotomography **1999**, 3744, 44
- 10 Femtosecond laser integration of volume grating in BK7 glass refractive lens. *Optical Engineering*, **2020**, 59, 1 1.1
- 9 Fabrication of Three-Dimensional Micro Optical Device. *The Review of Laser Engineering*, **2003**, 31, 276-281
- 8 Intracellular Nanosurgery Using Near-Infrared Ultrashort Laser Pulses. *The Review of Laser Engineering*, **2007**, 35, 448-452 ○
- 7 Industrial Application of Ultrashort Laser Processing. *The Review of Laser Engineering*, **2013**, 41, 780 ○
- 6 Nonlinear Optical Spectroscopy (NLOS)145-172
- 5 Ultrafast Optics for Nonlinear Optical Microscopy1-86
- 4 Functional Imaging Based on Molecular Control267-325
- 3 Basic Microscopic Technique87-144
- 2 Nonlinear Optical Microscopy173-265
- 1 Ultrafast Laser Surgery327-341