

# Yoshizo Kawaguchi

## List of Publications by Year in descending order

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104  
papers

1,360  
citations

304743

22  
h-index

377865

34  
g-index

104  
all docs

104  
docs citations

104  
times ranked

653  
citing authors

#	ARTICLE	IF	CITATIONS
1	Time-resolved fractoluminescence spectra of silica glass in a vacuum and nitrogen atmosphere. <i>Physical Review B</i> , 1995, 52, 9224-9228.	3.2	82
2	Surface micro-fabrication of silica glass by excimer laser irradiation of organic solvent. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2003, 158, 179-182.	3.9	79
3	Transient pressure induced by laser ablation of toluene, a highly laser-absorbing liquid. <i>Applied Physics A: Materials Science and Processing</i> , 2005, 80, 275-281.	2.3	57
4	Laser-induced high-quality etching of fused silica using a novel aqueous medium. <i>Applied Physics A: Materials Science and Processing</i> , 2002, 75, 641-645.	2.3	56
5	Micron- and submicron-sized surface patterning of silica glass by LIBWE method. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2004, 166, 129-133.	3.9	51
6	Generation and Photoreactions of 2,4,6-Trinitreno-1,3,5-triazine, a Septet Trinitrene. <i>Journal of the American Chemical Society</i> , 2004, 126, 7846-7852.	13.7	51
7	Microetching of fused silica by laser ablation of organic solution with XeCl excimer laser. <i>Applied Surface Science</i> , 2002, 186, 552-555.	6.1	47
8	Fractoluminescence Spectra in Crystalline Quartz. <i>Japanese Journal of Applied Physics</i> , 1998, 37, 1892-1896.	1.5	46
9	Luminescence spectra at bending fracture of single crystal MgO. <i>Solid State Communications</i> , 2000, 117, 17-20.	1.9	46
10	Laser-Induced Backside Wet Etching of Sapphire. <i>Japanese Journal of Applied Physics</i> , 2003, 42, L176-L178.	1.5	44
11	Nano- and Microdot Array Formation of FeSi <sub>2</sub> by Nanosecond Excimer Laser-Induced Forward Transfer. <i>Applied Physics Express</i> , 2008, 1, 057001.	2.4	43
12	Laser-induced back-side wet etching of fused silica with an aqueous solution containing organic molecules. <i>Applied Physics A: Materials Science and Processing</i> , 2002, 75, 437-440.	2.3	40
13	Etching a Micro-Trench with a Maximum Aspect Ratio of 60 on Silica Glass by Laser-Induced Backside Wet Etching (LIBWE). <i>Japanese Journal of Applied Physics</i> , 2005, 44, L176-L178.	1.5	38
14	Laser ablation of toluene liquid for surface micro-structuring of silica glass. <i>Applied Surface Science</i> , 2006, 252, 4387-4391.	6.1	37
15	Fabrication of Microarrays on Fused Silica Plates Using the Laser-Induced Backside Wet Etching Method. <i>Langmuir</i> , 2004, 20, 9769-9774.	3.5	32
16	OH-content dependence of fractoluminescence spectra in silica glass. <i>Physical Review B</i> , 1996, 54, 9721-9725.	3.2	30
17	Dicyanocarbodiimide and Trinitreno-s-triazine Generated by Consecutive Photolysis of Triazido-s-triazine in a Low-Temperature Nitrogen Matrix. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 5206-5209.	13.8	30
18	Transient pressure induced by laser ablation of liquid toluene: toward the understanding of laser-induced backside wet etching. <i>Applied Physics A: Materials Science and Processing</i> , 2004, 79, 883-885.	2.3	30

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19	Charged Particle Emission and Luminescence upon Bending Fracture of Granite. Japanese Journal of Applied Physics, 1998, 37, 3495-3499.	1.5	25
20	Imprinting by hot embossing in polymer substrates using a template of silica glass surface-structured by the ablation of LIBWE method. Applied Physics A: Materials Science and Processing, 2004, 79, 827-828.	2.3	24
21	Rapid prototyping of silica glass microstructures by the LIBWE method: Fabrication of deep microtrenches. Journal of Photochemistry and Photobiology A: Chemistry, 2006, 182, 319-324.	3.9	22
22	Surface microstructuring of silica glass by laser-induced backside wet etching with a DPSS UV laser. Applied Surface Science, 2007, 253, 8287-8291.	6.1	22
23	Site-selective dye deposition on microstructures of fused silica fabricated using the LIBWE method. Chemical Communications, 2003, , 2168.	4.1	21
24	Characteristics of $\text{Fe}^{3+}$ -induced absorption bands in oxygen deficient silica. Journal of Applied Physics, 1996, 80, 5633-5638.	2.5	19
25	Fabrication of a Novel Microfluidic Device Incorporating 2-D Array of Microbeads. Chemistry Letters, 2006, 35, 218-219.	1.3	19
26	Interaction of wide band gap single crystals with 248 nm excimer laser irradiation. VII. Localized plasma formation on NaCl single crystal surfaces. Journal of Applied Physics, 2001, 89, 2370-2378.	2.5	17
27	A deep micro-trench on silica glass fabricated by laser-induced backside wet etching (LIBWE). Journal of Physics: Conference Series, 2007, 59, 380-383.	0.4	17
28	Nano- and microdot array formation by laser-induced dot transfer. Applied Surface Science, 2009, 255, 9703-9706.	6.1	17
29	Formation of a TiO <sub>2</sub> Micronetwork on a UV-Absorbing SiO <sub>2</sub> -Based Glass Surface by Excimer Laser Irradiation. Chemistry of Materials, 2005, 17, 6651-6655.	6.7	16
30	Flexible 3D deep microstructures of silica glass by laser-induced backside wet etching. Applied Physics A: Materials Science and Processing, 2010, 101, 319-323.	2.3	15
31	Phonon Sidebands of $\frac{1}{2}$ 00 Line in Absorption and Luminescence Spectra of NaNO <sub>2</sub> : Spatial Dispersion of $\frac{1}{2}$ 00 Exciton. Journal of the Physical Society of Japan, 1989, 58, 4620-4625.	1.6	15
32	Electronic states of thiophene/phenylene co-oligomers: Extreme-ultra violet excited photoelectron spectroscopy observations and density functional theory calculations. Journal of Applied Physics, 2013, 113, 083710.	2.5	14
33	Preparation of carbon nitride film by cryogenic laser processing. Applied Physics A: Materials Science and Processing, 2004, 79, 1477-1479.	2.3	13
34	On-Demand Deposition of Functional Oxide Microdots by Double-Pulse Laser-Induced Dot Transfer. Journal of Laser Micro Nanoengineering, 2014, 9, 10-14.	0.1	13
35	Pulsed laser deposition of semiconductor-ITO composite films on electric-field-applied substrates. Applied Surface Science, 2002, 197-198, 438-441.	6.1	12
36	Room-temperature preparation of $\text{FeSi}_2$ microprecipitates by the KrF excimer laser ablation of an iron disilicide alloy target. Applied Physics Letters, 2003, 83, 3078-3080.	3.3	12

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37	Optimization of thermal treatment of vapor-deposited thiophene/phenylene co-oligomer films. Journal of Crystal Growth, 2012, 345, 39-43.	1.5	11
38	Detection of trace substances adhered to a metal surface by laser-induced breakdown spectroscopy. Journal of Analytical Atomic Spectrometry, 2017, 32, 609-615.	3.0	11
39	Laser-induced backside wet etching of silica glass with ns-pulsed DPSS UV laser at the repetition rate of 40 kHz. Journal of Physics: Conference Series, 2007, 59, 539-542.	0.4	10
40	Surface microfabrication of fused silica glass by UV laser irradiation. , 2004, 5339, 112.		9
41	Laser ablation and photo-dissociation of solid-nitrogen film by UV ps-laser irradiation. Applied Surface Science, 2002, 197-198, 67-71.	6.1	8
42	Plume dynamics of iron disilicide studied by time-of-flight mass spectroscopy. Applied Surface Science, 2003, 208-209, 52-56.	6.1	8
43	Laser-Induced Backside Wet Etching Employing Green DPSS Laser and Liquid Metallic Absorber. Journal of Laser Micro Nanoengineering, 2011, 6, 204-208.	0.1	8
44	Consequences of combining laser irradiation with other stimuli on laser desorption and ablation from wide bandgap insulators. Applied Surface Science, 2000, 154-155, 291-304.	6.1	7
45	Fabrication of 1 1/4µm patterns on fused silica plates by laser-induced backside wet etching (LIBWE). , 2003, , .		7
46	Surface microstructures of silica glass by laser-induced backside wet etching. Proceedings of SPIE, 2008, , .	0.8	7
47	Laser cutting of carbon fiber reinforced plastics (CFRP) by 1kW cw fiber laser irradiation. Proceedings of SPIE, 2013, , .	0.8	7
48	Fabrication of Multiple Slanted Microstructures on Silica Glass by Laser-Induced Backside Wet Etching. Journal of Laser Micro Nanoengineering, 2010, 5, 256-262.	0.1	7
49	Laser-induced positive ion and neutral atom/molecule emission from single-crystal CaHPO <sub>4</sub> · 2 H <sub>2</sub> O: The role of electron-beam-induced defects. Applied Physics A: Materials Science and Processing, 1999, 69, S547-S552.	2.3	6
50	Variation in the Etch Rate of LIBWE Fabricating Deep Microtrenches. Journal of Laser Micro Nanoengineering, 2012, 7, 81-86.	0.1	6
51	Temperature dependence of resonant secondary emission in NaNO <sub>2</sub> : Spectral behavior. Solid State Communications, 1990, 74, 419-423.	1.9	5
52	Fractoluminescence in minerals. Radiation Effects and Defects in Solids, 1999, 149, 131-135.	1.2	5
53	Plume dynamics in ZnO under ArF laser radiation. Applied Surface Science, 2002, 197-198, 268-272.	6.1	5
54	Surface microfabrication of silica glass by excimer laser irradiation of toluene solution. , 2003, 4977, 269.		5

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55	Fabrication of a microfluidic bioarray device using laser-machined surface microstructures. , 2007, , .		5
56	Effects of pn Doping in Thiophene/Phenylene Co-oligomers Thin Films. Molecular Crystals and Liquid Crystals, 2015, 620, 153-158.	0.9	5
57	Investigation of the factors affecting the limit of detection of laser-induced breakdown spectroscopy for surface inspection. Plasma Science and Technology, 2019, 21, 034021.	1.5	5
58	Failure and relaxations of carbon fibre-reinforced plastic tested by exoemission and luminescence methods. International Journal of Adhesion and Adhesives, 1997, 17, 75-78.	2.9	4
59	Large gain for crystalline thin films of thiophene/phenylene co-oligomer by photopumping with femtosecond laser pulses. Journal of Luminescence, 2014, 155, 338-342.	3.1	4
60	Pre-bond surface inspection using laser-induced breakdown spectroscopy for the adhesive bonding of multiple materials. International Journal of Adhesion and Adhesives, 2019, 93, 102320.	2.9	4
61	Spectral and temporal behavior of resonant secondary emission in NaNO <sub>2</sub> . Journal of Luminescence, 1987, 38, 225-229.	3.1	3
62	<title>Laser ablation process of quartz material using F<formula><inf>2</roman></inf></formula> laser</title>. , 2000, , .		3
63	Characteristics of Excimer-Laser-Induced Luminescence of the Ground Surface of Silica Glass. Japanese Journal of Applied Physics, 2000, 39, 180-185.	1.5	3
64	Improvement in Electrical Conductivity of Indium Tin Oxide Films Prepared via Pulsed Laser Deposition on Electric-Field-Applied Substrates. Japanese Journal of Applied Physics, 2002, 41, 3760-3761.	1.5	3
65	The onset of optical breakdown in KrF-laser-irradiated silica glass surfaces. Applied Surface Science, 2002, 197-198, 50-55.	6.1	3
66	Reflection Spectra of Vibronic Excitons in NaNO <sub>2</sub> . Journal of the Physical Society of Japan, 1988, 57, 3613-3620.	1.6	3
67	Laser Ablation of Carbon Fiber Reinforced Plastics: Laser-Ionization TOF Mass Spectrometric Study. Journal of Laser Micro Nanoengineering, 2014, 9, 59-63.	0.1	3
68	Effect of heat treatment on UV-laser-induced positive ion desorption in CaHPO <sub>4</sub> · 2H <sub>2</sub> O. Applied Physics A: Materials Science and Processing, 1999, 69, S621-S624.	2.3	2
69	<title>Onset of laser plume formation at 248 nm on cleaved-single crystal NaCl: evidence for highly localized emissions</title>. , 2000, 3935, 38.		2
70	Interaction of wide band gap single crystals with 248 nm excimer laser irradiation. VI. The influence of thermal pretreatment on laser desorption of positive ions from a water-containing ionic crystal (CaHPO <sub>4</sub> · 2H <sub>2</sub> O). Journal of Applied Physics, 2000, 88, 647-656.	2.5	2
71	Effect of VUV F <sub>2</sub> laser irradiation on fluoride crystal. , 2003, , .		2
72	Surface microstructuring of transparent materials by laser-induced backside wet etching using excimer laser. , 2003, , .		2

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73	Resistance of LiCaAlF <sub>6</sub> Single Crystals against F <sub>2</sub> Laser Irradiation. Japanese Journal of Applied Physics, 2003, 42, L1015-L1017.	1.5	2
74	Microfluidic Bead Array Device Using Laser-Machined Surface Microstructures on Silica Glass. , 2007, , .		2
75	Synthesis and Photolysis of Biphenylenetetracarboxylic Dianhydride in Low-temperature Neon Matrixes. Chemistry Letters, 2008, 37, 334-335.	1.3	2
76	Flexible fabrication of deep microstructures by laser-induced backside wet etching. , 2010, , .		2
77	Laser cutting of carbon fiber reinforced plastics (CFRP) by fiber laser irradiation. , 2013, , .		2
78	On-Demand Preparation of Microdot Patterns by Laser-Induced Dot Transfer. Journal of Laser Micro Nanoengineering, 2012, 7, 77-80.	0.1	2
79	<title>Plume formation and optical breakdown on KrF excimer laser-irradiated silica glass</title>. , 2001, , .		1
80	Onset of laser ablation in CaF <sub>2</sub> crystal under excimer laser irradiation. , 2002, 4637, 13.		1
81	Initial stage of laser ablation of LiCaAlF <sub>6</sub> single crystal under F <sub>2</sub> laser irradiation. Applied Physics A: Materials Science and Processing, 2004, 79, 1579-1581.	2.3	1
82	<title>Surface micro-structuring of silica glass by laser-induced backside wet etching using ns-pulsed UV lasers: application into micropatterning of functional materials using self-assembled monolayers</title>. , 2004, , .		1
83	Evaluation of amplified spontaneous emission from photopumped thiophene/phenylene co-oligomers in polycrystalline states. Proceedings of SPIE, 2012, , .	0.8	1
84	Laser Cutting of Carbon Fiber Reinforced Thermo-Plastic (CFRTP) by IR Laser Irradiation. Journal of Laser Micro Nanoengineering, 2014, 9, 180-186.	0.1	1
85	Laser ablation of nitrogen-solid films by UV ps-laser irradiation: surface modification of materials by fragments in laser ablation plume. , 2002, , .		0
86	Laser ablation plume of FeSi <sub>2</sub> alloy target studied by TOF mass and optical emission spectroscopies. , 2003, , .		0
87	Site-selective dye deposition onto micropatterns of fused silica fabricated with laser-induced backside wet etching (LIBWE). , 2003, , .		0
88	Time-resolved monitoring of ZnO plume by ArF laser ablation: influence of surrounding gas. , 2003, 4830, 132.		0
89	Microfabrication of Transparent Materials by Laser Processing. , 2003, , 339-357.		0
90	Effect of Annealing on the Tolerance of LiCaAlF <sub>6</sub> Single Crystals against F <sub>2</sub> Laser Irradiation. Japanese Journal of Applied Physics, 2004, 43, 6168-6169.	1.5	0

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91	Preferential Crystallization of $\text{FeSi}_2$ from Micro-droplets Generated by Laser Ablation.. Materials Research Society Symposia Proceedings, 2004, 848, 245.	0.1	0
92	<title>F<formula><inf><roman>2</roman></inf></formula>-laser-induced damage on transparent fluoride crystals</title>. , 2004, , .		0
93	<title>Room-temperature fabrication of $\text{FeSi}_2$ <formula><inf><roman>2</roman></inf></formula> microprecipitates by pulsed laser deposition</title>. , 2004, 5662, 400.		0
94	Surface microfabrication of silica glass by LIBWE using DPSS-UV laser. , 2005, , .		0
95	Laser direct-write and crystallization of $\text{FeSi}_2$ micro-dot array for NIR light-emitting device application. , 2007, , .		0
96	Laser-induced formation of photocatalytic $\text{TiO}_2$ micro networks on a UV-absorbing glass surface. , 2007, , .		0
97	Fabrication of deep microtrenches with inclined parts by laser-induced backside wet etching. , 2009, , .		0
98	Deep trenches fabricated by laser-induced backside wet etching for guiding light. Proceedings of SPIE, 2009, , .	0.8	0
99	Laser cutting of carbon fiber reinforced thermo-plastics (CFRTP) by single-mode fiber laser irradiation. , 2014, , .		0
100	Investigations of laser desorption from modified surfaces of ionic single crystals. , 2000, , .		0
101	Surface Micro-Structuring of Silica Glass by Laser-induced Backside Wet Etching. The Review of Laser Engineering, 2008, 36, 1246-1249.	0.0	0
102	Progress in laser-induced backside wet etching. , 2010, , .		0
103	Surface Microstructuring of Glasses by Laser-Induced Backside Wet Etching. The Review of Laser Engineering, 2012, 40, 106.	0.0	0
104	Surface Microstructuring of Glass Materials by Laser-Induced Backside Wet Etching. The Review of Laser Engineering, 2017, 45, 273.	0.0	0